

EMOTIONAL INTELLIGENCE: PORTRAIT AND SIGNIFICANCE IN HEALTHCARE WORKERS (FITNESS CENTER WORKERS, SURGEONS AND PODIATRIST)

INTELIGENCIA EMOCIONAL: RETRATO E IMPORTANCIA EN PROFESIONALES DE LA SALUD (TRABAJADORES DEL SECTOR FITNESS, CIRUJANOS Y PODÓLOGOS)

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ABSTRACT

Emotional intelligence (EI) refers to how people perceive, value, and show emotions, as well as those personal, cognitive, and/or social skills which define the efficacy of the people to understanding and confronting the daily problems. Up until a few decades ago, there wasn't much knowledge about EI. Nonetheless, there has recently been increasing attention from the research community for identifying the relationship between EI and health. In this review, results of different investigations about EI and its relationships with health and job performance in samples such as health (fitness center workers, surgeons, and podiatrists) are presented. Besides, some key aspects are proposed to improve the EI aiming at reducing stress, enhancing social and mental health, and increasing human resilience to different stressor agents (workload, disease or death of a relative, etc.).

KEYWORDS: Education, emotion, emotional intelligence, health, stress

RESUMEN

La inteligencia emocional (IE) se refiere a la forma en que las personas perciben, valoran y expresan emociones, y a las habilidades personales, cognitivas y/o sociales que determinan la eficacia de las personas para comprender y afrontar los problemas diarios. Hasta hace unas décadas, poco se sabía acerca de la IE ya que, se consideraba a la inteligencia cognitiva como el único predictor de "éxito" en una persona. No obstante, en los últimos años, ha habido un creciente interés de los investigadores por identificar las connotaciones que tiene la IE con la salud. En esta revisión se muestran los resultados de diferentes investigaciones sobre IE y variables relacionadas con la salud y el desempeño laboral en poblaciones poco estudiadas relacionadas con la salud (trabajadores del sector *fitness*, cirujanos y podólogos). Se proponen algunas claves para mejorar la IE con el objetivo de reducir el estrés, mejorar la salud mental y social y aumentar la eficacia del afrontamiento ante diferentes agentes estresores (carga laboral, enfermedad o muerte de un familiar, etc.).

PALABRAS CLAVE: Educación, emoción, estrés, inteligencia emocional, salud

Translation by **Paula González** (Universidad Católica Andrés Bello, Venezuela).



Cómo citar el artículo:

Simón Grima, J. (2020). Emotional intelligence: portrait and significance in healthcare workers (fitness center workers, surgeons, and podiatrist). *Revista de Ciencias de la Comunicación e Información*, 25(2), 23-40.
doi: [http://doi.org/10.35742/rcci.2020.25\(2\).23-40](http://doi.org/10.35742/rcci.2020.25(2).23-40)

1. INTRODUCTION

The concept of intelligence has been defined by many authors in the scientific literature, and in humans, it has been studied in depth for over a century (Nisbett et al. 2012). However, scientists such as William H. Calvin believe that such a concept can never be defined incontestably because it is an open word, just like consciousness (Calvin, 1994). Along the same lines, other authors also affirm that "intelligence" is very complex to define and very problematic to measure (Arsuaga and Martínez, 1999). However, in general terms, there is a definition that has obtained wide acceptance in the scientific community (Nisbett et al., 2012). This determines that intelligence is "the ability to reason, plan, solve problems, think abstractly, understand complex ideas, learn quickly, and learn from experience. So it's not just about book learning, limited academic ability, or test-taking intelligence. Rather, it reflects a broader and deeper capacity to understand our environment: "understand", "make sense" of things or "figure out what to do" (Gottfredson 1997, p. 13). Therefore, it seems that general intelligence, as defined in humans or non-human animals, emphasizes reasoning ability and behavioral flexibility (Burkart et al., 2017). Intelligence is also believed to involve acquiring new knowledge through interaction with the environment (physical and social), as well as solving novel and unknown problems that arise (Rumbaugh & Washburn, 2003).

