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SOCIO-EMOTIONAL SKILLS BASED ON MINDFULNESS, WORK STRESS AND SOCIODEMOGRAPHIC VARIABLES: A STUDY WITH TEACHERS

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ABSTRACT

Socioemotional skills have attracted the attention of researchers due to their explanatory power over several variables related to mental health. Thus, this study aimed to analyze the predictive power of mindfulness-based socioemotional skills on stress in teachers. The data collection was carried out with a sample of 203 participants. Two instruments were used for data collection. The first was a mindfulness-based socioemotional skills scale and the second was a work-stress scale. The results showed that some socioemotional skills factors were able to predict the social support and demand dimensions of the work stress instrument. In addition, some significant differences in skill scores were identified for the variables gender and age. It is concluded that mindfulness-based socioemotional skills are predictors of work stress.

Keywords: Socioemotional Skills. Mindfulness. Stress.

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INTRODUCTION

Socioemotional competencies (SEC) have attracted increasing attention from researchers due to their theoretical relevance and broad applicability in different contexts. These competencies can be defined as individual capacities expressed through consistent patterns of thoughts, feelings, and behaviors, which can be developed through formal and informal learning experiences. They are essential for driving positive socioeconomic outcomes in people's lives (Kankaras & Suarez-Alvarez, 2019).

SEC refers to a set of skills, attitudes, and knowledge that, throughout an individual's development, enable them to recognize their own emotions and those of others. From this perspective, SEC is understood as a body of knowledge that allows individuals to formulate effective responses to various life demands (Bisquerra & López, 2021).

The definitions of SEC are broad and have been addressed in different ways across various studies. A systematic review of international literature, which analyzed articles published between 2017 and 2022, concluded that SEC encompasses the skills, knowledge, and attitudes necessary to understand, regulate, and express social and emotional phenomena. These competencies aim to promote individuals' healthy intrapersonal and interpersonal relationships (Silva & Behar, 2023).

In recent years, academic interest in mindfulness practices has increased significantly. However, the lack of a consensual definition of the concept has posed challenges concerning the instruments used to measure it. To analyze mindfulness assessment tools, Pires et al. (2015) conducted a literature review that included an analysis of eight instruments described in international reviews. The authors identified that the concept of mindfulness is interpreted in various ways, incorporating different factors and theoretical approaches. They highlighted the need to develop new measures for this construct to facilitate assessments and interventions. Upon examining the instruments assessed by Pires et al. (2015), it is observed that many of them aim to measure socioemotional skills, such as awareness, emotional awareness, self-awareness, and emotional regulation.

Mindfulness-based socioemotional Competencies (MBSEC), the theoretical model used in this research, can be defined as a set of socioemotional skills that enable individuals to perceive their environment, the present moment, and the impact of their own emotions and those of others on their physical and psychological health, allowing for

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emotion management to promote personal well-being and fulfilling social relationships (Souza et al., 2025).

MBSEC is characterized by the presence of skills in three dimensions:

1. **Bodily and Emotional Self-Awareness** – Skills for recognizing and describing experiences, bodily sensations, functional and dysfunctional thoughts (whether pleasant, unpleasant, or neutral), and the impact of bodily perception and physiological responses on emotions, as well as their influence on behavior in the pursuit of well-being.
2. **Emotion Self-Management** – Skills for managing thoughts, emotions, and impulses in personal life situations, aiming to control stress and anxiety to establish healthy and balanced social relationships. This also includes the development of acceptance skills, frustration management, and resilience.
3. **Relationship and Compassion Skills** – Skills for developing and maintaining healthy and gratifying social relationships, as well as fostering a connection with the shared human condition by cultivating loving awareness and developing compassionate attitudes towards others and oneself, aiming for individual and collective well-being (Souza et al., 2025).

