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EMOTIONAL COMPETENCE HANDBOOK

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CHAPTER 6
The Emotional Competence VEIGA Scale (ECVS)

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6.1 Introduction

Emotional Competence… a Conception in progress

In my commitment to Life, I feel close to the need for reflection… with my eyes on myself, in communion with Spinoza's God …

Perspectives for an Introduction

In general, workspaces, whether in scientific, technological, and mathematical fields like engineering, neuroscience, or aeronautics, or in humanistic areas such as social work, law, education, or healthcare, increasingly require individuals to possess soft skills that express their emotional competence. The behaviours needed to be assertive have become more complex, interrelated, and demand a combination of multitasking and professionalism, while still requiring a touch of charm and captivation, whether in one's personal or professional life.

The need to manage behaviours that express emotional body states is legitimized, essential, and in an underlying way. This territory concerns the dimensions of emotional competence, namely self-awareness and emotional management. Employers require a CV of empathy, self-motivation, drive and focus on the task. This current concept of professionalism is being expressed in all areas of work in general, and in health in particular.

The 21st century assumed organizations, in general, and health organizations in particular, as spaces for co-creation, drawn in flows of transdisciplinary interactions, designed in a paradigm that seeks quality and improvement. The current paradigms of excellence seek to find executory and evaluative standards, such as behaviour charts and work routes, in the sense and meaning of achieving that excellence, which is why their actors must have a sense of subjective well-being and promote their health through Emotional Education.

In the social and healthcare fields, especially in contexts involving pandemics, wars, or social confrontations, the fragility of human beings necessitates more comprehensive and diverse care approaches. In these situations, the concept of humanity becomes essential as it helps recognize the unendurable aspects of suffering, expressions of anguish, exclusion, and revolt. Caregivers in such contexts must possess emotional dexterity to effectively navigate these sudden, exhausting, and overwhelming situations.

So, in workplace contexts caregivers work in a setting of intellectual and work positions of and for excellence. In this broad context, it is worth placing the central idea that, in the binomial organizations and quality - in terms of human provision - the health-promoting training component should be underlying the holistic perspective, to which Emotional Education, and according to Pérez, et al. (2020) (1) does not omit itself. Thus, quality organizations and Emotional Education can be symbiotic. That is, it is assumed that this binomial will be expanded and promoted if this triangulation is present.

In this perspective, the institutions in general, and the health institutions, in particular, and within these, the organizational managers of the organic units and respective health services, who rescued the quality of care as the priority element of this paradigm co-creator of excellence, in the route of the visibilities, success and recognition of these institutions, are now called to objectify this triangulation, where not only, but also, according to the study by Almeida et al., (2021) (2) the concept of Emotional Competence is inserted.

From the point of view of operationalization, more than a starting theoretical and static construct, it starts with the planning of a transversal strategic axis, from the government entity to the operators in health institutions, capable of identifying units of care behaviour, building monitoring and evaluative attribution plans, to improve the quality of the services provided.

In this process, all resources are relevant and appropriate, especially human resources in an absolutely essential way, because they are the core elements of health teams, which also include nurses. And in them, their characteristics of productivity, knowledge and ability to comply, creativity and, above all, intra and interpersonal interaction.

This context is the exchange of energies, interactions, service provision, which serve and express the acts of care, at a bio, psycho, social, cultural and spiritual level.

The essence of the theme is nursing in action. Within this action, lies the implicit ability to care for oneself, to tend to one's internal world, and nurture one's inner milieu, all in the pursuit of holistic care for the external world. This self-care is perhaps the initial indicator of quality—taking care of oneself.

And in this context, it is important to learn/develop Emotional Competence, in its three self dimensions, at the intrapersonal level: Self-awareness, Self-motivation, Emotion Management; and at the interpersonal level: Empathy and the Management of Emotions in Groups, since it has been proven that “existing equivalences when relating the general competences of the work of nurses with the emotional competences and abilities that emerged from the responses of these professionals...” as we can see in the study by Carício et al. (2021), (3).

The body and/or cognitive expression, in conscience, of feeling emotionally competent, in fact translates an inner harmony, and, therefore, a level of availability to the outside, to the other, which can prove to be a sensitive indicator of the quality of care, and therefore quality in health, which, as defended by Donabedian (2003) (4) , is strengthened in the interpersonal relationship, between client and health professional, by incorporating the principles of respect for the client's values, beliefs and desires and where the client is the centre of attention.

In fact, already at the beginning of the century, Donabedian (2003) (4) in the initial approaches to the formulation of the concept of quality in health, placed it as a structure supported by two sub-structures: (1) the product of the interaction of science and technology of care factors, and (2) the surrounding conditions.

And in this structure, he considered: a) technical-scientific dimension, b) the interpersonal dimension, the interpersonal relationship, health professional and client; c) and the environmental dimension. The author argued that quality in health would result from the way these variables are related, being considered, therefore, by the author as the central elements of the conceptual definition of quality in health. And, in that quality, the emotional interaction, and the perception about that, is a very pertinent issue to reflect about.

