SA Journal of Human Resource Management
ISSN: (Online) 2071-078X, (Print) 1683-7584

Employee assistance programmes: A study on stress reduction in trainee accountants

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Dates:
Received: 21 Jan. 2025
Accepted: 20 Mar. 2025
Published: 23 May 2025

How to cite this article:
Naidu, S., & Olivier, B.H. (2025). Employee assistance programmes: A study on stress reduction in trainee accountants. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur, 23*(0), a2971. https://doi.org/10.4102/sajhrm.v23i0.2971

Orientation: Workplace stress has reached endemic proportions, affecting mental, physical and organisational health. Research indicates that trainee accountants experience higher levels of stress compared to other accounting professionals. Employee Assistance Programmes (EAPs) have been developed to assist trainees in managing workplace stress.

Research purpose: The purpose of this study was to determine if participating in an EAP focussed on stress management can reduce perceived levels of stress among trainee accountants.

Motivation for the study: Workplace stress impacts the performance and mental health of trainee accountants. Employee Assistance Programmes can assist in providing stress management strategies.

Research approach/design and method: The study utilised a quantitative, pre-experimental single-group pre-test and post-test design without the use of a control group. Out of a population of 350 trainee accountants, a purposeful sample of 166 trainees who participated in an EAP was chosen to participate in the study. Their perceived stress levels were assessed before and after attending an EAP.

Main findings: The research indicated a statistically significant decrease in the perceived stress levels among trainee accountants who attended an EAP ($t = -3.43$; $p = \leq 0.01$; small effect size).

Practical/managerial implications: The implications are that auditing firms should use EAPs to lower stress among trainee accountants.

Contribution/value-add: The study demonstrated that an effective EAP could help trainee accountants lower their stress levels. In addition, this research is distinctive because it is the first in South Africa to examine the effect of an EAP on the perceived stress levels of trainee accountants.

Keywords: employee assistance programme; MANOVA; mental well-being; paired-samples *t*-test; stress; stress management; *t*-test; trainee accountants.

Introduction

Orientation

In the modern world, stress is a common issue, especially in the workplace where it is widespread (Altindag, 2020; Ozkan & Ozdevecioğlu, 2012; Rathi & Kumar, 2022; Sharma et al., 2021). Stress can be described as feelings of anxiety, nervousness or changes in one's mental and physical state that disrupt 'normal' functioning (Makhbul et al., 2015; Mayer & Oosthuizen, 2021; Patil & Shahapure, 2021). Daniel (2019) and Altindag (2020) emphasised that stress is now one of the biggest challenges for mental, physical and organisational health in the workplace.

Research indicates a strong connection between stress and its negative effects on mental well-being (Mayer & Oosthuizen, 2021). Poor mental health can lead to physical illnesses such as hypertension and burnout and also severely affect life outside of work (Rajgopal, 2010). Tennant et al. (2007) defined mental health as the awareness of one's ability to cope with daily stress, work productively and contribute to the society. Positive mental health is often used interchangeably with mental well-being. Furthermore, various researchers have found a significant relationship between stress and job performance, explaining that stress can decrease productivity, lower the quality of work, increase absenteeism and turnover and lead to strained interpersonal relationships (Altindag, 2020; Kumari & Priya, 2016; Timotius & Octavius, 2022). In turn, employees who perform well on the job contribute to organisational effectiveness (Kareem, 2019; Otoo, 2024).

To ensure organisational effectiveness, organisations thus need to assist employees in managing their stress levels.

Stress has become a burning issue, especially for individuals pursuing careers in the accounting field (NeuroLaunch Editorial Team, 2024; Ozkan & Ozdevecioğlu, 2012). Molina-Sanchez et al. (2019) argued that accounting professionals experience high stress levels mainly because of the emotional demands of the consulting aspect of their roles. This often involves navigating complex interpersonal dynamics, managing client expectations and handling sensitive financial matters, all of which contribute to increased emotional strain and stress. Moreover, the Fourth Industrial Revolution (4IR) has introduced significant changes that require accountants to be adaptable. Failure to adapt to these evolving technological and industry shifts can exacerbate stress levels (Mayer & Oosthuizen, 2021). Smith et al. (2017) found that many who start in the accounting field experience burnout quickly because of the significant amount of stress, while Kelly and Barrett (2012) found that stress affects accountants' mental and physical well-being, leading to higher resignation rates.

According to Atai and Özyaral (2021), accounting is a crucial profession in any country, playing a significant role in economic stability. This importance became particularly visible during the coronavirus disease 2019 (COVID-19) pandemic, when accountants were essential for maintaining business operations (Atai & Özyaral, 2021). Owing to the nature of this profession with the constant demand for accuracy, accounting can be stressful and impact professionals' mental health (Atai & Özyaral, 2021).