Regarding the origin of human intelligence, there is no scientific consensus, nor is it proven that it has developed after a slow and continuous process or that it exists thanks to a supernatural cause. Both theories were created by Darwin and Wallace, respectively (Plotkin, 1997; Burkart et al., 2017). Beyond this fact, cognition has been defined by the American Psychological Association as "a person's abilities to learn, remember, reason, solve problems, and make sound judgments, particularly in contrast to emotional intelligence." Regarding this, some authors maintain that general intelligence is a statistical abstraction, not a cognitive trait, and that the former does not guarantee inferences about the nature or evolution of the latter (Burkart et al., 2017).

Intelligence began to be evaluated with the publication of the Binet-Simon intelligence metric scale (1905). That moment, considered historic in the field of psychology and psychometry, was the starting point for the construction, standardization, adaptation, and publication of a large number of intelligence tests and scales to measure the level of intelligence in people. The assessment of a global capacity or intelligence IQ is intended to be carried out from the observation of a set of cognitive functions supposedly related to it.

Traditionally, it has always been considered that cognitive intelligence is a quality that is located in the highest rung of the human construct, leaving others in lower rungs. However, empiricism and current experience have shown that being cognitively intelligent alone does not guarantee academic, professional, and/or personal success (Goleman, 1995; Jiménez and López-Zafra, 2009). Besides, recently, the emotional aspect has become more important in both the work and educational spheres (Fernández-Berrocal and Aranda, 2008). Authors such as Lazarus (1982) and Zajonc (1980, 1984) debated about it and raised the issue of dissociation. Zajonc considered the emotional system as a strong antagonist of the cognitive system. Lazarus, for his part, integrated it into a cognitive context, but different from the common one.

2. OBJECTIVES

One of the objectives of this article is to explain and develop the concept of emotional intelligence, assessment instruments and keys for its improvement and exercise, as well as to make a comparison between it and cognitive intelligence. Besides, it is proposed as a secondary objective to review the scientific literature regarding the influence of emotional intelligence on different variables (relationship with the user/patient, empathy, general stress, burnout, job satisfaction, etc.) in some of the health professionals that have been less studied concerning it, such as professionals in the fitness sector, surgeons, and podiatrists.

3. EMOTIONAL INTELLIGENCE

Emotional intelligence (EI) is a concept that was popularized by Goleman (1995) and is defined as the ability to perceive, assimilate, understand and regulate one's own emotions and those of others (Mayer and Salovey, 1997; Petrides and Furnham, 2003). Despite this definition, EI is conceptualized by many authors and in very different ways. We found a last definition of EI formulated recently by Barrientos (2019), who defines it as the ability to positively control and manage one's own and other people's emotions, in any setting, where experiences and changes occur as part of the personal learning process.

The importance of EI lies in the fact that emotions are an essential aspect of human nature and stimulate motivation towards behavior so that this can be a powerful indicator of success (in many aspects of life) in the future (Goleman, 1995). In turn, EI is an important predictor of the social and personal functioning of human beings and, more specifically, of mental and social health (Martins et al., 2010). It should be noted that emotions are focused on subjective experiences that people represent, in part, with thousands of semantic terms, and this geometric organization has provoked an intense debate (Cowen and Keltner, 2017).

In today's society, emotions play a very relevant cultural role (Zaccagnini, 2008). During the 1970s, psychologist Paul Eckman identified six basic emotions that, in his opinion, had a universal experience in all human cultures. The emotions he identified were happiness, sadness, disgust, fear, surprise, and anger. He later expanded his list of basic emotions to include pride, pity, shame, and excitement (Robinson et al., 2013).

For his part, the psychologist Robert Plutchik created an “emotion wheel” that worked in a similar way to the color wheel. Emotions could combine to form different feelings, just as colors can be mixed in a palette. The most basic emotions would resemble building blocks, and the most complex would be combinations of the most basic. For example, joy and trust (basic emotions) would combine to create love (complex emotion) (Plutchik, 1991, 2001; Chafale and Pimpalkar, 2014).

A recent 2017 study by Cowen and Keltner, suggests that there are far more basic emotions than previously believed. These researchers identified 27 different categories of emotions. However, rather than being completely different, the researchers found that people experience these emotions along a gradient.

Just as we do not all have the same IQ, we are not similar in terms of EI either, as people differ in the way they can identify, express, use, and regulate their emotions and those of others (Petrides et al., 2016).

Different EI models have been proposed, which have been called “skill model” (Mayer et al., 2008) and “mixed or trait models”, whose main author is Bar-on (1997) (figure 1). Other proposals include variables such as personality and other abilities (Goleman, 2001; Petrides and Furnham, 2006).