In these contexts, the relational and emotional field care, make sense to think about soft skills in general and about Emotional Competence in particular. In fact, when we say Emotional Competence, we describe the ability a person or a team express - or has to express - his or her own emotions with complete freedom, in what part or parts of the body, in what intensity, balance or during of time. The concept, is derived from the concept of emotional intelligence, which seems also to be the ability to identify emotions, and that is present in all human and animal life.

More specifically, when we talk about Competence, we want to talk about the level of skill with which someone interacts constructively with him or herself or other people.

Thus, and because this concept deals with understanding and/or recognizing at what level someone can achieve effectiveness and/or efficiency in a certain dimension, - such as Empathy or Emotional Regulation - it will be presented how the transformation of the concept was developed in construct and the respective operationalization of each of the five dimensions, as well as and necessarily the final operationalization of the global CE.

6.2 Emotional Competence

Before the Concept, an overview of Emotion

The emotions of human beings are activated in the brain in response to different stimuli, which can be generated internally and externally, triggering a complex state of the organism, which is characterized by disturbance or excitement, which anticipates an organized response.

As we can see, in study by Stanojlović, et al. (2021), actually, research shows that the four components that influence each other represent the concept of emotions and complete the overall emotional experience, and these are: autonomous (the autonomic nervous system signals, increase in heart rate, blood pressure); somatic (body language, facial expressions); cognitive (control, management), and subjective feeling (emotion, individual experience). The interplay between emotions and cognition has been the subject of research. In this study, the authors, present the actual concept that "*Emotions can be evoked reflexively by simple physical stimuli (bottom-up), but can also be complex reactions involving cognitive, physiological and behavioural reactions (top-down). The amygdala, the "alert" or "neural alarm" structure, is responsible for conditioning fear, while the medial prefrontal cortex participates in emotion self-regulation and decision making*". (Stanojlovic, et al., 2021, p.361) (5).

This current proposal corroborates in terms of knowledge and conceptualization, what was previously described in research into Damásio (2000) that always likes to conclude with the idea that "*consciousness and emotion are not separable*" (6), but he always starts from the assumption that emotion is assumed to be a phylogenetically constructed program, and "…its biological impact is considered very different in terms of three phenomena that, despite being distinct, are closely related: *having an emotion, feeling that emotion, and becoming aware that we are feeling that emotion…*" (6) and how these different levels can be present in the person.

Indeed, we can have an emotion and not feel that emotion, and therefore not be aware that we are feeling that emotion. This fact can change the level of self-awareness of a person, who cannot, for that fact, be responsible, much less "guilty". This is a property that is developed with and during training in Emotional Education, and which, in its proven capacity, brings people closer to their Emotional Competence. Such skills are particularly important in nurses.

It is important to clarify, since the issue of providing care and services is addressed here in a context of greater or lesser expression of suffering, pain and/or anguish, that any of these phenomena may or may not trigger emotions in nurses.

As the author explains: "… *human emotion (*6*) is triggered even by music and by cheap films, whose power we must never underestimate. The human impact of all these causes of emotions, (...) depends on the feelings engendered by these emotions. It is through these, which are private and directed inwards, that the emotions, which are public and directed outwards, begin their impact on the mind; but the full and lasting impact of feelings requires awareness, for only in conjunction with the advent of a sense of self do feelings become known to the individual who has them*" (6).

And Damásio continues (6) "*… I separate three stages of processing that are part of a continuum: a state of emotion, which can be triggered and executed unconsciously; a state of feeling, which can be represented unconsciously, and a state of feeling made conscious, i.e., which is known by the organism that is having emotion and feeling*."

It is important to make clear the phenomenon of *"... contrast between the condition of emotion, which is induced without our knowing and turns outwards, and the condition of human feeling, which is essentially known and turns inwards*..." (6), can leave us completely confused and unprepared to face this

phenomenon in us, that others know about me through my expression, than I through the feeling I feel about that emotional expression to which others have already acceded.

This point is essential to understand the value of learning self-awareness – the first dimension of Emotional Competence - from body self-awareness… because, as Damásio explains, *"... like emotion, conscience is based on the representation of the body..."* (6), thus assuming that the body assumes the status of an entity, capable of elaborating its own speech and emotional expressive grammar, and that somehow, what the body says/expresses says nothing better.

6.3 The Emotional Competence Dimensions - Operational terms

Self-awareness

It is the first dimension and emerges from a corporeal self-awareness, produced from a fluid dialogue between the body and the somatosensory systems, where mental maps are constructed and reconstructed in a total and progressive immediacy. In fact, the essence of our consciousness is the body mapped in the brain, in the totality of the bodily structures in functioning or not, in a total and absolute precision. This process, based on the expression of Damásio (6) "...*by mapping your body in an integrated way, the brain manages to create the crucial component of what will become the self*»,(6), and therefore a current and dynamic self, updated through networks of chemical and neural signals, where arms and legs, viscera and vascular networks are completely and in detail mapped – positions, movements, blood pressure, blood pH, artery tension, irrigation hollow viscera, hemodynamics, stasis points, endocrine and exocrine secretions, in short... - in their respective changes at every moment.