A solution proposed by Molina-Sánchez et al. (2019) and the EAP Association of South Africa (2024) would be to add Employee Assistance Programmes (EAPs) as a potential intervention to assist in managing high stress levels. However, there is no set or standardised EAP that allows an organisation to be confident about its success in combatting stress (Edwards & Marcus, 2018). Empirical studies exist showing that, for example, EAPs are effective in reducing symptoms of depression and anxiety among the United States (US) state government employees (Richmond et al., 2016), reducing absenteeism among civil servants in the US (Richmond et al., 2017), improving the workplace productivity in the US (Osilla et al., 2010) and improving health-related productivity when on the job among employees from different industries and job roles in Germany (Zieringer & Zapf, 2024). However, a search of the literature produced no studies that specifically examined the impact an EAP has on the stress levels of trainee accountants in the auditing industry, both globally and in South Africa.

This study sought to investigate whether attending an EAP would benefit trainee accountants in managing their stress levels. It will also assist the organisation in the study in understanding the benefits of their current EAP and drive any constructive changes needed to improve the effectiveness of the existing EAP for trainee accountants.

Research purpose and objectives

The purpose of this study was to determine if participating in an EAP focussed on stress management can reduce perceived levels of stress among trainee accountants.

Literature review

In the next section, stress will be defined and its prevalence in the workplace and impact on mental well-being will be discussed. This will be followed by a discussion of EAPs in general as well as the specific EAP used in this study, concluded by a discussion of the relationship between an EAP attendance and participants' perceived stress levels.

Defining stress

Bienertova-Vasku et al. (2020) stated that stress is a term used in numerous settings and is subjective to each individual experience, making a simple definition difficult to establish. It was further argued in the article that the definition used for stress was dependent on the field of study. When studying stress, a physiological perspective focuses on stress as a reaction to a specific situation. A biological perspective highlights the environmental factors affecting the living cells, while a psychological perspective emphasises the perception of negative situations or factors. Kelly and Barrett (2012) simplified the definition of stress as a physiological or psychological response to pressure, demand or challenges that typically exceeds the individual's ability to cope effectively.

In this study, the definition of stress by Dolan (2007) was used. Although dated, it is an all-encompassing definition – namely, that stress should be defined by looking at the stimulus, the response and the stimulus–response concept. This means that external forces or stimuli cause tension, which influences either a psychological or physiological response. This response is the consequence of the relationship between the stimuli and the idiosyncratic reaction of the individual (Dolan, 2007).

Stress in the workplace

Stress in organisations is becoming an increasing concern, with its effects proving particularly detrimental in developing nations (Altindag, 2020; Rajgopal, 2010; Rathi & Kumar, 2022; Sharma et al., 2021). Workplace stress is seen as a consequence of modern organisational life which requires employees to find a balance between their work responsibilities and personal and family responsibilities (Altindag, 2020). Work-related stress significantly reduces productivity and negatively impacts physical health, causing hypertension and headaches as well as mental illness leading to anxiety, depression and loss of concentration (Makhbul et al., 2015; Timotius & Octavius, 2022). Chathuranga and Wijesooriya (2021) emphasised that employees' well-being is influenced by numerous factors, the most significant being stress. Stress in the workplace is identified as a considerable issue that organisations should take time to manage (Chathuranga & Wijesooriya, 2021). Kroemer and Kroemer

(2017) explained that there are three major traits of workplace stress: (1) job stressors that arise because of the demands of the job, (2) the individual's ability to manage the demands and (3) the mindset of the individual. Dolan's (2007) definition of stress, given above, supports this explanation and adds that prolonged and impactful stress, especially if unresolved, can lead to an increase in workplace accidents or injuries.

Stress and mental well-being

Tennant et al. (2007) defined mental health as being aware of one's abilities, coping with day-to-day stressors, working productively and contributing to every aspect of one's life. It has been shown that mental well-being is closely linked to one's overall health and, if feeling low, can lead to burnout (Rajgopal, 2010). According to Sahai and Mahapatra (2020), there are five types of well-being: (1) emotional, (2) physical, (3) social, (4) workplace and (5) mental well-being. Diener and Tov (2012) referred to well-being as a responsive and dynamic term that is not static, but changes as factors and aspects of individuals' lives change. This implies that it determines how people experience their lives – the physical and mental aspects thereof. In the case of trainee accountants, Ongori and Agolla (2008) mentioned how stress has a ripple effect and impacts on their mental well-being. They added that when a trainee's mental well-being is affected, it results in negative thinking, procrastination, decreased productivity and rigid thinking. Ongori and Agolla (2008) added that accounting trainees should be equipped with the skills needed to take ownership of their stress management, which will have a positive effect on their overall mental well-being.

Trainee accountants' stress level

Kelly and Barrett (2012) argued that trainee accountants are more susceptible to stress than any of the other groups in the accounting profession. They undergo a rigorous 3-year programme to attain the prestigious Chartered Accountant of South Africa (CA[SA]) designation. However, this title comes with significant stress. Trainee accountants often work gruelling hours that extend into the night and early morning. They must navigate stringent legislative frameworks, adhere to rigorous quality guidelines and manage demanding client relationships, all of which can lead to noticeable symptoms of stress (Bressler et al., 2021). Gardner (2017) argued that the ability to manage stress is a crucial soft skill for trainee accountants, given the complex nature of their responsibilities. These tasks require strong interpersonal skills, as trainees must effectively interact with clients, supervisors, managers and various stakeholders, both inside and outside the firm. Moreover, Gardner emphasised the importance of cultivating emotional intelligence as a critical soft skill, suggesting that stress management training could be the key to whether a trainee accountant succeeds or fails to become a chartered accountant (CA).