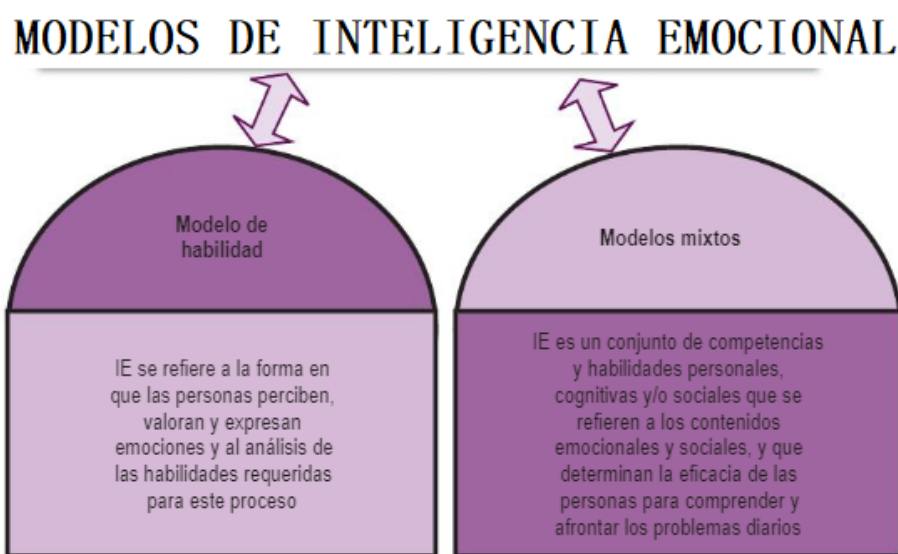


Figure 1: Models of emotional intelligence.
Source: Domínguez and Cameselle (2015)

3.1. Assessment of emotional intelligence

In the opinion of Salovey and Mayer (1990), EI should be evaluated through problem-solving exercises. However, the implementation of EI, as a skill, is complicated due to the subjectivity of emotional experiences (Robinson and Clore, 2002). An alternative for its evaluation could be to conceptualize it as a measurable trait through a self-report that reflects the subjective perception of a subject’s emotional abilities (Schutte et al., 2001; Brackett and Geher, 2006). However, these types of tools have been criticized due to their great dependence on self-perception (Matthews et al., 2004). However, this limitation is common to all the self-report

scales used in the field of research and, therefore, it seems that it would not be logical to rule out its use to assess EI (Davies et al., 2010).

3.2. Instruments to assess emotional intelligence

There are different instruments to measure emotional intelligence (EI), which consist of various items and several determined dimensions. Salovey et al. (1995) developed the *Trait Meta-Mood Scale* (TMMS-48), which consists of 48 items included in 3 dimensions. The TMMS-48 was modified, simplified (from 48 items to 24 items), and translated into Spanish by Extremera and Fernandez-Berrocal (2004). Later, in 1997 and 1998, two more tests were created. Bar-On (1997) developed the Emotional Quotient Inventory (EQ-i), with a large number of items (133) encompassed in 15 dimensions, and validated in a sample of 120 subjects. Schutte et al. (1998), meanwhile, only included 33 items in the *Schutte Self Report Inventory* (SSRI). This was validated in 346 people. One of the most complete instruments for evaluating EI was the one developed by Mayer et al. (1999). Said test, the *Emotional Intelligence Test* (MSCEIT) consists of 141 items distributed in 4 dimensions and was validated in a sample of 5000 people. There are also validated instruments for specific populations, such as schoolchildren. An example of this is the Emotional Intelligence Questionnaire as a trait for schoolchildren (CIE), developed by Mestre (2003), which consists of 56 items integrated into 4 different dimensions. This test was validated in a large sample of 1002 subjects. Regarding the number of items, the *Trait Emotional Intelligence Questionnaire*, prepared by Petrides and Furnham, is the most complete, since it consists of 144 items grouped in 15 dimensions. This questionnaire was validated in a population of 282 subjects.

