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Ilídia Cabral e Diana Mesquita (Coord.)

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Effects of a relaxation intervention on college students' social-emotional competence: study protocol.

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Abstract

Introduction: Higher education path is often marked by personal challenges which often overwhelm students, leading them, in some situations, to emotional exhaustion. Thus, it is essential to promote students' social-emotional competence, allowing them to better deal with the stressful daily events. Social-emotional competence helps students to adapt their ability to feel, understand, and regulate emotions and behaviors, contributing to their well-being and enabling them to establish and maintain positive relationships.

Aim: The present study aims to analyze the effects of a psychomotor relaxation program on college students' social-emotional competence, and in their personal and professional development.

Methods and procedures: The study follows a repeated measures design, which in the participants will be tested on two occasions, 4 weeks apart to establish a baseline measure (pretest 1 and pretest 2), and then will engage in an 8-week psychomotor relaxation program. Participants will be tested again after the intervention program (post-test). The intervention program will comprise two 20-minute sessions per week combining body awareness, muscle tone regulation, and breathing exercises. Students' social-emotional competence will be measured through questionnaires and through the biochemical analysis of salivary cortisol (a stress indicator). The personal and professional development of the participants will be assessed through structured interviews. The collected data will be analyzed through the Statistical Package for the Social Sciences program, in order to assess the impact and effectiveness of the intervention program.

Keywords: Higher Education, Self-Regulation, Stress, Body-Oriented Intervention.

Introduction

A growing body of evidence highlight the higher education years as a developmental period with a variety of social, emotional, and academic challenges that overload students, influencing their mental health and wellbeing. A systematic review of 13 studies showed that higher self-reported levels of stress by college students are associated with poorer quality of life and well-being (Ribeiro et al., 2017). Beside this, research shows that college students have a risk of experiencing mental and physical stress-related problems, that negatively influence students social-emotional competence (Simpson, 2018), and in the other hand, improved social-emotional competence allows students to better management stress (Thomas & Zolkoski, 2020).

Social-emotional competence helps students to adapt their ability to feel, understand, and regulate emotions and behaviors, contributing to their well-being and enabling them to establish and maintain positive relationships, which means, is the ability to manage feelings, manage friendships and solve problems (CASEL ,2013). Social-emotional competence have been shown to be essential to social, emotional, and academic development (Conley, 2015) in the short and long term (Feuerborn & Gueldner, 2019; Taylor et al., 2017).

Relaxation techniques have been argued as valuable approaches to promote social-emotional competence, either through attention regulation (e.g., breathing exercises, meditation), or muscle tone regulation (e.g., muscle stretching, progressive relaxation) (Centeno & Fernandez, 2020; Garner et al., 2018; He et al., 2015; Janjhua et al., 2020; Schonert-Reichl et al., 2015). A growing body of evidence shows the benefits of relaxation intervention programs on college students' social-emotional competence, such as self-regulation (Bond et al., 2013), emotion regulation (Patel, Nivethitha, & Mooventhan, 2018), positive affect (Patel, et al., 2018), self-compassion (Erkin & Aykar, 2021, Patel et al., 2018), and self-efficacy (Brennan, et al., 2016).

The current study aims to examine the impact of a psychomotor relaxation program on college students' social-emotional competence, as well as in their personal and professional development. More specifically, this study aims to: analyze the effects of the intervention program on college students' self-regulation, health and well-being indicators; analyze the perception of the students about the influence of the intervention program on their personal development; and analyze students' perception of the influence and benefits that the intervention program may have in the exercise of the future profession as an early childhood educator.

Method

Study design

Quasi-experimental study that follows a repeated measures design, with one-group pretest-posttest design using a double pretest. To examine the effects of the intervention program, instruments will be collected at baseline (pretest 1), pre-intervention (pretest 2, after 4 weeks), and at the end of the 8-week period (post-test).

The study was approved by the Ethics Committee of the University of Évora and will be carry out under the standards set by the Declaration of Helsinki. The collected data was fully encrypted to ensure the privacy of the participants.

Participants

Participants will be recruited through contact with students from the degree in Basic Education at the University of Évora. Exclusion criteria were (a) not attend the degree in Basic Education; (b) be under 18 or over 30 years old; (c) participating in a similar intervention program within the last 6 months; (d) having a physical condition that can affect the participation in the program; and (e) taking medication that can influence the dependent outcomes. Informed written consent is obtained before pretest 1 takes place.

Outcome measures

Self-regulation

Self-regulation will be assessed through the Portuguese version of the Perceived Stress Scale – 10 (Trigo, et al., 2010). This 10-item self-report questionnaire allows to determine the extent to which life events are perceived as inducing stress, as a result of its unpredictable, uncontrollable or excessive nature, and measures on a five-point scale ("0 = never" to "4 = very often"). To calculate a total score, responses to four positively stated items need to be reversed (items 4, 5, 7 and 8), and then summing the scores of all the items. Higher scores indicate higher levels of perceived stress (Trigo, et al., 2010).

Salivary cortisol (mcg/dL) will be quantified in saliva samples collected at the same time and in the same room where the intervention will be occurred. Samples were collected directly from each participant's mouth for 5 minutes, without stimulation, by passive droll to a polyethylene tube maintained on ice and further maintained at −20 °C, until laboratory analysis.