Employee assistance programmes

Employee Assistance Programmes are workplace programmes used in an organisation to assist troubled employees, resolve problems, motivate employees, provide training and resources as interventions and offer counselling support (Long & Cooke, 2023). Long and Cooke (2023) mentioned that one of the philosophies of EAPs is that prevention is the best course of action, as this is a more proactive approach. Soeker et al. (2015) explained that the role of an EAP is to ensure that employees are able to perform their functions in life optimally in a manner that attracts a well-balanced lifestyle. Mugari et al. (2014) said that the programme can be as cost-effective as providing resources or training on prevalent topics, such as stress. This view is supported by Ananda and Mayangsari (2022), who added that research has shown several benefits of EAPs, including increased employee motivation, higher productivity and an overall happier workforce.

Contents of the employee assistance programme utilised in this study

To deal with the high demands and nature of the auditing industry, the organisation in this study has implemented an EAP that offers counselling and soft skills training interventions for trainee accountants. The training covers various topics that affect trainees' well-being, including resilience, emotional intelligence, self-care, unconscious bias and stress management. It is delivered in a hybrid format, combining virtual, online and live classes. These initiatives are designed to enhance trainees' work experience and help them to adapt to the workplace and their career paths. The programme aims to increase self-awareness about stress, how stressed the trainee accountants perceive themselves to be and techniques to reduce their stress. All the first- and second-year trainees received the same training, which included a 2-h online session and study materials for self-study afterwards. In addition, participants received two handouts, one with blank templates for self-reflection exercises and another with a workbook containing 15 different stress management techniques.

The relationship between the attendance of an employee assistance programme and the perceived level of stress of participants

According to Baskar et al. (2021), most companies are interested in the return on investment (ROI) of EAPs, that is, the financial benefits of EAPs, despite the negative consequences of stress such as absenteeism, increased mistakes and demotivation, to name but a few (Baskar et al., 2021). Baskar et al. (2021) further argued that the value of EAPs is often intangible and cannot always be indicated through metrics, stating that the underutilisation of EAPs can be attributed to uncertainty about the services the EAP provides to the organisation. Previous research by Attridge et al. (2009) reported that 57% of employees who attended an EAP improved their productivity and reduced their absenteeism by 50%, while Sahai and Mahapatra (2020)

emphasised the benefits of attending an EAP as improved well-being and the management of stress. Chathuranga and Wijesooriya (2021) called for more research to understand how culture and employee awareness impacted the actual experience of using an EAP. In conclusion, although previous research has indicated that EAPs can improve employee well-being and stress management, there is a lack of research on how these programmes affect the perceived stress levels of trainee accountants.

From the literature review, the following research hypotheses were formulated:

H1: Trainee Accountants who participated in an EAP will experience a decrease in their levels of perceived stress.

H0: Trainee Accountants who participated in an EAP will not experience a decrease in their levels of perceived stress.

Research design

Research approach

A pre-experimental, quantitative research design was used for this study, specifically the single-group pre-test and post-test design, which did not use a control group. This involved assessing the perceived stress levels of a group of individuals before attending an EAP, allowing the group to attend an EAP and assessing the perceived stress levels of the same group after attending the EAP (Vogt et al., 2012). An online self-report questionnaire, namely the 10-item Perceived Stress Scale (PSS-10) developed by Cohen and Williamson (1988), was used to gather data before and after EAP attendance for statistical analysis. The benefits of this type of design are that it is simple to implement and traces variations that occur after attendance of training received during an EAP (Dimitrov & Rumrill, 2003). Furthermore, Flannelly et al. (2018) reported that this design is popularly used to evaluate the effectiveness of a training programme.

In this study, it was not possible to use a control group as part of the research design, as the auditing firm made it compulsory for all trainees to attend the EAP for stress management purposes, which had become a burning issue. This posed a threat to the internal validity of the study (Terre Blanche et al., 2011), as it introduced the possibility that the EAP on its own could not be presumed to be solely responsible for any change in the perceived stress levels of trainee accountants. Knapp and Faan (2016) mentioned that history, maturation and instrumentation, if not controlled, could impact the internal validity of a study. To mitigate these threats to internal validity, the following recommendations by Paulus et al. (2013) were implemented:

- A large sample of 166 respondents (47% of the population) was used.
- The post-test data were retrieved just 2 months after the EAP training was completed, reducing the time between the pre-test and post-test data points.
- A reliable and valid instrument was used to gather pre-test and post-test data.
- A strong and transparent research design was used and explained in detail.
- Data were accurately collected, well-managed and thoroughly analysed, ensuring that valid conclusions could be based on reliable statistics.