Since the MBSEC concept is relatively recent in the literature, it has not been investigated as a predictor variable of mental health or illness. However, SEC has gained prominence for its predictive capacity concerning various important variables related to well-being and personal, professional, and educational success (Jennings et al., 2017). Therefore, one of the objectives of this study is to assess the predictive power of MBSEC concerning work-related stress, given that the literature has shown SEC to be a strong negative predictor of stress (Karimi et al., 2014; Rakhshani et al., 2018; Ramesar et al., 2009).

Additionally, this study aims to analyze potential differences in Mindfulness-Based Socioemotional Competency diagnoses across different sociodemographic groups. Literature has shown that socioemotional competencies yield different results depending on gender (Coelho et al., 2014; Coelho et al., 2016; Coryn et al., 2009; Merrell et al., 2010; Souza, 2022) and age (Bar-On, 2002; Cabello et al., 2016; Souza, 2022; Van Rooy et al., 2005).

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METHODOLOGY

This study is characterized as a research with a quantitative approach. It is classified as a cross-sectional study to analyze statistical correlations, the predictive power of model competency variables on work stress variables, and statistical differences between groups based on gender and age.

PARTICIPANTS

The study involved 203 teachers, ranging from elementary to university-level education. The sample was predominantly composed of women (73.4%), with a mean age of 43.65 years (ranging from 24 to 69 years; SD = 8.43). The sample size calculation was conducted using the G*Power 3.1.9.2.7 software, considering a 5% significance level, 80% statistical power, and an effect size of 0.15. For a multiple linear regression analysis with three predictor factors, the minimum required sample size was 77 participants, for correlations 64 participants, and t-tests 102 participants (Faul et al., 2009).

INSTRUMENTS

Two instruments were used in this research. The first was the Mindfulness-Based Socioemotional Competencies Scale by Souza et al. (2025). For this study, the instrument consisted of twenty items and three factors: body and emotional self-awareness (6 items; $\alpha = 0.70$, $\omega = 0.70$), emotion self-management (5 items; $\alpha = 0.70$, $\omega = 0.69$), and relationship skills and compassion (9 items; $\alpha = 0.83$, $\omega = 0.83$). The model demonstrated good fit indices: $\chi^2 = 670.51$; df = 167; $\chi^2/df = 4.01$; CFI = 0.95; TLI = 0.94; RMSEA = 0.07; and SRMR = 0.06.

The second instrument used was the Job Stress Scale, adapted for the Brazilian context by Alves et al. (2004). The original instrument consists of seventeen items organized into three factors. In this study, confirmatory factor analysis and reliability analyses were performed on the factors. After these procedures, the instrument demonstrated the following psychometric properties: demand factor ($\alpha = 0.77$, $\omega = 0.77$), control factor ($\alpha = 0.62$, $\omega = 0.67$), and social support factor ($\alpha = 0.85$, $\omega = 0.85$). The instrument showed acceptable fit indices: $\chi^2 = 146.19$; df = 62; $\chi^2/df = 2.35$; CFI = 0.98; TLI = 0.97; RMSEA = 0.08; and SRMR = 0.08.

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ETHICAL AND DATA COLLECTION PROCEDURES

Data were collected online via Google Forms using a questionnaire containing the instruments and a Free and Informed Consent Form (FICF). The FICF informed participants about the research topic, objectives, and researcher details, and guaranteed anonymity. The study was conducted according to ethical guidelines for human research (CAAE: 71280623.7.0000.5053).

DATA ANALYSIS PROCEDURES

Statistical analyses were conducted using SPSS 22. Multiple linear regression analyses (enter method) were performed, and statistical assumptions for this analysis were verified, including multicollinearity and independence of residuals, which showed appropriate indicators according to Field (2013).

Group difference analyses for age and gender variables were also conducted using t-tests for independent samples. Data normality was assessed using the Kolmogorov-Smirnov and Shapiro-Wilk tests, and variance homogeneity was evaluated using Levene's test. Bootstrapping procedures (1000 resamples; 95% BCa CI) were applied in the t-tests to enhance result reliability. This technique corrects normality deviations in the sample distribution and differences in group sizes while also using a 95% confidence interval for mean differences (Haukoos & Lewis, 2008). Additionally, the effect size was calculated using Cohen's d.