In recent times, the use of interviews as a tool to evaluate EI has been proposed as a novel and valid alternative. However, some authors question their performance and validity, since, in their opinion, EI, mental capacity, and extraversion are studied in interviews in isolation, without obtaining remarkable results (Kluemper et al., 2015). Another perspective offered a review published in the *Journal of Managerial Psychology*, and whose objective was to specify and define that sometimes diffuse construct that is EI, concluded that it could be evaluated more effectively through "performance analysis" than with "classical tests with paper and pencil". Furthermore, these authors support the idea that the combination of EI and cognitive or intellectual intelligence is a more powerful predictor of "success" than any of the isolated measures (Dulewicz and Higgs, 2000).

3.3. Strategies to train emotional intelligence

The keys proposed to learn to be more emotionally intelligent have been the following (Bobinski, 2010):

- 1) The ideas of "good" or "bad" have to be discarded when thinking about personality styles. People are just different.
- 2) People often associate the terms "different" with "difficult". However, differences are difficult only because people have not learned to work through those differences effectively.
- 3) All strengths have an associated weakness and all weaknesses have an associated strength. We must focus on which end we want to work on.

- 4) We must focus on strengths rather than weaknesses. All personality styles add strength to a team.
- 5) You have to constantly strive to find the strengths in each personality style.
- 6) We cannot be effective if we hope that people do not step out of their comfort zone.
- 7) We must ask others what a certain term means (win, lose, improve, etc.). We cannot assume that we know the answer.
- 8) Putting our goals before those of the rest will create divisions and weaken the ability to maximize results
- 9) Effectiveness (doing the right thing) and efficiency (doing it fast) rarely go hand in hand. The best results are obtained when we take the necessary time to do things correctly through multidisciplinary work.
- 10) Understanding these keys is not the same as carrying them out. Sometimes the longest distance is the one between the head and the heart.

3.4. Importance of emotional intelligence in health workers

EI has gained great relevance because a large number of studies carried out show that it benefits multiple areas of human functioning (Joseph and Newman, 2010; Bracket et al., 2011). However, its effects are not direct but are produced because people with high EI maintain positive and satisfactory interpersonal relationships (Fernández-Berrocal and Aranda, 2008). Therefore, acquiring this series of skills could help solve some of the problems that currently exist in different contexts, specifically health and work (Sabucedo and Morales, 2015).

One of the most important human needs is to have good health, which is an indicator of the quality of life and a fundamental requirement to be happy (Hitam and Borhan, 2012). For this reason, governments and different entities are strongly involved in working to improve public health and, therefore, the general health of the population (Asiamah, 2017). Among the measures that are being taken, improving medical care and the work performance of health workers is a priority. For this reason, much of the public health promotion spending around the world has been earmarked for this purpose (Diab and Ajlouni, 2015).

If it is proposed to improve the quality of life of the general population and the work performance of health workers, for example, controlling stress levels should be crucial for achieving this goal since we live in a highly stressed society. According to the American Psychological Association (APA), the majority of US citizens report moderate to high levels of stress (Am. Psychol. Assoc. 2012). Furthermore, the WHO proclaimed the twentieth century as "the century of collective and individual tensions in epidemic proportions, unseen until now in the history of the human race." The physiological systems and processes involved in stress have evolved to help us cope with or escape life-threatening situations (fight or flight) (Lovallo and Thomas, 2000). However, today, most of the stressors we face daily are psychological (related to our job, for example) rather than physical (Tomiyama, 2018). This is of vital importance since, during the last century, stress became a critical factor in maintaining health and the cause of psychosomatic illnesses (Burgard et al., 2019).

Due to the high levels of stress in health personnel, especially in some areas and specialties (Aguado et al., 2013), how a professional in this area deal with this stressor will make them stronger or weaker. This person will be distinguished from another by their ability to perceive, understand, and regulate their emotions and that of others when exposed to general stress or one generated by a particular circumstance. The easier it is for a person to identify an emotion during a stressful situation, the less time they will spend attending to their emotional reactions and the less cognitive resources they will use. This is positive since they will be able to evaluate more action alternatives and keep thoughts on other tasks or carry out active coping strategies (Gohm and Clore, 2002; Leung et al., 2008). This ability, inherent in EI, also has much to do with positive (or negative) psychology, a new way of analyzing basic processes in the face of trauma, disorders, and pathologies (Seligman, 2002). Besides, several studies have confirmed a significant positive effect of EI on job performance (Olakitan, 2014; Özer et al., 2016).