Research method

Research participants

The population for this study consisted of approximately 350 trainee accountants in the Audit department of a medium-sized South African auditing firm, which provides auditing services throughout the country and consisted of first-, second- and third-year trainee accountants. For this study, only first- and second-year trainees were targeted and 177 first- and second-year trainees from across the organisation were interested in participating in the pre-test. However, only 166 of the 177 trainees completed the post-test, constituting the research sample. The third-year trainees were excluded as they received additional accounting training and were exposed to more complex accounting activities that were different from the first- and second-year trainees, whose training and practical exposure to accounting activities during their first 2 years were similar. The only noticeable difference was that the second-year group had an additional year of practical accounting experience compared to the first-year group. However, this did not create a significant difference between the stress levels of the first- and second-year groups, as both groups had received the same accounting training and exposure to accounting activities. The sampling method used was non-probability, purposive sampling, which is defined as selecting a sample whose traits are defined for a reason that is related to this study (Andrade, 2021). This study only considered trainees who participated in the EAP training and were interested in participating in the study as part of the study sample. The composition of the sample is presented in Table 1.

TABLE 1: Composition of the research sample (n = 166).

Item	Category	Frequency	%
Gender	Female	111	66.9
	Male	55	33.1
Trainee year group	First-year trainees	65	39.2
	Second-year trainees	101	60.8
Race	African people	108	65.1
	Mixed race people	6	3.6
	Indian people	20	12.0
	White people	31	18.7
	Other people	1	1.0
Age (years)	21–25	85	51.2
	26–30	70	42.2
	31–35	9	5.4
	36–40	1	0.6
	41–45	1	0.6
Office (region)	Cape Town	29	17.5
	Durban	25	15.1
	Gqeberha	16	9.6
	Johannesburg	84	50.6
	Pretoria	12	7.2

Table 1 shows that the sample consisted of 66.9% female trainees (n = 111) and 33.1% male trainees (n = 55). Most respondents were from the second-year trainee group, making up 60.8% (n = 101), whereas 39.2% (n = 65) were from the first-year trainees. Most respondents were African people (65.1%), followed by white people (18.7%). The gender and race composition of the sample is in line with the Black Economic Empowerment (BEE) requirements of the South African government. Regarding age, 51.2% were between the age of 21 years and 25 years and the second largest group was between the age of 26 years and 30 years. The reason for this is the industry in which the respondents operate, as most of them would enter their training contracts immediately after completing their honours qualifications, as the training programme is a requirement to become a CA(SA). In addition, Table 1 shows that 50.6% of the respondents work in the Johannesburg office, while the second highest is 17.5% from Cape Town, reflecting that the Johannesburg office is the largest office in the company and Cape Town the second largest.

Measuring instruments

Biographical questionnaire: To gather biographical data and details on the composition of the sample, a Biographical Questionnaire (BQ) was developed and used. The BQ included questions about gender, race, age, ethnicity, traineeship year group and their region within South Africa.

Perceived Stress Scale 10: The 10-item Perceived Stress Scale (PSS) was developed by Cohen and Williamson (1988) and used in this study to assess the perceived level of stress of participants before and after they attended an EAP. When developing the PSS, Cohen and Williamson (1988) reported an internal reliability of 0.78, which they considered as adequate. Regarding the validity of the PSS, Cohen and Williamson (1988) reported moderate predictive and concurrent validity. However, Mitchell et al. (2008) found a higher level of convergent validity and adequate evidence of concurrent validity.

The PSS-10 includes questions about current experiences of stress as well as feelings and thoughts during a person's previous month (Lee, 2012). Examples of questions are 'In the last month, how often have you felt nervous and stressed?' 'In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?' Each item is rated on a 5-point Likert scale, where 0 is Never, 1 is Almost Never, 2 is Sometimes, 3 is Fairly Often and 4 is Very Often. Furthermore, the scale makes use of reversed items (questions 4, 5, 7 and 8) and requires the researcher to reverse the scores (Baik et al., 2019; Lee, 2012). Andreous et al. (2011) conducted a study on 941 urban residents in Greece and determined a Cronbach's alpha score of 0.82, which is an acceptable level of reliability according to the guidelines provided by Aithal and Aithal (2020). In 2021, in a study in the Czech Republic, Figalová and Charvát reported a Cronbach's alpha score of 0.91. Baik et al. (2019) reported that the PSS-10 produced an adequate internal consistency reliability of 0.78 and moderate concurrent criterion validity. Lee (2012) analysed several studies to determine the psychometric properties of the scale and found the PSS-10 to be superior to the PSS-14 and PSS-4.

In South Africa, Hamad et al. (2007) conducted a study to explore the social and economic factors associated with depressive symptoms and perceived stress among low-income adults, using the PSS-10 to measure stress. The study reported a Cronbach's alpha of 0.72, showing an acceptable level of reliability (Aithal & Aithal, 2020). A more recent study in 2022 examined 444 nursing students, using the PSS-10 and reported a Cronbach's alpha of 0.93 (Chachula & Ahmad, 2022). This was the first study to measure the construct validity of the PSS-10, using South African nursing students and found the scale to have acceptable construct validity (Pakhomova et al., 2021).