Everything and about everything, body and brain exchange dialogues, and *"... the brain is able to do more than map states that are occurring (...), it can transform body states, simulate body states that have not yet occurred...»* (6). In short, the body says to the brain: "*this is how I am constituted and this is the state I find myself in now*" (6) and the brain, which even receives qualitative orientations about the *"states of the body"*, guides the body in the functions to be maintained in the sense of homeostasis, and whenever requested "... *the brain tells the body how to create an emotional state*" (6). Thus, from the point of view of operationalization, the concept of self-awareness concerns the scrutiny and recognition, in consciousness, of any changes in these body states, triggered from an emotional trigger, or taking this activation (arousal) because of an Emotionally Competent Stimulus (ECS) to the subject.

Emotional Management

This dimension, in Emotional Competence concept, has been the subject of progressive studies and therefore progressive changes in its definition and conceptualization. From the beginning of this century with Damásio (2000) (6), and some new perspectives for understanding how the body integrates and manages emotional body states (2010) (11), until the recent research results, namely the presented by Myruski et al. (2022) (7), which unequivocally explain that the key feature of adaptive Emotion Regulation

is the capacity to manage behaviour during a range of emotional challenges. Other literature (Gross, 2015) (8) and other researches, also present for example, the managing frustration and delaying gratification, as common regulatory challenges in childhood – but we can have it in adulthood - , and, people in general and children in particular, all of us along life, can vary in their and ours use of adaptive or maladaptive Emotions Regulation behaviours during these challenges. So, recent authors when assume Emotional Regulation, assume the behaviour regulations in the arousal experience of an emotion.

Based on this assumption and current publications, this dimension starts from the recognition that the act of "management" does not refer to emotion, as an *arousal*, as the autonomic *activation*, but rather and only to the behaviour resulting from this activation. It is important to clarify that the basic emotions, Jamesian, of a sudden and/or unconscious event, are not considered, a priori, an object that can be managed. Even in its late arousal, after recognizing and mapping this body state, at a somatosensory level, it is not considered exactly manageable at a behavioural level spontaneously.

When we're talking about Emotional Management, what is assumed here is the management - scrutiny and recognition of signs and body modifications and the consequent interaction of the subject, consciously, about this process -, of the behavioural component of secondary and/or social emotions (7), and/or any kind of emotional feelings expressed about emotional body states emerging from an ECS.

The interaction of the subject on his own observation of the emotional occurrence (or emotional feeling), in the sense of his objectives, without suppression, nor loss of homeostasis, of his inner milieu, nor external context, is considered here, management of emotions. It is important to clarify that the so-called regulation of emotions (self-regulation) and cognitive flexibility (Decety & Jackson, 2004)(9), emerge from self-awareness and awareness of the other that develop simultaneously in preschool years and play an important role in this dimension. Its pertinent to present the Langeslag and Surti (2017) (10) perception, defending that we can control our emotions to some extent. But, they also argue that emotion regulation is the use of behavioural or cognitive strategies to generate new emotions or to increase or decrease the intensity of current emotions (10).

In scientific publications we can find some approaches to multiple regulation strategies, including for example, the distraction and or the cognitive reappraisal. Distraction involves thinking about something unrelated and reappraisal entails changing the meaning of a situation by reinterpreting it (10). Reinterpreting the situation can, for example, be done by changing the personal relevance, which has been called self-focused reappraisal, or by imagining better or worse outcomes, which has been called situation-focused reappraisal (9).

Langeslag and Surti (10) advice to reflect about the fact that it has been proposed that the effectiveness of reappraisal to up- and down-regulate emotions may vary depending on the intensity of the emotion, but this has not been systematically tested yet, suggesting that research must continue and results must be reflected, and Ochsner & Gross, (2008) (11) that present the concept and the skill of cognitive emotion regulation, as a kind insights from social cognitive and affective neuroscience, that we can learn and understand.

Self-motivation

In this operational context, the concept of motivation is integrated in the sense of "genomic unconsciousness» (12), and in the words of Damásio *"...a series of behaviours that may appear to be decided by conscious cognition, but that are driven by non-conscious dispositions*." (12), and, in order to situate this construct at the level of brain structures, explains that they will be "*unconscious bases of behaviour, within the scope of instinct, automatic behaviours, impulses and motivations*" (12). In terms of definition, it would be assumed that the concept of self-motivation relates to recognizing the basic elements of the energy that triggers or "moves" a certain attitude or the pursuit of a given behaviour: whether autotelic, or exotelic, and how these two limit points are recognized in the person. But not only that, we also intend to assess what limits and differences the person perceives, between (1) the assumption of a frontal and permanent attitude, (2) the obstinate repetition, (3) the change of the route without feeling of loss or damage, (4) procrastination or laxity.