3.5. Emotional intelligence in workers in the fitness sector

The World Health Organization (WHO) recognized "burnout" or "burned worker syndrome" as a disease. Regarding this, the psychologist Herbert Freudenberger defined this condition as "a syndrome of emotional exhaustion, depersonalization, and a lower personal fulfillment that occurs in those individuals who work in contact with clients and users" (Freudenberger 1986,1989). This definition is important because it emphasizes those professionals who have daily contact with people, for example, personal trainers, coordinators, and/or sports center instructors, largely represented by graduates in Physical Activity and Sport Sciences. Studies carried out with health professionals who work directly with people have shown that the higher the level of emotional intelligence (EI), the lower the burnout and the higher the job satisfaction (Weng et al., 2011; Kim et al., 2016). To our knowledge, few studies in the scientific literature analyze the importance of emotional intelligence in workers in the fitness sector in particular. One of these studies, carried out by Ong and Yap (2017) analyzed a sample of 217 employees of sports centers, who completed questionnaires to measure their EI and professional burnout, among others. The results showed that EI aptitude and the way workers manage their emotions could affect their well-being. Besides, EI was observed to play an important role in the selection of strategies (beneficial or harmful) for health among employees of fitness centers.

It has also been observed that an athlete who perceives that their coach manages their emotions well and knows how to treat everyone equally, helping the personal improvement of everyone, will improve their intrinsic motivation (González-Vélez, 2010). Other studies carried out in large samples of health professionals (1163 subjects) have concluded that EI significantly predicts job performance in this type of population (Asiamah, 2017). Besides, studies carried out in coaches of different sports disciplines (n=99) showed that EI is related to training effectiveness and gives clues as to where applied work with coaches can be directed (Thelwell et al., 2008). However, although they are closely related jobs, on many occasions a professional in the fitness sector seeks to improve the user's health and not only their performance.

Although experience and some scientific studies tell us that EI could be a vitally important ability for job performance and improvement in the relationship with users in professionals in the fitness sector, we still do not have enough specific research carried out in this population that can resolve these doubts. More research is needed to study professionals in the fitness sector (personal trainers, sports instructors, sports coordinators, etc.) and the benefits that EI can offer to this sector.

3.6. Surgeons and emotional intelligence

For some time now, the world of medicine has begun to understand, value, and recognize the potential benefits of EI for both patients and healthcare workers (Jensen et al. 2008). Within the broad group of professionals that constitute the health field, it has been shown that one-third of American surgeons suffered from high degrees of burnout (Campbell et al., 2001). It appears that age, employment seniority, and the number of vacation days were the demographic variables inversely associated with this syndrome. Other studies have shown a moderate degree of burnout among surgeons with average job satisfaction, justified by their vocational nature (Jiménez et al., 2002). Furthermore, in transplant surgeons, even higher degrees of burnout were observed than in the study by Campbell et al. (2001). For this reason, different coping and prevention strategies have been proposed for years that could be very useful to improve the management of certain specific external and/or internal demands, as well as the management of resources in response to stress (Lazarus, 1997; Ceslowitz, 1989). As mentioned above, EI refers to the set of abilities and skills that determine the effectiveness of people to manage, understand, and face daily problems. Therefore, it is important to review the scientific literature in search of results that shed light on the role of EI in surgeons.

Regarding this, in the study carried out by Weng et al. (2011) in which 50 surgeons and their 549 patients were surveyed, it was observed that the EI of the surgeons had a positive effect on the relationships between them and the patients. Related to this, a higher level of EI has also been associated in a sample of 126 surgeons with less professional burnout in them (Benson et al., 2007). Furthermore, within the general EI scale, there appear to be differences in the subscales between surgeons and other health professionals. For example, a study published by the University of Cambridge in which EI was compared between surgeons and psychiatrists (n=148), concluded that although the average total score of it in both populations did not differ, surgeons showed higher scores on the subscales of self-esteem, stress tolerance, and optimism compared to psychiatrists (Stanton et al., 2011). Results like these could indicate the need to train and work on different specific skills depending on the health professional involved. In this regard, a recent review of the scientific literature (39 articles and 5 textbooks) whose objective was to address the implications of EI in surgeons, concluded that surgeons should know their own emotions and those of others to perform their job optimally. In this review, it was also concluded that EI is positively associated with leadership in surgeons, non-technical skills, decreased stress, less job burnout, and greater job satisfaction (Sharp et al., 2020).