Owing to the research results reported above, the PSS-10 was considered to be a reliable and valid instrument for measuring the level of perceived stress in this study.

Research procedure

Written permission to conduct the research was obtained from the Head of Audit at the firm in the study. Thereafter, ethical clearance was obtained from the Ethics Committee of the Industrial and Organisational Psychology (IOP) Department at the University of South Africa (UNISA). Once ethical clearance for the study had been received, the study commenced. A third party, who signed a Confidentiality Agreement to maintain the confidentiality of the participants and data gathered, was used to gather the data to ensure that participants were not coerced into participating because of the researcher working at the organisation. The third party contacted participants via e-mail and provided them with a Microsoft Forms link, which included information about the study, informed consent, the PSS-10 and the biographical questionnaire. Participants who completed the pre-test needed to attend the 2-h EAP, which included stress management training developed by the researcher. Only those who had completed the pre-test and training were contacted to complete the post-test. A total of 166 trainees completed the post-test and participated in the entire process. The third party assigned each participant an identification number to maintain the confidentiality of participants.

Statistical analysis

All data were analysed using IBM Statistical Package for Social Sciences version 28. Prior to using the software, the data were checked for missing items, revealing that four participants did not answer four different questions; three during the pre-test phase and one during the post-test phase. Further examination revealed that the missing values were random, allowing for regression for imputation to be used to estimate and replace missing responses with mean values (Aithal & Aithal, 2020).

Firstly, descriptive statistics were used to determine the means, standard deviations, skewness and kurtosis of replies. Secondly, Cronbach's alpha coefficients were used to determine the pre-test and post-test internal consistency of the measuring instrument used. According to Aithal and Aithal (2020), a Cronbach's alpha coefficient of at least 0.70 is considered adequate for the reliability of an instrument, while above 0.70 is considered high internal consistency. Thirdly, a paired *t*-test was performed to determine differences in the means between pre- and post-test data. The cut-off score used to determine statistical significance was $p \leq 0.01$ (Aithal & Aithal, 2020). Kraft (2018) and Lakens (2022) proposed the following benchmarking to evaluate the practical effect size of correlations: $d < 0.20$ = Very Small, $0.20 \leq d < 0.50$ = Small, $0.50 \leq d < 0.80$ = Medium and $d \geq 0.80$ = Large. Kraft (2018) further added that research is starting to propose that effect sizes between 0.20 and 0.25 are considered substantial enough to hold significant educational elements. Finally, a univariate multivariate analysis of variance (MANOVA) was conducted to determine whether there were any statistically significant differences between the different biographical groups of trainee accountants (gender, trainee year group, race and age) and their perceived stress levels after attending an EAP.

Ethical considerations

Ethical clearance for the study was obtained from the Research Committee of the Industrial and Organisational Psychology Department at the University of South Africa. The approval number was 2023_CEMS/IOP_0379. Written informed consent was obtained from participants before proceeding with the research and this included their right to withdraw from the study at any time. Confidentiality and privacy of the participants were always maintained as the questionnaires were anonymous to protect the identity of participants and data were stored on a password-protected server and computer.

Results

Descriptive statistics

Descriptive statistics were calculated for the PSS-10 pre-test and post-test scores as shown in Table 2.

The mean values reflect the average effects level, indicating a slight decrease from 24.60 before training to 22.80 after training. Skewness and kurtosis values were used to test for normality. According to Hair et al. (2022), skewness and kurtosis values between −1.0 and 1.0 indicate that the data were normally distributed. In Table 2, the skewness indicates a slight leftward skew in both cases, suggesting a tendency towards lower effect levels. Furthermore, negative kurtosis (−0.05) for post-training implies a distribution less peaked and with thinner tails, signifying a broader range of effect levels. These findings collectively suggest that while the EAP training may have led to a decrease in the average effect level, it also potentially contributed to a more diverse range of outcomes among participants.

TABLE 2: Descriptive statistics for the Perceived Stress Scale-10 scores (n = 166).

Measurement time point	Mean	SD	Skewness	Kurtosis
PSS pre-test scores	24.60	6.36	-0.06	0.06
PSS post-test scores	22.80	6.53	-0.29	-0.05

PSS, perceived stress scale; SD, standard deviation.

Reliability of the perceived stress scale

Cronbach's alpha coefficients were used to determine the pre-test and post-test internal consistency of the PSS-10 used to measure trainee accountants' perceived level of stress. A Cronbach's alpha of 0.83 for the pre-test and 0.84 for the post-test were obtained, indicating a high level of internal consistency in the measurements, as suggested by Aithal and Aithal (2020). As such, the PSS-10 was considered to be a reliable instrument for measuring the pre-test and post-test scores of participants in this study.

Paired sample *t*-test

The purpose of a paired sample *t*-test, also known as the *t*-test for dependent means, is to determine if there is a significant difference between the means of the scores of two related groups (Novia et al., 2024). Table 3 shows the results of the paired sample *t*-test calculations for this study.

