The mindful trait and the socio-emotional level of education professionals: profile of the Portuguese participants in the European Hand in Hand project

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Abstract

The global cultural transition has generated profound changes in the way of life and social processes. Given cultural diversity, education professionals have faced numerous challenges to work and teach. In challenging learning environments, socio-emotional and mindfulness training can protect and strengthen the skills of educational agents. The goal is to explore and link the mindfulness practices and socio-emotional levels of Portuguese educational professionals. The Portuguese version of the SEC-Q and the FFMQ were applied to 221 education professionals who participated in the Hand in Hand program. Spearman correlation analyses were carried out between the dimensions and scores of both questionnaires, and comparisons were made with sociodemographic variables using the Kruskal-Wallis and Mann-Whitney tests. The participants had a medium-high socio-emotional level (M=4.0; SD=0.37). On the other hand, more modest values were observed for the mindful trait (M=3.25; SD=0.46), with teachers showing difficulties in the dimensions of non-reaction and non-judgment. The FFMQ description dimension appears to be related to the SEC-Q self-concept (r=0.477; p<0.01), global socio-emotional development (r=0.427; p<0.01) and acting with awareness of the FFMQ (r=0,408; p<0,01), while the mindful dimensions of observing and acting with awareness appear to be related to the socio-emotional dimensions of not reacting (r=0.404; p<0.01) and not judging (r=0.436; p<0.01), respectively. The participants have positive socio-emotional levels. However, the data suggests that it is necessary to increase investment in the development of all the mindful dimensions, especially the dimensions of non-judgment and non-reaction.

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O traço mindful e o nível socioemocional dos profissionais de educação: perfil dos participantes portugueses no projeto europeu Hand in Hand

Resumo

A transição global cultural tem provocado alterações profundas no modo de vida e processos sociais. Perante a diversidade cultural, os profissionais de educação têm encontrado inúmeros desafios para trabalhar e ensinar. Em ambientes de aprendizagem desafiantes, a formação socioemocional e de *mindfulness* podem proteger e reforçar as habilidades dos agentes educativos. O objetivo deste estudo é descrever e relacionar o nível *mindfulness* e socioemocional de agentes educativos portugueses que trabalham em contextos culturais diversos e desafiantes. Foi aplicada a versão portuguesa do SEC-Q e do FFMQ a 221 profissionais de educação que participaram no programa *Hand in Hand*. Foram efetuadas análises de correlação de Spearman entre as dimensões e os resultados dos dois questionários, e foram realizadas comparações com variáveis sociodemográficas utilizando o teste Kruskal-Wallis e Mann-Whitney. Os participantes apresentaram um nível socioemocional médio-alto (M=4.0; DP=0.37). Por outro lado, para o traço *mindful* observaram-se valores mais modestos (M=3.25; DP=0.46), denotando-se dificuldades nos docentes nas dimensões de não reação e não julgamento. A dimensão de descrição do FFMQ apresenta uma relação com o autoconceito do SEC-Q (r=0.477; p<0.01), com o desenvolvimento socioemocional global (r=0.427; p<0.01) e com a dimensão do agir com consciência do FFMQ (r=0,408; p<0,01). Por outro lado, as dimensões de observar e agir com consciência do traço *mindful* apresentam associações com as dimensões de não reagir (r=0.404; p<0.01) e de não julgar (r=0.436; p<0.01), respetivamente. Os participantes apresentaram níveis socioemocionais positivos. No entanto, os dados sugerem que é necessário aumentar o investimento no desenvolvimento de todas as dimensões *mindful*, especialmente as dimensões de não julgamento e de não reação.

Palavras-chave: Formação de professores; Educação socioemocional; Escola intercultural; *Mindfulness*; Competências socioemocionais.

El rasgo mindful y el nivel socioemocional de los profesionales de la educación: perfil de los participantes portugueses en el proyecto europeo Hand in Hand

Resumen

La transición cultural mundial ha provocado profundos cambios en los estilos de vida y en los procesos sociales. Ante la diversidad cultural, los profesionales de la educación se han enfrentado a innumerables retos a la hora de trabajar y enseñar. En entornos de aprendizaje difíciles, la formación socioemocional y el *mindfulness* pueden proteger y reforzar las competencias de los agentes educativos. El objetivo de este estudio es describir y relacionar el nivel *mindfulness* y socioemocional de los agentes educativos portugueses. Para ello, se aplicaron la versión portuguesa del SEC-Q y del FFMQ a 221 profesionales de la educación que participaron en el programa Hand in Hand. Se realizaron análisis de correlación de Spearman y comparaciones mediante las pruebas de Kruskal-Wallis y Mann-Whitney. Los participantes presentaron un nivel socioemocional medio-alto (M=4,0; SD=0,37). Por otro lado, se registraron valores más modestos para el rasgo de *mindfulness* (M=3,25; SD=0,46), destacando dificultades en las dimensiones de no reacción y no juicio entre los docentes. La dimensión de descripción del FFMQ parece estar relacionada con el autoconcepto del SEC-Q (r=0,477; p<0,01), el desarrollo socioemocional global (r=0,427; p<0,01) y la actuación consciente del FFMQ (r=0,408; p<0,01).Asimismo, las dimensiones *mindful* de observar y actuar con conciencia parecen estar relacionadas con las dimensiones socioemocionales de no reaccionar (r=0,404; p<0,01) y no juzgar (r=0,436; p<0,01), respectivamente. En general, los participantes mostraron niveles socioemocionales positivos. Sin embargo, los datos sugieren que es necesario aumentar la inversión en el desarrollo de todas las dimensiones del *mindfulness*, especialmente en las de no juicio y la no reacción.