3.7. Emotional intelligence in the field of podiatry

Most of the scientific literature that studies job burnout in health professionals have focused on nursing, physical therapy (Janssen et al., 1999; Evans and Allen, 2002), and occupational therapy (Scutter and Goold, 1995; Schuster et al., 1984). However, this variable has been little studied in podiatry. Since it has been observed that the levels of exhaustion in podiatrists exceed the normal values established for all health professionals (Mandy and Mandy, 2000), it is important to assess the role of emotional intelligence in this group of workers.

Two reasons that would justify these high values of professional burnout compared to other professions (physiotherapists, for example) would be isolation in the workplace and lack of respect from other professional disciplines towards podiatrists (Mandy and Mandy, 2000). It has also been suggested that professional burnout develops over time as idealism is lost (Mandy and Tinley, 2002). These variables could be different depending on the country since, in Australia, for example, 75% of podiatrists work in private centers (Op.cit), while in Spain almost all of them work in this type of center, being the percentage of podiatrists who work in public centers very small. This could mean that these professionals feel that they are not supported by the rest of the health “colleagues” (Cherniss, 1995). Other studies affirm that working longer hours and the high emotional demands of working with patients could encourage said job burnout (Schaufeli and Enzmann, 1998). Furthermore, in podiatrists studied in both the UK and Australia, high levels of emotional exhaustion and low levels of personal fulfillment have also been observed, both results synonymous with burnout syndrome (Mandy and Tinley, 2004). Burnout has also been described in podiatrists as a result of working primarily with the group of patients who generally present to podiatry services (Op.cit; Potter and Borthwick, 2009). Due to this and that EI is vital to help overcome this syndrome, as well as for the podiatrist to improve the emotional well-being of the patient and their therapeutic action plan (Ivcevic et al., 2007), it is necessary to review what has contributed scientific literature regarding EI and podiatry.

There is little scientific literature that has focused on how EI levels in podiatrists affect their performance, health, and interaction with patients. One of these studies has concluded that in podiatry students there is a strong correlation between empathy, personality, and EI (Bertram et al., 2016). Although this population sample was not yet professional podiatrists, they are subjects who were going to be in a short time. It has also been stated that because the podiatrist can develop a long-term professional relationship with the patient (chronic conditions that affect gait, routine chiropody, etc.), it could be that the decline in their health or death affect the mental and emotional well-being of the professional because they are not prepared to deal with this situation. Concerning this fact, a study that analyzed 15 podiatrists from the private sector suggests that there is a profound impact on the podiatrist when a patient who has been treated for a long time dies (Robson and Williams, 2017). Therefore, it is proposed to implement strategies to deal with these situations on an emotional level (Carton and Hupcey, 2014). The podiatrists included in this study also claimed to have no formal training on how to deal with the long-term psychological impact associated with the death of a patient. Some of the positive interventions should focus on developing resilience in these professionals, which has

been associated with emotional intelligence (Edward and Warelow, 2005; Maulding et al., 2012; Schneider et al. 2013).

4. CONCLUSIONS

In recent years, research in psychology has focused on the study of EI, which comprises a set of skills and abilities aimed at understanding, analyzing, and giving optimal responses to daily situations that involve a greater or lesser emotional level. This intelligence, unknown until a few decades ago, has proven to be a predictor of "success" on a personal, professional, and academic level. Until this occurred, cognitive intelligence (in the context of human beings) monopolized all (or most) of the importance and was at the highest level. However, that has changed thanks to new scientific advances. Although it is true that when a person has high levels of both types of intelligence, they may have a better chance of "success", both seem to be independent, and having a high level in one of them would not necessarily imply having a high level in the other. There are various instruments to evaluate EI. However, there is also controversy over which are the most effective or best measure this skill set. The most widely used methods to evaluate it are self-reported questionnaires, although interviews or "concrete performance tests" have also been proposed.

There are different strategies and keys to improve emotional intelligence, and these involve constantly working on each of the skills that it comprises, focusing on the weaknesses (to improve them), but also on the strengths (to reinforce them). Having higher levels of EI will make us empathize more strongly with others, improve our social relationships, reduce our stress levels, reduce professional burnout (including health professionals subjected to high levels of stress and in direct contact with users/patients), better manage different stressors and implement more effective coping strategies against them, manage our emotions and those of others, increase our resilience, as well as improve our quality of life both physically and mentally.

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