Table 3a and Table 3b indicates a reduction on the PSS-10 scores from the pre-intervention assessment (M = 24.60, standard deviation [SD] = 6.39) to the post-intervention assessment (M = 22.80, SD = 6.53) of the two samples and this reduction is statistically significant ($t = -3.43, p \leq 0.01$). A practical effect size calculation was conducted to assist in understanding the magnitude of the difference found in the results. The effect size of the reduction in the means of the two samples, as denoted by Cohen's d, was calculated to be −0.27. This indicates that although there was a decrease in the perceived stress scores from the pre-intervention to the post-intervention, the practical effect size of this decrease can be classified as small (Kraft, 2018; Lakens, 2022).

Results of the univariate multivariate analysis of variance on the biographical groups

A univariate MANOVA was conducted to determine whether there were any statistically significant differences

TABLE 3a: Results of the paired samples *t*-test calculations (n = 166).

PSS scores	Mean	SD	SE mean
Pre-test	24.60	6.35	0.49
Post-test	22.80	6.53	0.50

PSS, perceived stress scale; SD, standard deviation; SE, standard error.

TABLE 3b: Paired differences and statistical significance of PSS scores (n = 166).

M	SD	SE mean	95% confidence interval of the difference		*t*	*df*	Sig.
			Lower	Upper			
-1.79	6.76	0.52	-2.83	-0.76	-3.43	165	0.001

Note: Paired differences are mean, standard deviation and standard error mean.

M, mean; SD, standard deviation; SE, standard error; *df*, degrees of freeedom; Sig., significance.

between the different biographical groups of trainee accountants (gender, trainee year group, race and age) and their perceived stress levels after attending an EAP. A univariate MANOVA was considered appropriate as it extends the capabilities of a normal analysis of variance (ANOVA) by allowing for the simultaneous analysis of multiple continuous dependent variables (Hassan, 2024; Smith et al., 2020).

Before conducting the univariate MANOVA on the four biographical groups, they were consolidated as follows: the mixed (n = 6) and other (n = 1) categories of the Race biographical group were excluded, because of the small nature of the sample. Therefore, the sample on which the univariate MANOVA was conducted consisted of 159 participants. In addition, for the biographical age group, the five original categories were collated into two groups, namely, Group 1 ≤ 25 years old and Group 2 > 25 years old, to ensure the size was more statically relevant. This is shown in Table 4.

Once the four biographical groups were consolidated, Levene's test of equality of error variances was conducted to determine significance, allowing to advance to a MANOVA analysis. The test was used to determine if the variance between the four biographical groups was the same (Purnama et al., 2020). Tabachnick and Fidell (2013) stated that Levene's test is conducted before the MANOVA to ensure the reliability of the results obtained from the MANOVA. The criterion used was that if the significance level was ≤ 0.05, then the intergroup data variants were different, whereas if the significance was > 0.05, then the intergroup data variants were the same. The significant level obtained from Levene's test of equality was p = 0.72, which is > 0.05, indicating that the assumption of equal variance between the groups was met.

Having established the assumption of equal variance between the four biographical groups, tests of between-subjects effects were conducted on the four groups. As indicated in Table 5, the trainee year biographical group had a statistically significant effect on scores (F = 7.84; p = 0.006), as did the race biographical group (F = 4.82, p = 0.009). However, gender (F = 0.23, p = 0.635) and age (F = 2.68, p = 0.104) were not statistically significant. Owing to the insignificant effect of gender and age on scores, a MANOVA was not conducted on these two biographical groups.

After the results, shown in Table 5 of the between-subjects effects were obtained, a MANOVA was conducted to examine the main effects of the year groups on the difference between the pre-test and post-test PSS-10 scores. These results are shown in Table 6.

Table 6 shows that the mean difference score for the first-year trainees was −0.04 and −3.49 for the second-year trainees, with a mean difference of 3.10 and a significance level of 0.006. Therefore, the second-year trainees had the highest decrease in PSS-10 score compared to the first-year trainees.

A MANOVA was also conducted to examine the main effects of the race groups on the difference between the pre-test and post-test PSS-10 scores. These results are shown in Table 7.

Table 7 shows that the African race group had a statistically insignificant decrease in post-PSS-10 scores (M = −1.71), the Indian race group had a statistically significant decrease in the post-PSS-10 scores (M = −5.01), while the white race group had a statistically insignificant increase in post-PSS-10 scores (M = 0.89). Table 7 also shows that there was a statistically insignificant difference between the means of the African race group scores, the Indian race group scores (p = 0.136) and the white race group scores (p = 0.195). However, there was a statistically significant difference between the means of the Indian and white race group scores (−5.90; p = 0.007).

TABLE 4: Sample for the univariate multivariate analysis of variance conducted on the four biographical groups (n = 159).

Biographical group	Category	Total
Gender	Female	107
	Male	52
Trainee year group	First year	63
	Second year	96
Race	African people	108
	Indian people	20
	White people	31
Age (years)	Group 1: ≤ 25	83
	Group 2: > 25	76

TABLE 5: Tests of between-subjects effects of the four biographical groups (n = 159).