Palabras clave: Formación de profesores; Educación socioemocional; Escuela intercultural; *Mindfulness*; Competencias socioemocionales.

Introduction

Cultural globalization has introduced new motivations and perspectives, driving significant changes in work and daily life. In developed communities, well-being and personal development have become increasingly important. Globally, the growing

interaction between hemispheres has sparked interest in lifestyles and philosophies from culturally distant civilizations that were previously inaccessible.

Due to the change in the global socio-cultural paradigm, individuals have gradually renewed their cultural practices, and modern societies have become multicultural structures where the coexistence of groups with significant differences in values, practices, and beliefs is advocated (Rego Maia & Moreira da Silva, 2019). The rise in cultural diversity has significantly expanded opportunities for individuals to deepen their understanding of life and humanity. This evolving social context has also created both opportunities and challenges for socio-emotional development.

Despite the obvious benefits of cultural diversity, in communities where the values of inclusion and tolerance are not rooted, social problems can increase. Due to the global increase in the risk of intercultural conflicts, there has been a growing appreciation of the mechanisms that protect populations from cultural homogenization, and a growing consciousness of the importance of creating learning environments where cultural interaction (interculturality) is favored, and not just coexistence (multiculturality) (Costa, 2019).

The school has been placed under increased pressure as it is the first institution to absorb cultural diversity. However, in order to aggregate and preserve cultural differences and encourage school leaders towards inclusive and tolerant relationships, it is necessary to organize the institution so that it responds to new challenges, it is essential to create conditions that dignify the work of education professionals and it is fundamental to prepare education professionals socially and emotionally for the challenges of culturally diverse and challenging educational environments (Kozina, 2020).

In Portugal, as a result of sociocultural transformation processes, there has been an increase in cultural diversity in schools in recent years (Costa, 2019), which, combined with other problems in the educational sector, has increased the difficulty of Portuguese education workers. To respond to the difficulties at work and to protect the quality of teaching and learning processes, Portuguese education professionals need to strengthen their socio-emotional skills: increase social awareness, adopt inclusive and tolerant behaviors, act with awareness, be non-judgmental, and increase resilience, among other skills. However, the ongoing scenarios of stress and catastrophe affecting Portugal and the world community, particularly wars, economic crises, Covid-19, and climate change, have compromised the acquisition and development of socio-emotional skills (Gameiro et al., 2023).

The socio-emotional development of education professionals relies on reducing workplace stressors and fostering conditions that enhance emotional management

skills (Jennings & Greenberg, 2009). However, despite the literature showing that investment in schools generates an economic return and protects the most vulnerable populations (Campos & Reis, 2017; Carvalho & Boas, 2018; Carvalho & Silva, 2017; Heckman et al., 2010), in recent decades there has been a lack of investment in the Portuguese education sector (EDUSTAT, 2022), which has contributed to the increase of professional stress, emotional exhaustion and deterioration of the physical and mental health of Portuguese education workers (Matos et al., 2023; Varela et al., 2020). Given this background, now it is necessary to consider all the methods that can be provided safely, universally, and at low cost, and which, simultaneously, contribute in the short and medium term to the transformation of individual and community values, to appease cultural boundaries, to protect the health of school participants and to strength the social and emotional skills of education professionals.

In Portugal, and taking into account the practices available to promote emotional regulation and stress management, it is necessary to consider mindfulness practices. Because of their methodological nature, mindfulness practices can be available at low cost and practiced independently, and because of their ideological nature, these practices contribute to reinforcing values, shaping behavior, and transforming relational contexts. A regular and conscious practice of mindfulness contributes to stress reduction, increased professional self-efficacy, and increased emotional self--regulation (Emerson et al., 2017). At school, all these factors, when combined, allow professionals to act more effectively in socially challenging and culturally diverse educational environments.