RESULTS

DESCRIPTIVE ANALYSES OF FACTORS

The following are the descriptive analyses of the three factors of the mindfulness-based socioemotional competencies scale, as well as the results for the three factors of the job stress scale. The table presents mean values and standard deviations.

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Table 1. Descriptive analyses of competencies and work stress scales

Socioemotional Competency Factors	Mean	Standard Deviation
Body and emotional self-awareness	3.97	0.64
Emotion self-management	3.41	0.69
Relationship skills and compassion	4.15	0.56

Work Stress Factors	Mean	Standard Deviation
Demand	3.65	0.77
Control	3.83	0.70
Social support	3.79	0.78

Source: Author.

T-TEST FOR GENDER AND AGE

Mean difference analyses for gender and age variables were conducted for all factors of the socioemotional competencies and job stress scales. No significant results were found for work stress factors. However, some significant results were identified for socioemotional competency factors regarding age and gender variables, as described below.

For age differences, the variable was categorized into two groups: individuals aged 24 to 44 years and those aged 45 to 69 years. This division was based on the median analysis, ensuring a similar number of participants in both groups. The t-test results for age revealed a significant difference in the emotional self-management factor. Older individuals exhibited higher levels of emotional self-management. The effect size for this difference was moderate (Cohen's d = 0.49).

Regarding gender differences, significant differences were found in two factors. Males exhibited higher emotional self-management scores than females. The effect size for this analysis was moderate (Cohen's d = 0.46). Conversely, females had higher scores in body and emotional self-awareness than males. The effect size for this analysis was small (Cohen's d = 0.33).

Table 2 below presents the statistically significant differences in socioemotional competency factor means for gender and age variables.

Table 2. t-Test for Age and Gender Variables of Socioemotional Competency Factors

Factors	Age	Mean	df	t	d	p
Emotion Self-Management	24 to 44	3.26	201	-3.450	0.49	0.001
	45 to 69	3.59				

Factors	Gender	Mean	df	t	d	p
Emotion Self-Management	Male	3.64	201	-2.4819	0.46	0.001
	Female	3.33				
Body and Emotional Self-Awareness	Male	3.82	201	1.932	0.33	0.001
	Female	4.03				

Source: Authors.

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STATISTICAL CORRELATION ANALYSES

Table 3 below presents the results of statistical correlations between all factors of the mindfulness-based socioemotional competency scales and the factors of the work stress scale. This analysis revealed some statistically significant correlations, albeit with a low effect size. The most notable result was the positive correlation between relationship skills and compassion with social support.

Table 3. Correlations Between Socioemotional Competencies and Work Stress

	Demand	**Control**	**Social Support**
Body and Emotional Self-Awareness	0.143*	0.018	0.136
Emotion Self-Management	-0.193	0.086	0.270**
Relationship Skills and Compassion	0.076	0.090	0.411**

Source: Authors; **. Significant correlations at 0.01. *. Significant correlations at 0.05.

LINEAR REGRESSION ANALYSIS

Three multiple linear regression analyses were conducted to investigate the extent to which the socioemotional competency instrument factors impact work stress levels. Among the three dependent variables analyzed, only the control factor did not show statistically significant results.

Table 4 below presents the predictive coefficients for the dependent variables social support and demand. The main results demonstrated a significant influence of socioemotional competency factors on social support. As observed, the only variable that impacted social support levels was relationship skills and compassion.

Regarding the results related to the dependent variable demand, the indicators showed a significant influence of socioemotional competency factors. As observed, the variables that most impacted demand levels were emotional self-management and body and emotional self-awareness.