Source	Type III sum of squares	*df*	Mean square	*F*	Sig.	Partial Eta-squared
Corrected Model	753.76	5	150.75	3.50	0.005	0.103
Intercept	335.54	1	335.54	7.80	0.006	0.048
Gender	9.72	1	9.72	0.23	0.635	0.001
Trainee year group	337.38	1	337.38	7.84	0.006	0.049
Race	414.54	2	207.27	4.82	0.009	0.059
Age (years)	115.42	1	115.42	2.68	0.104	0.017

df, degrees of freedom; Sig., significance.

TABLE 6: Univariate multivariate analysis of variance: Difference in scores between the year groups (n = 159).

Statistic	First-year trainees	Second-year trainees	Mean difference
Mean	-0.04	-3.49	3.10
Standard error	1.00	0.761	1.107

Note: p = 0.006.

TABLE 7: Univariate multivariate analysis of variance: Difference in scores between the race groups (n = 159).

Race group	Mean of group	Compared to African people		Compared to Indian people		Compared to white people	
		Mean difference	*p*	Mean difference	*p*	Mean difference	*p*
African people	-1.71	-	-	3.30	0.136	-2.60	0.195
Indian people	-5.01*	-3.30	0.136	-	-	-5.90	0.007
White people	0.89	2.60	0.195	5.90	0.007	-	-

*, significant at the 0.05 level (2-tailed).

Discussion

Outline of the results

The purpose of this study was to determine if participating in an EAP focussed on stress management can reduce perceived levels of stress among trainee accountants. Specifically, the stated hypotheses were as follows:

H1: Trainee accountants who participated in an EAP will experience a decrease in their levels of perceived stress.

H0: Trainee accountants who participated in an EAP will not experience a decrease in their levels of perceived stress.

The results show that the PSS-10 used in the study has an acceptable level of internal consistency among trainee accountants in a South African auditing firm. The results also indicated a statistically significant reduction of small effect size in the perceived stress levels of trainee accountants, following the attendance of an EAP ($t = -3.43$, $p \leq 0.01$). These results support H1, which was accepted, while H0 was rejected.

The reduction in perceived stress levels of trainee accountants after attending an EAP is supported by previous research conducted by Yu et al. (2009), Dickerson et al. (2012), Clavell (2012), Edwards and Marcus (2018), Nunes et al. (2018) and Bouzikos et al. (2022), who all identified positive changes among employees who had attended an EAP. These studies used different research methods, such as pre- and post-test designs (Edwards & Marcus, 2018) or comparing attendance of the EAP versus non-attendance (Azad et al., 2020; Nunes et al., 2018). The consistent trend across these studies revealed a reduction in absenteeism, enhanced mental, physical and emotional well-being among employees, increased job satisfaction and improved stress management (Azad et al., 2020; Bouzikos et al., 2022; Dickerson et al., 2012; Ozkan & Ozdevecioğlu, 2013). Yu et al. (2009) investigated high-tech employees who encounter similar pressures to those in the accounting field and observed that as stress levels increased, the EAP's effectiveness in managing and alleviating stress also increased. This is consistent with a study by Attridge (2019), who also found that when employees attend an EAP, workplace distress decreases, resulting in better stress management.

The MANOVA results aimed at assessing potential differences among the four biographical groups, revealed significance in two out of the four groups (trainee year group and race), while the remaining two showed no significance. Consequently, a MANOVA was not pursued for gender and age because of their lack of significant effects following EAP attendance. However, further exploration was undertaken regarding the trainee year group and race. With reference to the trainee year group, the results of this study indicated that the second-year trainee group showed a higher decrease in their PSS-10 scores than the first-year trainee group. Viviers (2016) highlighted that soft skills are not typically emphasised during the studies of accountants, as they tend to prioritise technical skills. Consequently, freshly graduated trainees may prioritise technical skills over stress management training. In contrast, the second-year trainee group, having experienced more stress, likely recognises the importance of non-technical training such as stress management. This is further supported by a study on Jordanian students and professionals, where the professionals highlighted the importance of soft skills, whereas the students emphasised the importance of technical skills (Asabeh et al., 2023). In addition, Lansdell et al. (2019) found that newly qualified accountants in South Africa valued soft skills development, showing that the more time spent in the profession, the more important the training, such as stress management became.

Regarding the race biographical group, results indicated a decrease in PSS-10 scores for the African group, but this was not statistically significant. The research literature, as noticed by Kalinowski et al. (2021), indicates that few studies on EAPs focused on race, specifically African ethnicity. An earlier study by Van Zyl in 2002, found that African groups tend to hide their high stress more because of higher emotional defensiveness coping strategies such as withdrawing. A more recent study by Kalinowski et al. (2021) found that interventions specifically targeting female African groups significantly helped them manage their stress levels.