Given the origins of mindfulness, empirically it is common to attribute this practice to Western culture, however, the foundations of mindfulness lie in Eastern culture, especially Buddhist philosophy (Fulton et al., 2016). Due to the rapid growth in popularity of the terms mindfulness and meditation, especially in the last 20 years, these concepts are not always presented clearly, and the hierarchical order of the two can, in certain training contexts, appear inverted (Van Dam et al., 2018). For this reason, it is essential to clarify their meanings. So, meditation can be understood as a comprehensive concept that encompasses a varied set of techniques with multiple effects (Matko & Sedlmeier, 2019), while mindfulness is a sub-group of meditation and shares its principles with the Buddhist meditations Vipassana and Zen, for example (Chiesa et al., 2011).

Although there is no universally accepted definition (Van Dam et al., 2018), mindfulness can be defined as reinforced attention to experience or current reality, with restriction of compulsive or automatic behaviors (Brown & Ryan, 2003). Through mindfulness training, the individual can increase their ability to be mentally aware, in

the present moment, of their actions, emotions, and thoughts, without judgment, but with control (Bishop et al., 2004). The distinction between concepts is particularly important in this case, as it allows us to understand that part of the solution to the problems generated by the processes of cultural globalization can be found in the knowledge and practices that result from the processes of cultural transfer.

Today, mindfulness interventions are widely documented, as are their benefits (Gregório & Gouveia, 2011), and in most of the studies the expected effects were found (Lomas et al., 2017). The gains result from the mechanisms intrinsic to the practice, which aim to regulate attention, regulate emotion (reappraisal, exposure, extinction, and reconsolidation), increase body awareness, and change the perspective on the self (Hölzel et al., 2011).

At present, the most widely practiced and studied mindfulness programs are Mindfulness Based Stress Reduction (MBSR), created in 1990 by Jon Kabat-Zinn (Kabat-Zinn, 2013), and Mindfulness Based Cognitive Therapy (MBCT), created in 2001 by Mark Williams, Zindel Segal e John Teasdale (Segal et al., 2002). Both programs consist of 8 weeks of intervention. Still, while MBSR has a broad spectrum of action, impacting psychological morbidity associated with chronic diseases and emotional and behavioral disorders (Bishop et al., 2004), MBCT has more specific action objectives, it is the result of a combination of cognitive-behavioral therapy and MBSR modeling. It is aimed primarily to control and prevent depression. (Lao et al., 2016). In practice, both programs integrate focused attention (maintaining focus on an internal or external object) and open monitoring (focusing on experiences as they arise) (Sumantry & Stewart, 2021).

Based on the results of the systematic review and meta-analysis carried out by Gómez-Olmedo et al. (2020), which indicates that mindfulness is a method that influences socio-emotional development in three aspects (emotional regulation, empathy and social bonding, and resilience), this study aims to describe the characteristics of Portuguese education professionals who took part in the Hand and Hand project and who worked in challenging and culturally diverse environments and to describe and relate the socio-emotional level and mindful trait of these participants. The proposed analysis was carried out as part of the Hand in Hand project: Empowering teachers across Europe to deal with the social, emotional and diversity challenges related to their careers. The Hand in Hand project is a European public policy initiative implemented in seven countries:Austria, Croatia, Denmark, Germany, Slovenia, Portugal and Sweden. Its main goals are to promote the development of social and emotional competences and to prepare teachers for diverse and challen-

ging educational contexts (Kozina, 2020). In Portugal, the program also introduced mindfulness practices, including mindfulness meditation, Qigong, and Taichi exercises

Method

Participants

All the participants voluntarily joined the *Hand in Hand project: Empowering teachers across Europe to deal with the social, emotional and diversity challenges related to their careers*. A total of 221 Portuguese education professionals took part. Participants include teaching and non-teaching staff.

The participants' ages ranged from 24 to 68 (M=50.1, SD=7.6). They all worked in public education institutions in the 2022/2023 academic year, . All the participants were Portuguese, the majority were women (94.6%; N=209) and lived in the Lisbon metropolitan area (67.0%; N=148), and approximately one-sixth were displaced from their place of residence (15.4%; N=34) (Table 1).

In total, 11 sub-regions of the national territory were represented and, in addition to the Lisbon metropolitan area, the participants lived in the center region (18.1%; N=40), the Alentejo region (3.6%; N=8), the Algarve region (6.8%; N=15) and the Azores region (4.5%; N=10).