Empathy

It starts with the concept and function of "mirror neurons" (6), (12) to access the skill of producing "as if" phenomena in the body, to understand and defend the cognitive component of empathy, which is characterized by the capacity to accurately infer the feelings and thoughts of another person, without necessarily experiencing the same feelings as that person. This point is here of the greatest importance. Such a perspective involves neutrality and impartiality of the one who empathizes and has been called perspective taking (Davis, 1983 (13); Ickes, 1997(14), a phenomenon that had already been identified, if there is a dynamic interrelationship (Decety and Jackson, 2004 (15) between the "I" (self-awareness) and the "other" (awareness of the other). The ability to represent and report one's own mental states is what will allow inferential knowledge of the mental state of others.

It is assumed that empathy in human beings is an innate attitude with four dimensions, and in the recent publication (Hoffman, 2000) (16), corroborated that the cognitive component, allows us to understand what Damásio (2010) (12) presented *"...the actions of others, by putting ourselves in a comparable bodily state, (...) when we see the action of another person, our somatosensory brain adopts the bodily state that we would assume if we were moving…"* (12), clarifying with some specificity that it is "…*the connection we establish between our body states and the meaning they have assumed for us, which can be transferred to the simulated body states of others (…) we can assign a comparable meaning to the simulation.*" (12).

The affective dimension concerns the cognitive understanding of the feelings and emotions of others, and later allows one to empathize with empathy, in the depths of one's being, the emotions associated with something, whereby it is possible to internalize and personally experience the suffering suffered by others. The motivational dimension is the phenomenon of generating altruistic and interpersonal empathic motivation - feelings of compassion for others - that we observe or recognize. The prosocial dimension concerns how this compassion encourages us to be proactive, taking prosocial or ethical actions in defence of or for something or someone.

In the recent research, Decety & Jackson (2004) (15) presented studies shown that *only part of the network mediating pain experiences (including the anterior cingulate cortex and the insula) is shared when empathizing or evaluating the pain in others.* Most importantly, the authors defended that empathy - as we know the concept - *also necessitates emotion regulation for which the ventral prefrontal cortex, with its strong connections with the limbic system, dorsolateral, and medial prefrontal areas, plays an important role. Once again, we do not assume that there is a unitary empathy system (or module) in the brain. Rather, we consider multiple dissociable systems to be involved in the experience of empathy. Finally, as suggested earlier, empathy is a motivated process that more often than commonly believed is triggered voluntarily. This makes empathy a flexible human capacity as well as a method of gaining knowledge of understanding another, and it is susceptible to social-cognitive intervention, such as through training or enhancement programs for targeting various goals"(15).* As we can see, the concept is more complex and deeply inside interaction between body and brain structures.

Emotional Management In Groups

It is the dimension of the E.C. unifying empathy and emotional management, and which concerns the already mentioned "empathic" perspective-taking, that is, the phenomenon already identified by Decety and Jackson, (2004) (15), if any, and when there is a dynamic interrelationship between the "I" (self-awareness) and the "other" (awareness of the other). This dimension examines the effects of empathy, emotional contagion and emotional management.

It emerges from plural empathy, in which the absorption of the emotional expressions of others are perceived, and the respective impacts on us trigger emotions and emotional feelings to which we manage to give a response and behavioural expression, within an intellectual organization, which keeps us under control, and which, in turn, we may be able to spread to others. Previous studies about the process model of emotion regulation Ickes (1997) (14), has previously demonstrated that antecedent focused emotion regulation results in improved outcomes compared to response-focused emotion regulation when people are attempting to regulate their own feelings.

Reeck and Onuklu (17) in their study about Interpersonal Emotion Regulation (IER), the Consequences for Brands in Customer Service Interactions, they start from studies also demonstrate similar benefits of antecedent-focused emotion regulation when it is applied interpersonally.

These authors focus not only on the consequences of the strategies people use to manage their own emotions, to instead examine the consequences of the strategies people use to manage others' emotions. So, the current research builds on prior demonstrations that IER can improve relationships between people by showing that these benefits can not only emerge between these social and personal interactors as with some resources or contexts. Reeck and Onuklu (17) corroborant previous results (16), demonstrating that successfully managing negative others emotions can result in improved trust and best interactions. More than these, and taking prior demonstrations (Niven et al., 2012 (18), Bloch et al., 2014 (19) that IER between people results in increased trust and relationship satisfaction.

Operationalize Emotional Competence

Emotional competence has continued to be presented, in the literature, in a similar way to the concept of Emotional Intelligence, but each one of them has a different perspective on capabilities related to emotion, different methodologies of development and application, and different instruments for data collection and analysis of results.