Health and well-being indicators

Mood states will be obtained through the Portuguese short version of the Profile of Mood States (Viana, Almeida, & Santos, 2001). This self-report questionnaire is comprised of 36 items and measures on a five-point scale ("0 = not at all" to "4=very much") the extent to which six affective states have been felt during the "past week, including today" which belong to following subscales: Tension-Anxiety (e.g., tense; restless), Depression (e.g., unhappy; hopeless), Anger-Hostility (e.g., annoyed; bad tempered), Vigor (e.g., active; lively), Fatigue (e.g., exhausted; worn out) and Confusion (e.g., mixed-up; unable to concentrate). The authors chose the reference to the past week since they considered this was a long enough period to capture people's typical and persistent emotional reactions to daily life events, yet short enough to assess the acute effects of a treatment (McNair, Lorr, & Droppleman, 1992). Each scale is obtained by the average of the respective six items.

Psychological well-being will be assessed through the Portuguese version of the Psychological Well-being Manifestation Measure Scale (Novo, Duarte-Silva, & Peralta, 2004). This self-report questionnaire is comprised of 18 items and measures on a six-point scale ("1 = strongly disagree" to "5 = strongly agree"), composed of six subscales in accordance with the six factors of positive functioning, each with 3 items: Autonomy (e.g., "I tend to be influenced by people with strong opinions"), Environmental mastery (e.g., "I often feel "crushed" by the weight of responsibilities"), Personal growth (e.g., "I feel that, over time, I have developed a lot as a person"), Purpose in life (e.g., "I enjoy making plans for the future and working to make them a reality"), Positive relations with others (e.g., "Maintaining close relationships with others has been difficult and frustrating for me"), and Self-acceptance (e.g., "In many ways I feel disappointed with what I have achieved in life"). The total score of each subscale ranging from 3 to 18, which higher scores for each subscale correspond to higher levels of well-being (Fernandes, Vasconcelos-Raposo, & Teixeira, 2020).

Interoceptive awareness will be obtained through the Portuguese version of the Multidimensional Assessment of Interoceptive Awareness (Machorrinho et al., 2019). This self-report questionnaire is comprised of 33 items and measures on a six-point Likert scale starting in 0 points ("never"), and up to 5 points ("always"), within seven scales: Noticing, consisting of three items (e.g., "I notice when I am uncomfortable in

my body"); Not-Distracting, consisting of four items (e.g., "When I feel pain or discomfort, I try to power through it"); Not-Worrying, consisting of four items (e.g., "I can notice an unpleasant body sensation without worrying about it"); Attention Regulation, consisting of seven items (e.g., "I can maintain awareness of my inner bodily sensations even when there is a lot going on around me"); Emotional Awareness, consisting of five items (e.g., "I notice how my body changes when I am angry"); Self-Regulation, consisting of seven items (e.g., "When I feel overwhelmed I can find a calm place inside"); and Trusting, consisting of three items (e.g., "I am at home in my body"). Higher scores represent more positive interoceptive awareness (Machorrinho et al., 2019).

Personal and professional development

In the ending of the intervention program, interviews using an open-ended questionnaire will be held with each of the participants, in order to analyze students' perceptions about the influence and benefits of the participation in the program on their personal development, as well in their future profession of early childhood educators. The interviews will be analyzed through categorical content analysis, performed mostly through inductive or open procedures (Esteves, 2006).

Intervention program

The psychomotor relaxation program combined body awareness, muscle tone regulation, and breathing exercises, and will comprise two 20-minute sessions per week, for 8 weeks.

Relaxation sessions will begin with an initial dialogue (2 min), a main section combining the relaxation exercises (15 min), and a final dialogue (3 min). During the main section, participants will be laid down on mattresses, listening to and observing a therapist, who will describe and demonstrate the exercises. The sessions will be planned and conducted by a psychomotor therapist.

Results

Statistical analysis

All statistical procedures will be performed using Statistical Package for the Social Sciences software version 27. First, exploratory analyses of the data will be performed to verify the distribution of variables, identification of outliers, missing data, and asymmetries. The normality of the data will be evaluated through a Shapiro–Wilk test. For analyzing the effects of the intervention program on the outcomes studied the paired t test will be used for normal data or the Wilcoxon test for non-normal data. In the comparison between the groups, the unpaired t test or Mann–Whitney test will be used depending on the normality of the data. The delta value (Δ%) between each moment (pretest 1, pretest 2 and post-test) was calculated using the formula: $\Delta\% = [(\text{moment}_{y} - \text{moment}_{y-1})/\text{moment}_{y-1}] \times 100$. For all statistical testes, significance will be set at $p < 0.05$.

Discussion

There is a growing body of evidence supporting the effectiveness of relaxation programs on teachers' social-emotional competence. However, there are few studies focusing on early childhood educators, as well in college students at the beginning of their academic training.

In this way, we hope that the current study may contribute to a better acknowledgement about the importance of the promotion of social-emotional competence in college students, as well provide evidence that relaxation interventions are effective strategies for reducing the usual stress experienced during their academic path. We also pretend encourage students to consider employing these strategies in other situations in life, as they feel appropriate.

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