Table 1
Descriptive analysis of the place of residence of the participants (N=221)

Variable	n	%
Displaced from your usual residence?		
Yes	34	15.4
No	187	84.6
Place of residence		
Alentejo litoral	7	3.2
Algarve	15	6.8
Área Metropolitana de Lisboa	146	66.1
Baixo Alentejo	1	0.5
Beiras e Serra da Estrela	1	0.5
Lezíria do Tejo	2	0.9
Região Autónoma dos Açores	10	4.5
Região de Aveiro	15	6.8
Região de Coimbra	1	0.5
Região de Leiria	16	7.2
Oeste	7	3.2

In terms of contractual situation, 88.2% (N=195) of the participants had permanent contracts with their schools. Most participants were teachers (82.4%; N=182),while 4.1% (N=9) held executive responsibilities, 11.3% (N=25) were health professionals, and 9.9% (N=22) were involved in coordination activities. Among the health professionals, psychologists were the largest group (N=23), followed by school health nurses and occupational therapists. In terms of academic qualifications, 74.7% (N=165) held a degree, 22.2% (N=49) had a master's degree, and only 3 participants had a completed doctorate.

All scientific fields were represented in the teachers' training and teaching areas. Of those who were currently teaching, 29.1% (N=53) taught in the 1st cycle, 10.4% (N=19) and 18.7% (N=34) taught in the 2nd cycle and 3rd cycle, respectively, and 25.3% (N=46) taught in secondary and/or professional education. The sample also included pre-schools (8.8%, N=16), special education (7.1%; N=13), and arts teachers (0.6%; N=1).

Instruments

In this study, we report the results of data collected using the Social and Emotional Competencies Questionnaire (SEC-Q), the Five Facets Mindfulness Questionnaire (FFMQ), and the sociodemographic characterization questionnaire.

This study employed the Portuguese version of the SEC-Q, translated by Lobo, Almeida and Basto-Pereira, which demonstrated satisfactory properties confirming the initial model's factor structure (Lobo, 2020). The SEC-Q allows the individual to evaluate their socio-emotional level over the past 12 months. To assess the mindful dimensions of the participants (observation, description, acting with awareness, non-judgment, and non-reaction) was used the FFMQ (Baer et al., 2006), in the Portuguese version adapted by Gregório and Gouveia (2011). After psychometric analysis, it was also verified that this instrument is suitable for the Portuguese population (Gregório & Gouveia, 2011).

Procedure

This study used an analytical cross-sectional design. The intervention was carried out as part of the Hand in Hand project: Empowering teachers across Europe to deal with the social, emotional and diversity challenges related to their careers.

Data collection and the training of educational agents took place between September 2022 and December 2022. All the questionnaires were completed in person

before the practical training. Before taking part in the project Hand in Hand, the participants authorized the use of their data for research purposes by completing a free, prior, and informed consent form. All procedures guaranteeing the confidentiality and anonymity of the data were followed. After the training, between January 2023 and July 2023, the participants built and implemented programs in their schools to develop socio-emotional and mindful skills in pupils and/or educational professionals.

Data analysis

A descriptive analysis of sociodemographic data, socio-emotional level, and mindfulness dimensions was carried out. To analyze the reliability of the SEC-Q and FFMQ items, Cronbach's alpha was measured and a corrected value of 0.84 and 0.81 was obtained, respectively. Spearman's correlation analyses were then carried out between the categories and scores of the SEC-Q and FFMQ, as not all the categories in the questionnaires were normally distributed. The Kruskal-Wallis and Mann-Whitney non-parametric tests were used to compare the medians of the SEC-Q and FFMQ categories and scores between sociodemographic variables.

When comparing the FFMQ and the SEC-Q, it is necessary to consider the particularities of each instrument. In total, the FFMQ consists of 39 items, and the SEC-Q of 16 items. Although both questionnaires use five values to analyze each of their items, the meaning of the values is different and some FFMQ items are presented in reverse. To calculate the categories and the final FFMQ score, some items had to be coded and inverted: 3, 5, 8, 10, 12, 13, 14, 16, 17, 18, 22, 23, 25, 28, 30, 34, 35, 38, 39.

In order to compare the age group medians between the factors of the two questionnaires, it was necessary to construct the age group variable. Quartile values were used as the intermediate points of the variable.

The data was processed using the SPSS Statistics software, version 28.0.

Results

Descriptive analysis of the socio-emotional level and mindfulness trait

The level of social and emotional competences of the participants in this study was medium-high (M=4.00; SD=0.37) and the level of mindfulness observed was medium (M=3.25; SD=0.46) (Table 2).