The literature reveals that sometimes they are carelessly applied as synonyms (19), causing theoretical and methodological confusions, (19). Recently, Pérez-González et al (1) in an analysis of previous works, report Roberton et al. (2014) (20) definition of emotional competence as "...the ability to deal effectively with emotional information, that is, with one's own feelings and desires", and argue, quoting Davis & Qualter, (2020) (21), that emotional competence:

"*…has been used as an aggregating term and as a multifaceted construct that encompasses emotion-related skills (e.g., emotion awareness, emotion perception, emotion regulation), dispositional skills and qualities (e.g., emotional self-efficacy), which enable the individual to function effectively in emotionally charged situations*." Pérez-González, (1)

In a very brief summary, Emotional Competence (E.C.), as an autonomous concept, seems to have emerged with the mixed models of Emotional Intelligence (E.I.), such as those of Goleman and Bar-On, but in fact it did not happen that way. Two authors in different countries – Saarni (22, 23) in the USA and Bisquerra (24, 25) in Spain – developed the construct of Emotional Competences (in the plural), more focused on the contexts of education and youth training, in order to make emotional education training in higher education more understandable and adaptive, as some authors advocated (Fragoso-Luzuriaga, 2015) (26) to develop students' emotional competence, in those contexts.

Later, in Portugal, studies by Veiga-Branco (2004) (27) e (2005) (28) on teachers appear, which presents the concept of E.C. based on the mixed model of E.I. (Goleman, 1995) (29).

Veiga-Branco (27, 28, 30, 31) studies Emotional Competence in the context of teachers and needs of the teaching-learning process, and starts the work, based on the modified concept of E.I. (32), modification that operated when perceiving the added value of E.C., reflecting what the author explores in *Notas* (32): "*... the expression "emotional competence" includes both social and emotional competences, clarifying that "****an emotional competence is a learned ability, (...) that results in an extraordinary performance at work***" (32), where he pointed out that:

"Our E.I. determines our potential to learn practical skills that are based on five elements: Self-awareness, motivation, self-mastery, empathy and talent in relationships. Our E.C. shows the extent to which we translate that potential into professional skills".

Thus, later (28) distinguishes this concept from E.I., arguing that "the E.C. exists when someone reaches a desired level of achievement", and that this concept concerns the post-facto. It can only be appreciated simultaneously or after the exhibition of behaviours and/or attitudes, through observation or through the expressed memories, by executing subjects or by observers.

Starting from these elements as a theoretical framework, and having the exploration, identification or recognition of a E.C. profile as the object of study, it creates an Analysis Instrument: the Veiga Branco Scale of E.I. (EVBCIE) (27, 28, 30, 31).

This instrument was subsequently reformulated, to an instrument with 86 items - the Emotional Competence Veiga Scale, (EVCE), used in progressive studies, in successive samples, since 2010, until two years ago, for exemple, the "Emotional Competence profile in a higher education students" (Veiga-Branco, 2011, (33), the study in "Emotional competence in healthcare professionals: correlational and comparative research" (Veiga-Branco et al, 2012) (34), and the study about "Emotional competence (EC) in physiotherapists in the national network of integrated continued care" (Afonso, et al., 2013) (35), and even out of health scientific area, the study developed in Emotional Competence in Portuguese political decision-makers in Veiga-Branco & Costa (2015) (36).

This data collection instrument, with 86 items, has been progressively under development towards its reduction, resulting in the study of the reduced form, the Emotional Competence Veiga Scale (ECVSr33), in the original Portuguese version: *Escala Veiga de Competência Emocional (EVCEr33)*.

This current reduced version of the Scale, has already been used in some studies, with the respective application and statistical study in several samples, namely in the areas of Health, Education and Finance, as the nursing context in Almeida et al. (2021) (37) and even in Moreira, et al. (2021) (38), and in local political decision makers in the study by Nogueira et al. (2021) (39) having the respective statistical studies, considered the EVCEr33, a measuring instrument with the capacity to study the EC profile, in different areas.

Among others, the profiles of health professionals (34, 37, 38), and recently, the results by Rodrigues, (2017) (40) and by Ferreira (2018) (41), we have more recent results, in recent studies corroborating some EC dimensions values, as the study by Giehl et al. (2020) (42) and the last one by Silva et al. (2023) (43) in Management and Finance contexts. In terms of results, successive correlational studies, with analysis of principal components, have been showing the profile of E.C. through the five dimensions, - self-awareness, management of emotions, self-motivation, empathy and emotional management in groups -, which may be differently correlated with each other and with the E.C., depending on the contexts of the samples.

6.4 Measuring Emotional Competence

To study a phenomenon, primarily non-measurable, the research methodology is clear: it is necessary to transform the concept into a measurable phenomenon, then the phenomenon into a variable and finally operationalize the variable at either a quantitative or qualitative level.

And, at this point, it is important to consider Emotional Competence dimensions, as skills in the phoneme quality (of life), that is recognized as an adjective and therefore subjective as a concept, but in this context, it is considered as a variable to be operationalized, to become the evaluable product of an instrument to be applied.