The Indian race group showed a statistically significant decrease in PSS-10 scores, which indicated that the attendance of the EAP by the Indian group led to a significant decrease in their perceived stress levels. Masi and Tisone (2010) noticed that individuals of Indian ethnicity value learning and actively seek opportunities for self-improvement, which could explain the enhanced post-test scores observed among this biographical group. This view is supported by Burke et al. (2008), who found that the Indian group related their job satisfaction to receiving continuous training.

The white race group showed an increase in PSS-10 scores, although insignificant. This indicated that the attendance of the EAP by the white group led to an increase in their perceived stress levels. This contradicts the findings by Coles (2019), who found that white participants used the EAP more than other racial groups, thus finding more benefits. However, a recent study conducted by Brown et al. (2020) in America found that the white race group was more affected by stressors than the other race groups. This supports the view of Franklin-Jackson and Carter (2007), who argued that race-related stress is a factor that needs to be considered as it has a specific impact on mental well-being. Ng et al. (2020) added to the above by researching 527 working professionals and found that the white employees experience more negative psychological effects such as higher stress and lower job satisfaction because of their race.

In conclusion, the findings from this study suggest that participation in an EAP has a positive impact on reducing perceived stress levels among trainee accountants as a group within a South African auditing firm. Specifically, second-year trainees indicated a greater decrease in perceived stress levels than their first-year counterparts, while the Indian biographical group indicated a significant reduction in

perceived stress levels after attending an EAP, with the white biographical group indicating an increase in perceived stress levels after attending an EAP.

Practical implications

This study has established a clear relationship between participating in EAPs and reduced stress levels among trainee accountants. The findings are significant because they emphasise that organisations should value EAPs in managing trainee accountant stress, even if immediate ROI may not be apparent. It highlights the need for leadership to actively promote and support the use of EAPs among trainee accountants. By doing so, leadership can help create a healthier and more productive work environment, benefiting both the trainee accountants and the organisation.

Limitations and recommendations

To assess the results of this study comprehensively, several important limitations were identified that could have influenced the overall outcomes. It is essential to interpret the results within the context of these limitations:

- The study did not include a control group, which may have affected the internal validity of the study, as perceived changes in the level of stress of trainee accountants may have been because of other factors besides the stress management skills taught during the EAP.
- While this study revealed a statistically significant reduction in stress post-intervention, the effect size was classified as small. This raises questions about whether the observed decrease in stress could have been greater if the stress management training provided as part of the EAP was more effective. Factors, such as the frequency and content of the training, including the absence of follow-up sessions before the post-test, may have influenced the outcomes. Only a single training session was conducted and the lack of prolonged contact sessions may have impacted the effectiveness of the intervention. Furthermore, the content of the programme primarily focused on introducing stress-related concepts such as burnout, resilience and time management, along with self-study and reflection exercises. The extent of participants' commitment to these exercises and the time invested in completing them remain unknown.
- Most research conducted on this topic focused on professions such as nursing, leading to a lack of dated literature on stress among the trainee accountant group, both internationally and within South Africa.
- The questionnaire used in the study was administered in English, although most participants' native language was not English. This language barrier may have had an impact on participants' comprehension of the questionnaire items, potentially affecting the accuracy of their responses.
- The study was confined to the auditing profession in South Africa, thus the generalisation of the results to other professions should be done with caution.

This study is unique as no significant South African research has examined the relationship between an EAP and the perceived stress of trainee accountants. Firstly, it is recommended that future research explore whether more intensive and prolonged stress-management training within an EAP could have a greater impact on participants' perceived stress levels than observed in the current study. Secondly, similar studies should be conducted across various professions, not just accounting to gain a more generalisable understanding of the impact of EAPs on perceived stress levels. Thirdly, future studies should focus more on the effect of EAPs on different demographic groups, especially various race groups. This could assist in understanding the cultural and contextual factors that influence the effectiveness of EAPs, which is critical to maximising their benefits in the workplace. Lastly, future studies should include the use of a control group to improve the internal validity of the research.

Conclusion

This study indicated that the level of stress of trainee accountants in a South African accounting firm can be reduced by stress reduction techniques that are taught during an appropriately developed EAP. The accounting profession in South Africa could use these results to assist their trainee accountants in managing stress throughout their training to ensure that their mental well-being and success as trainee accountants remain intact.

Acknowledgements

This article is partially based on the author, S.N.'s dissertation entitled, 'The impact of an Employee Assistance Programme on trainee accountants' perceived level of stress', towards the degree of Master of Commerce in Industrial and Organisational Psychology, in the Department of Industrial and Organisational Psychology at the University of South Africa, South Africa, with supervisor Dr B.H. Olivier, received October 2024. It is available here: https://uir.unisa.ac.za/server/api/core/bitstreams/c9b3989e-6fa5-4153-b328-320f1c711ad3/content.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

S.N. reviewed the literature, gathered and analysed the data and compiled the draft article. B.H.O. assisted with the finalisation of the article. Both S.N. and B.H.O. contributed to the final version of the article.

Funding information

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Data availability

The data that support the findings of this study are available from the corresponding author, B.H.O., upon reasonable request.

Disclaimer

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