Table 2

Descriptive analysis of SEC-Q and FFMQ categories and scores (N=221)

Categories	M	Med	SD	Min	Max
SEC-Q					
Self-concept	3.99	4.00	0.50	2.00	5.00
Self-management and motivation	3.90	4.00	0.59	1.67	5.00
Social awareness and pro-social behavior	4.07	4.00	0.43	2.50	5.00
Decision-making	3.98	4.00	0.66	2.00	5.00
Score SEC-Q	4.00	4.00	0.37	2.75	4.88
FFMQ					
Observation	3.48	3.50	0.71	1.38	5.00
Description	3.41	3.25	0.64	1.88	5.00
Acting with awareness	3.23	3.25	0.79	1.00	4.88
Non-judgment	3.06	3.00	0.77	1.00	5.00
Non-reaction	3.06	3.00	0.54	1.29	4.86
Score FFMQ	3.25	3.21	0.46	1.85	4.85

Note: M - Mean; Med - Median; SD - Standard deviation; Min - Minimum; Max - Maximum

Considering the factors in both questionnaires, the highest values in the SEC-Q were observed in *Social awareness and pro-social behavior* (*M*=4.07; *SD*=0.43), and in the FFMQ in *Observation* (*M*=3.48; *SD*=0.71) and *Description* (*M*=3.41; *SD*=0.64). Regarding the lower values, the *Self-management and motivation* category (*M*=3.90; *SD*=0.59) had the lowest value on the SEC-Q, and the *Non-judgmental* (*M*=3.06; *SD*=0.77) and *Non-reactive* (*M*=3.06; *SD*=0.54) dimensions had the lowest values on the FFMQ (Table 2).

Correlations analysis between socio-emotional competences and mindful facets

As expected, all the SEC-Q and FFMQ categories showed moderate positive or strong positive relationships with the scores on the respective questionnaires. In the SEC-Q, the relationships between the categories and the score were all strong positives (above 0.65 and in the FFMQ the relationships were between 0.51 and 0.77 (table 3).

In the relationships between the categories referring to the same questionnaire, different scenarios were observed, especially in the FFMQ. In the questionnaire that allowed participants to self-assess social and emotional competences, the correlations were all weak positives, with the exception of the relationships between *Self-concept* and *Self-management and motivation* (*r*=0.39) and *Social awareness and Pro-social behavior* (*r*=0.40), which were moderately positive. All the correlations between the SEC-Q categories were significant at the 0.01 level (Table 3).

Table 3
Descriptive analysis of SEC-Q and FFMQ categories and scores (N=221)

	SD	SMM	SAPB	DM	O	D	AA	NJ	NR	SM
SSE	0.697**	0.666**	0.770**	0.649**	0.311**	0.427**	0.378**	0.185**	0,350**	0.484**
SC		0.388**	0.398**	0.293**	0.329**	0.477**	0.254**	0.164**	0.334**	0.463**
SMM			0.340**	0.305**	0.259**	0.311**	0.372**	0.225**	0.301**	0.433**
SAPB				0.326**	0.126	0.258**	0.166*	-0.07	0.152*	0.197**
DM					0.240**	0.224**	0.333**	0.180**	0.273**	0.373**
O						0.380**	0.340**	-0.003	0.404**	0.622**
D							0.408**	0.245**	0.299**	0.691**
AA								0.436**	0.212**	0.770**
NJ									0.058	0.564**
NR										0.505**

Note: SSE - SEC-Q Score; SC - SEC-Q Self-concept; SMM - SEC-Q Self-management and motivation; SAPB - SEC-Q Social awareness and pro-social behavior; DM - SEC-Q Decision making; O - FFMQ Observation; D - FFMQ Description; AA - FFMQ Acting with awareness; NJ - FFMQ Non-judgement; NR - FFMQ Non-reaction; SM - FFMQ Score
* the correlation is significant at the 0.05 level; ** the correlation is significant at the 0.01 level

In the FFMQ, there were moderate positive relationships between the Acting with Awareness dimension and the *Non-judgment* ($r=0.44$) and *Description* ($r=0.41$) factors (Table 3). Similarly, moderate relationships were found between the *Observation* factor and *Not reacting* ($r=0.40$). Weak relationships were observed for the remaining interactions.

Various levels of correlation were observed between the categories and the scores on the SEC-Q and FFMQ scales. Of particular note are the moderate positive relationships between FFMQ *Description and Self-Concept* ($r=0.48$) and SEC-Q score ($r=0.43$), and between FFMQ score and *Self-Concept* ($r=0.46$) and SEC-Q *Self-management and Motivation* ($r=0.43$). Similarly, the scores of the two questionnaires show a moderate positive relationship ($r=0.48$). Regarding the other crossings, the values are not statistically significant, or the relationships are weak (table 3).

Comparisons of socio-emotional and mindful categories according to sociodemographic variables

It was observed that the 'age group' variable was associated with Social Awareness and pro-social behavior in the SEC-Q ($H=10.27$; $p=0.016$) and with Action with awareness in the FFMQ ($H=7.83$; $p=0.050$) (Table 4). According to the post-hoc analysis, the [57;68] and [45;50] age groups had different medians for the variables Social awareness and pro-social behavior from the SEC-Q ($H=34.88$; $p=0.030$) and Action with awareness from the FFMQ ($H=-33.36$; $p=0.046$). Thus, the median for the age group [57;68] tends to be higher for the Action with awareness dimension

of the FFMQ when compared to the age group [45;50], but, conversely, the median for the age group [45;50] tends to be higher for the Social awareness and pro-social behavior dimension of the SEC-Q.