This instrumental perspective of quality (of life) has to reveal an appreciative and measuring capacity of actions, activities and planning, of decision makers, executors and evaluators, and of all those who interact and integrate the prescriptive and care setting of all health teams.

The necessary transformation of a concept into a construct, and a construct into an evidence-instrument, is quite curious: in fact, it is practically a matter of obtaining the measurement of the quality of actions, through what was identified as acting *quality indicators*. And it will be these elements, in their most elementary form, simplistic or not, that portray and express the signs related to the structure, processes and results of preconceived actions, at the time of formulating the objectives, and that operationalize the concrete evaluation that promotes the quality of "to know to be" in emotional competence interactions in life.

In any life context – personal, social, and work – each of the primary independent variables of Emotional Competence (EC), represented by its five dimensions, can assume the status of behavioural and attitudinal variables of the five core concepts within the construct of Emotional Competence. These concepts reflect behaviours at the relational and inter-relational levels, making them valuable tools for analysing caregiver-user relationships, aligning with attributes such as effectiveness, efficiency, optimization, legitimacy, acceptability, and equity. These attributes, when used and measured in isolation or in combination, contribute to the meaning of 'quality in health' (44), particularly in the context of professional caregivers, including nurses, doctors, lawyers, and military personnel.

It would be both interesting and relevant to leverage the behavioural and attitudinal elements that comprise Emotional Competence to explore certain components of professionalism. These behaviours and interactions are inherent in achieving desirable relational quality. For instance, correlating the dimensions of Self-Awareness, Emotion Management, Self-Motivation, Empathy, and Emotion Management in Groups (teams) with the required functions and skills in various fields of work.

To assess whether individuals exhibit these behaviours in practice, one can simply review the 33 items comprising the Emotional Competence Scale, which effectively represent each of the five dimensions. By doing so, individuals can determine whether these behaviours are present in their lives, whether they have occurred in the past or are ongoing. This scale provides a practical repertoire of attitudes and actions that individuals can access, irrespective of the context.

Every road has a story… what about EVCE road?

The instrument, or the Data Collection Instrument (DCI) that has been used so far, the "Emotional Competence Veiga Scale (ECVS), (EVCE) (28, 31, 34,45) includes 86 items to operationalize the five dimensions of E.C.. The first dimension, Self-awareness was composed by 20 items, the Emotion Management dimension was composed by 19 items, the third dimension, Self-motivation, integrated 21 items, the fourth dimension, Empathy was constituted by 12 items, and the last one, the fifth dimension Management of Social Emotions was constituted by 14 items. These items are constituted as ordinal variables, and each of these items was, in turn, operationalized through a scale measured by a Likert-

type temporal frequency scale (1 to 7, with 1 - "never", 2 - "rarely", 3 - "occasionally", 4 - "usually", 5 - "often", 6 - "very often" and 7 - "always", with participants being able to choose how often they experience the situations described.

The Psychometry of the Data Collection Instrument (DCI), and from the point of view of descriptive statistical analysis, assumes that the EVCE cut-off point is 4. To measure the EC profile, 3 levels of E.C. are considered: the **low level**, between 1 and 3.49; the **moderate level** between 3.50 and 5.45, and the **high level** between 5.46 and 7.

Therefore, in order to obtain the level of Emotional Competence as a global construct, we will have to obtain the average values of the means of the five dimensions. To obtain the level of each of the dimensions we have to obtain the average values in each one.

The actual scale, EVCEr33, as Data Collection Instrument (DCI) and that has already been used, (37, 38, 39, 42, 43) includes only 33 items to operationalize the five dimensions of E.C., as the following.

- The first dimension, Self-awareness is actually composed by 8 items, one of which, is an inverted item;

- the second one, the Emotion Management dimension is now composed by 7 items, three of which, are inverted items;

- the third dimension, Self-motivation, now integrates 7 items, two of which, are inverted items;

- the fourth dimension, Empathy, is actually compose by 5 itens, four of which are inverted items;

- the last one, the fifth dimension Management of Social Emotions actually integrates 6 without inverted items.

For example, and to better understanding, the level of Management of Social Emotions dimension we have to obtain the average values of those 6 items, and if the average is between 3.50 and 5.45, we can assume thar our sample present a **moderate level** in **Management of Social Emotions.**

As the previous DCI, in the actual, all items are also constituted as ordinal variables, and each one is also operationalized and measured by the same Likert-type temporal frequency scale, and is also applied the same Psychometrics.

Therefore, and as has been explained, the analysis of the Instrument has to consider the normal configuration items and the inverted items, that must be assumed in a reverse way, among the total items of the EVCE. From the point of view of constructing factor analysis: the items related to each dimension of the E.C. must be submitted to Principal Component Analysis with varimax rotation, whose set of extracted factors aggregates a certain profile in each dimension of the E.C.. The scale was successively and progressively applied and after each use, the results were subjected to exploratory validation of the instrument, through analysis in main components (SPSS), so, in a first time, for the

Portuguese population (studies published and carried out in Portugal: two with teachers (27, 28) and three with nurses: Ferreira (2018) (41) studied the Formal and Informal caregivers in Primary Health Care Units, Veiga-Branco & Lopes (2012) (44) studied the Nursing Teams in Continued Care National Network, and, some years before, Agostinho, 2008 (45), had previously studied hospital nurses, through Principal Component Analysis.