Table 4. Regression Between Socioemotional Competencies and Work Stress

Predictors	**Social Support**
Adjusted R^2	Beta
Body and Emotional Self-Awareness	0.00
Emotion Self-Management	0.17
Relationship Skills and Compassion	

Predictors	**Demand**
Adjusted R^2	Beta
Body and Emotional Self-Awareness	0.17
Emotion Self-Management	0.05
Relationship Skills and Compassion	

Source: Authors.

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DISCUSSION

To analyze the scores of the socioemotional skills factors, it is necessary to consider the five-point linear scale used in the psychometric instrument, where the number 1 represents the lowest level of skills and the number 5, the highest level of skills. In the diagnosis of socioemotional skills, it was possible to see that the sample presented higher values of relationship and compassion skills (4.15), than the factors of body and emotional self-awareness skills (3.97) and self-management of emotions (3.41). It is important to highlight that these values were higher than the midpoint of the scale, which is 3.00. Studies on self-management of emotions show that this dimension generally presents lower scores than other dimensions of socioemotional skills (Souza, et al., 2021; Souza & Souza Junior, 2023).

Research on differences between socioemotional skills scores about the variables of gender and age has already been widely conducted. Similar results to this research, regarding differences in scores by gender, can be found in other studies (Coelho et al., 2014; Coelho et al., 2016; Coryn et al., 2009; Merrell et al., 2010). Regarding differences by age group, this can also be found in the literature (Bar-On, 2002; Cabello et al. 2016; Souza, 2022; Van Rooy et al., 2005).

Regarding the diagnosis of stress at work, it was noted that the indicators did not present extreme stress results. Considering the five-point linear scale used in the psychometric instrument, which ranges from 1 to 5, it was possible to verify that the indicators of the demand factor (3.65), control (3.98), and social support (3.79) were very close to the midpoint of the scale, not demonstrating high values of stress at work, considering the positive and negative dimensions of the theoretical model of Alves et al., (2004). Regarding the comparison between groups for the gender variable, the results found in this research corroborate the findings of the studies by Silva (2009), who also found no statistically significant differences between men and women. The results of the regression analyses indicated that the socioemotional skills factors explained 17% of the variation in the social support variable, with relationship skills and compassion being the most influential factors. Regarding the demand variable, the factors explained 5% of the variation, with emphasis on the self-management of emotions factor as the main predictor. These findings are consistent with previous studies on the relationship between socioemotional skills and stress (Karimi et al., 2014; Rakhshani et al., 2018; Ramesar et al., 2009).

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A very relevant factor that can be analyzed is the importance of relationship skills and compassion in their relationship with social support. The correlation index with the largest effect size was found in the relationship between these two variables, with a positive correlation value of $r = 0.411$, $p < 0.001$. In the regression analyses, it was also possible to verify the significant influence of relationship skills and compassion as antecedents of social support. This socioemotional competence factor was the only dimension of the theoretical model that presented a significant influence on the regression model.

CONCLUSION

This research aimed to analyze the correlation and prediction of mindfulness-based socioemotional competence factors on stress at work. In addition, the statistical differences for the variables gender and age were analyzed. The research objectives were achieved and presented important results on the topics studied. The main findings demonstrated that socio-emotional skills are related to and are capable of predicting stress at work. Furthermore, significant statistical differences were found for the variables gender and age for some socioemotional skills factors.

As for the limitations of the study, we can highlight that the collection could have reached a larger number of participants and other sociodemographic variables could have been collected for an analysis of their influences on socioemotional skills and stress at work. The collection carried out through an electronic form allowed for a diverse sample, but without the objective of categorizing the groups studied within variables such as weekly workload, length of service, experience in public or private education, and experience at different educational levels, such as elementary, secondary, and higher education.

About the research agenda, some relevant studies can be suggested based on the findings. Creating training protocols to develop socio-emotional skills based on mindfulness techniques could bring great contributions to the acquisition of socio-emotional skills, and probably, the reduction of stress levels in the trained group. Thus, a randomized clinical study presents itself as a very relevant proposal for future research.

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