It was also observed that the 'educational qualification' variable was associated with the FFMQ Observation (H=13.89; p=0.003), FFMQ Description (H=14.91; p=0.002) and FFMQ Score (H=11.17; p=0.011). For educational qualifications, four values were considered (doctorate, master's degree, and others). In this case, and after post-hoc analysis, the median observed for doctoral graduates for the FFMQ Observation variable was different from the median observed for university graduates (H=-101.56; p=0.046) and for participants with other levels of education (H=1440.67; p=0.023). Considering the graduates, it was also found that the median FFMQ Description was different from the median observed for master's degree holders (H=-29.69; p=0.025) and that the median FFMQ Score was different from that pre-sented by doctorate holders (H=-105.19; p=0.028). In all the categories, the medians found for doctoral graduates were higher than those for the other qualifications. When comparing the Description of the FFMQ, the average for master's graduates was higher than for graduates (Table 4).

Table 4
Comparison of SEC-Q and FFMQ categories and scores according to the variables 'age group', 'educational qualification', 'currently working as a teacher?' and gender: test and test value for difference in medians

Categories	age group		academic qualification		teacher?		sex	
	H	p-value	H	p-value	U	p-value	U	p-value
SEC-Q								
SC	5.952	0.114	6.164	0.104	2573.5	0.006*	1194.5	0.778
SMM	0.244	0.970	4.473	0.215	3483.0	0.853	1086.0	0.427
SAPB	10.270	0.016*	1.518	0.678	2675.0	0.015*	1150.0	0.627
DM	0.857	0.836	5.522	0.137	3136.0	0.245	826.5	0.043*
Score SE	5.460	0.141	3.630	0.304	2623.5	0.011*	986.0	0.213
FFMQ								
O	0.493	0.920	13.885	0.003*	3691.0	0.694	836.5	0.052
D	0.472	0.925	14.905	0.002*	2611.5	0.010*	1308.0	0.802
AA	7.831	0.050*	6.996	0,720	3435.5	0.754	905.5	0.105
NJ	3.728	0.292	1.266	0,737	2453.0	0.002*	1118.5	0.529
NR	5.190	0.158	7.061	0.070	3205.0	0.340	957.5	0.167
Score M	2.233	0.525	11.170	0.011*	2884.5	0.067	895.0	0.069

Note: SC - SEC-Q Self-concept; SMM - SEC-Q Self-management and motivation; SAPB - SEC-Q Social awareness and pro-social behavior; DM - SEC-Q Decision making; Score SE - SEC-Q Score; O - FFMQ Observation; D - FFMQ Description; AA - FFMQ Acting with awareness; NJ - FFMQ Non-judgement; NR - FFMQ Non-reaction; Score M - FFMQ Score
* the comparison is significant at the 0.05 level

For the variables *Self-concept* (U=2573.5; p=0.006), *Social awareness and pro-social behavior* (U=2675; p=0.015), and SEC-Q Score (U=2623.5; p=0.011), and for the variables *Description* (U=2611.5; p=0.010) and *Non-judgment* (U=2453; p=0.002) of the FFMQ, significant differences were observed according to the variable 'Do you currently work as a teacher?', coded with the values 'no; yes' (Table 4). Similarly, for the SEC-Q variable *Decision-making*, significant differences were observed according to gender (U=826.5 p=0.043). Given the differences presented, the median values were lower in all categories of those currently working as teachers, and in the SEC-Q *Decision-making*, men had higher medians when compared to women.

Median comparison tests were also applied to the variables 'level of education', 'place of residence', 'main role in the school', 'contractual situation', and 'voluntary activities', but no statistically significant differences were observed.

Discussion

In general, the educational agents who took part in this study have positive (medium-high) levels of socio-emotional development. In comparison with the study carried out by Gameiro et al. (2023), which included 1139 participants aged between 16 and 85 who had lived in Portugal for more than a year, the score observed for the SEC-Q was equivalent (M=3.92; SD=0.45), i.e. the participants had a medium-high socio-emotional level.

On the other hand, based on the values that allow us to define the mindfulness trait of the participants in this study, the data indicated that mindfulness skills need to be strengthened. Considering the dimensions of this construct, the participants have difficulties in non-reaction and non-judgment, that is, the ability to resist and prevent negative thoughts and emotions from affecting behavior, and the ability to prevent internal judgment processes from affecting happiness and a positive state of mind, respectively. According to Carpenter et al. (2019), these two factors are especially important for defining the mindfulness trait, since it is associated with the individual's ability to maintain awareness in the present moment, without value judgments and reactive actions. According to the data presented in the meta-analysis carried out by the same authors, the difficulties presented in the non-judgmental dimension can be particularly negative to the mental health of educational agents, since this factor and the acting with awareness dimension appear to be strongly related to the reduction of psychological suffering. As previously mentioned, Portuguese teachers currently have alarming numbers of psychological distress (Matos et al., 2023).

Regarding the dimensions of mindfulness, the data seems to indicate that the greater the capacity for observation (mastery of sensory, internal, and external awareness), the greater the capacity for non-reactivity of educational professionals. Whereas the greater the capacity for non-judgment and describing experiences, the greater the capacity of educational professionals to act with awareness, i.e. to act properly in the present based on quick judgment and non-reactivity. These data are similar to and reinforce the results presented in the systematic review and meta--analysis performed by Mattes (2019), which found that the success of interventions to promote the mindfulness trait is directly related to the development of two dimensions: observation and non-judgment.

Considering the dimensions of mindfulness of the participants in this study, the description appears to be positively related to self-concept and overall socio-emotional level. These data suggest that the ability of educational professionals to label experiences and present them positively to themselves and others is associated with the ability to perceive and represent the self reliably. Similarly, the global trait of mindfulness appears to be related to self-concept, self-management, motivation, and global levels of socio-emotional development. All this data corroborates the literature, since mindfulness interventions are seen as beneficial for increasing accuracy in emotional regulation, and their mechanisms aim to reinforce and change the perspective of the self by changing individual mentality (Hölzel et al., 2011; Sumantry & Stewart, 2021). For Lomas et al. (2017), the benefits of mindfulness for education professionals are evident since a mindful mindset increases stress management capacity, benefits the formation of skills such as empathy and resilience, promotes well-being and job satisfaction, and contributes to improved professional performance.

Through the practice of mindfulness, individuals can disengage from ingrained behaviors and habits, and this can be especially advantageous when the behaviors and habits are unhealthy (Emerson et al., 2017). At school, the evidence suggests that the mindful trait not only produces gains in educators but also in younger populations, i.e. in students whose behavior tends towards indiscipline or violence (Zelazo & Lyons, 2012; Zenner et al., 2014). In this study, it was found that age is also a factor that makes a difference between educational professionals, since older professionals tend to have a greater capacity to act with awareness, perhaps as a result of their greater professional experience. On the other hand, younger education professionals tend to show greater social awareness and pro-social behavior. This difference can be attributed to younger education professionals having better overall health and higher levels of physical and mental energy, enabling them to work more effectively with challenging population groups.

Regarding the teachers' professional qualifications, it was found that higher levels of qualification (especially a doctorate) benefit the ability to observe, describe, and the overall index of mindful development. In other words, levels of qualification appear to influence the mindfulness trait, and this finding is particularly important as it justifies continuing teacher training, not only for the development of professional and pedagogical skills but also for the protection of health and quality of life.

According to the literature, mindfulness generates neuropsychological effects and, depending on the stage of training the practitioner is in, different cognitive benefits are observed (Chiesa et al., 2011). Among the many effects, there are gains in generalized attention (speed and precision), executive control networks, and alertness networks (Sumantry & Stewart, 2021), as well as a relationship with the reduction of negative affective symptoms (Carpenter et al., 2019). However, according to Chiesa et al. (2011), studies show that the ability to maintain attention is greater in individuals with experience in meditation, and that the number of minutes of meditation per day and the total amount of practice is positively related to improved cognitive abilities and structural changes in the brain. In addition to the aforementioned benefits, gains have also been observed in relation to cortisol levels and blood pressure, immune functions, chronic pain, substance abuse, sports performance, physical symptoms or illness, and mental health including anxiety, depression, psychosis, and other conditions, among others (Hölzel et al., 2011; Mattes, 2019).

Although cultural diversity generates opportunities for expanding human knowledge about life and society, institutions and individuals need to be prepared to promote environments of healthy interaction, inclusion, and cultural tolerance. Given the cultural transformations experienced in recent years in Portuguese schools, it is currently necessary to create measures that support the activity of education professionals within the classroom and in the educational space in general, since cultural diversity creates risks related to insensitivity, hegemony, misunderstanding, conflict and cultural exclusion (Erbas, 2022). Therefore, the Portuguese educational model needs to be rethought, with a change in the cultural paradigm at school and a transition from the multicultural model to the intercultural model.

At present, the literature suggests that mindfulness meditation, a meditative practice that stems from processes of cultural exchange (Van Dam et al., 2018), is a viable solution for strengthening socio-emotional skills at school (Feuerborn & Gueldner, 2019; Gómez-Olmedo et al., 2020), promoting health and quality of life (Lao et al., 2016), balancing personal and work relationships (Hölzel et al., 2011) and for shaping behavior and improving academic performance (Lomas et al., 2017; Zenner et al., 2014). In this study, robust relationships were found between the mindfulness

trait and the socio-emotional dimensions of Portuguese educational professionals, which are in line with the most recent evidence.

According to Brown and Ryan (2003), mindfulness, as well as socio-emotional competences (Choudhury, 2021), appear to be related to other constructs, such as emotional intelligence. In the educational context, studies suggest that educational strategies that promote the development of mindful attitudes appear to be a safe solution, with satisfactory levels of acceptance by the participants and with positive effects on cognitive performance, resilience, coping strategies, and stress resistance (Zenner et al., 2014). Regarding interventions specifically aimed at teachers, studies point to gains related to emotion regulation and increased professional self-efficacy (Emerson et al., 2017). In stressful and culturally challenging educational environments, all these gains appear to be decisive for professional effectiveness, problem-solving capacity, and the promotion of health and quality of life for the entire population.

Although the goals of mindfulness appear ambitious and experience-oriented, the aims of this meditative practice should nevertheless be relativized because individuals vary in their propensity and willingness to be mindful, and because of the inexhaustible number of events and factors - physical, biological, psychological, and otherwise - that interact with the human body and mind at all times (Brown & Ryan, 2003). Associated with this information, the studies show that it is not simply participation in programs that produce the expected effects, but the quality and quantity of meditation practice (Chiesa et al., 2011). For this reason, rather than promoting a universal practice, it is necessary to analyze the intrinsic abilities of individuals to adopt the method and build programs adapted to the different ages, contexts, and intrinsic abilities of the participants.

Since most mindfulness programs are implemented in the classroom (Felver et al., 2016), the prospect of universalizing interventions is positive, as the feasibility of applying the practices in the classroom contributes to universal availability. However, given the difficulties found in the field related to the heterogeneity of the samples, the different resources, the different levels of knowledge of the promoters of the interventions, and the complexity of evaluating the results, some barriers significantly hinder the construction of reliable intervention and research models (Felver et al., 2016). To overcome this adversity, Emerson et al. (2017) suggests the creation of a model of interventions based on mindfulness, where decentralization, attention regulation and increased self-awareness and self-compassion produce intermediate effects on emotion regulation, work self-efficacy and stress management. However, according to the authors, it is essential to create complementary measures to improve

teachers' working conditions and mitigate the toxic effects that unfavorable working conditions have on workers' health, quality of life, job satisfaction and motivation.

In summary, the global scenario of cultural amalgamation can contribute to increasing levels of empathy, understanding of others and showing respect, individuals can acquire new experiences and, through learning new cultural components, populations can renew individual perspectives on life and society has the opportunity to open its collective mind to the idea of unity in diversity (Erbas, 2022). In order to increase engagement in learning and develop the socio-emotional skills of school participants it is necessary to transform the school culture since cultural structures, functions and processes are the basis for the formation of socio-emotional skills (Hecht & Shin, 2015). If investment in these areas is neglected, the school, as an institution that unites cultures, can contribute to the spread of conflicts inside and outside the school, and to the rise in movements that promote exclusion, segregation and cultural elimination.

Limitations

Since the Hand in Hand project is a program to promote socio-emotional learning with voluntary registration, it is expected that some participants have had previous experiences related to the topic and pre-formed knowledge. This may have influenced some of the results, especially those related to the analysis of socio-emotional indicators. Regarding the mindful trait, the participants were only informed that they would be trained in mindfulness after the training had started. For this reason, we expect less influence from the bias factors on the final values of mindfulness facets. Although the results are relevant to the sample and the sample included groups from all over the country, the data cannot be extrapolated to the Portuguese population because the probabilistic sampling methods were not applied. Even so, the results point to the importance of replicating the study in a representative sample of the Portuguese population, ensuring comparative analysis between two factors: the existence or non-existence of previous experience related to socio-emotional and mindfulness training.

Conclusion

The Portuguese participants in the Hand in Hand project were mostly women and teachers, who had stable employment contracts, lived in the Lisbon metropolitan area, and had a degree. In terms of socio-emotional skills, the participants had a medium-high level; however, in terms of the mindfulness trait, the participants showed modest values, especially in the dimensions of non-judgment and non-reaction.

Given the results of the relations and associations, the data points to the necessity of increasing investment in the development of self-concept and mindful abilities of describing, observing, and acting with awareness. For all these factors, significant relations were observed between the different dimensions, and significant associations were observed with sociodemographic variables.

Overall, the general level of socio-emotional development and the mindfulness trait also appear to be factors that enhance the development of various socio-emotional and mindfulness dimensions. In this study, robust relationships were found between the socio-emotional score and the mindful description, and between the mindful score, the self-concept and self-management and motivation. These results, combined with the challenges educators face in diverse and demanding learning environments, highlight the need for strategies that foster the simultaneous development of their socio-emotional and mindfulness skills.

Funding

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