In the successive application of the Scale, it was verified that the successively and sequentially obtained internal consistency values (α Cronbach), assume the validity of the DCI and provide a rigorous statistical treatment. find a level of quality for the successive Emotional Competence profiles of successive samples, and through exploratory factor analysis, we can have a summarized perception of this profile. The successive and progressive results obtained made it possible to access the respective construction of the averages analysed and the predictive variables of E.C. and that led to the construction of an E.C. profile.

In the Serious Game and Emotional Competence studies, we had an analyses, where we can observe the following in the text.

Data Analysis Methodology

The data analysis process took place in two phases. The first phase focused on the validity, reliability, and confirmation of the emotional competence scale used in the questionnaire. The second phase of the data analysis was intended to descriptively analyse the results obtained and identify statistically significant differences between groups.

1st Phase

It should first be mentioned that all the methodological requirements for carrying out the factor analysis of the emotional competence scale were verified. All variables are metrics (Likert scale), all factors have at least 5 variables and there are more than 5 observations per variable (Hair et *al*, 2010 (46)).

Confirmatory analysis was carried out using structural equation analysis (SEA). The use of SEA allows a qualitative leap from an exploratory model to a confirmatory model, going beyond classic statistics:

Another advantage of using this methodology is that the SEA allows testing the global fit of models and individual significance of parameters in a theoretical framework that includes various types of linear models.

The internal reliability of the scales was examined using Cronbach's alpha analysis. Cronbach's alpha is one of the most used measures for internal verification of a group of variables (items) and can be defined as the correlation expected to be obtained between the scale used and other hypothetical scales of the same universe, with an equal number of items, which measure the same characteristic.

2nd Phase

In addition to carrying out the descriptive analysis of the variables using frequency distribution tables (in the case of the nominal variables), some measures were also examined, such as the mean, standard deviation, minimum, maximum, and median (in the case of variables of a quantitative nature).

To test the existence of statistically significant differences in the dimensions of emotional competence according to gender and the fact of being student workers, Student's t-tests were used for two independent samples. 1-way ANOVA tests were used to test the existence of statistically significant differences in the emotional competence dimensions according to the year of attendance and age groups. Since we are working with large samples, the assumption of population normality for carrying out these parametric tests was validated in most crosses by invoking the central limit theorem.

All statistical analyses were performed with IBM SPSS Statistics 24.0 and IBM AMOS (Chicago, IL)

Results

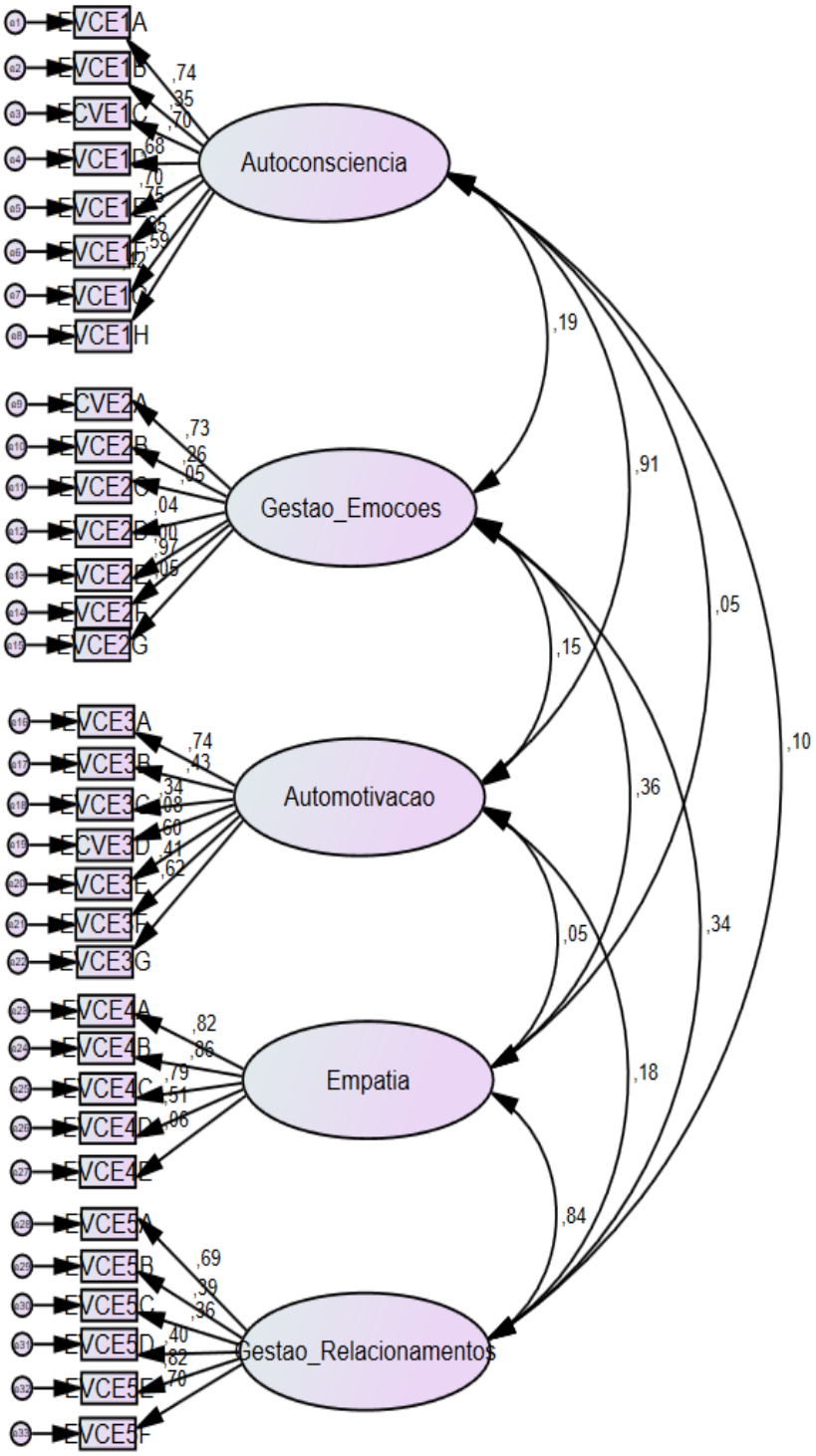
The list of EVCE-r33 items and the corresponding division by dimensions are presented in first place:

Table 1 – Items by dimension (Dim), Description in the Model (Discripti), Items, and Inverse Items

Dim	Description	Item Description	Inverse Item
Self-awareness	EVCE1A	I allow myself to be absorbed by these emotions, which I am unable to escape, and they end up conditioning my behaviour.	Yes
	EVCE1B	I have the exact notion of the type of feelings that invade me; e.g. if it's anger, fear, contempt... hate, frustration... I can define them.	No
	ECVE1C	Once invaded by negative feelings, I can't control them...	Yes
	EVCE1D	Decreases my level of reasoning. I can't concentrate easily…	Yes
	EVCE1E	My behaviour changes at the relational level… I remain silent; euphoric, sulking, etc...	Yes
	EVCE1F	I am mentally stuck in these feelings for a long time. That feeling always comes back...	Yes
	EVCE1G	I'm the unstable type, with various mood swings...	Yes
	EVCE1H	I'm the Unlucky type, I'm unlucky in life...	Yes
Emotional Management	ECVE2A	I did active physical exercise (aerobic). I spent the energy in activity.	No
	EVCE2B	I reasoned. I tried to understand… and identify what led me to anger. I thought better of that situation...	No
	EVCE2C	I had to unload… I tend to use objects, people or situations as targets for my anger, even though I feel less good about myself afterwards.	Yes
	EVCE2D	I live in a state of chronic worry about the event that caused my rage… and I keep thinking about the words/people/attitudes that caused it.	Yes
	EVCE2E	Apparently peaceful... Intrusive, persistent thoughts that haunt me day and night...	Yes
	EVCE2F	I feel relief if I practice physical exercise or sport.	No
	EVCE2G	I feel relief if I eat or drink.	Yes
Self motivation	EVCE3A	Pessimist... (whatever I do, it will go wrong).	Yes
	EVCE3B	I'm able to get out of any trouble!	No
	EVCE3C	Calm in life. I am completely absorbed in what I am doing, indifferent to what surrounds me…	No
	ECVE3D	Apparently calm, I'm doing what I have to do... ruminating on the thoughts that occur to me	Yes
	EVCE3E	Uninteresting... Self-pity invades me. I just feel "down"	Yes
	EVCE3F	Resentful... Contempt, resentment invades me. I cut ties with those who reject me, I resent that person(s)	Yes
	EVCE3G	Who thinks: It went wrong as a result of a personal defect, that's who I am.	Yes
Empathy	EVCE4A	“Recording”/noticing the feelings of others.	No
	EVCE4B	“Reading” non-verbal channels (voice tone, hand gestures, facial expression, gaze direction, behavioural attitude, position, etc.)	No
	EVCE4C	Realize the consonance between the words and the body attitude of the person.	No
	EVCE4D	Use calm (but consciously) to listen… I realize that I feel good listening to people	No
	EVCE4E	I become receptive to the instability of the other and trigger an unstable attitude. I get irritated.	Yes
Relationship Management	EVCE5A	I can understand how people are feeling...	No
	EVCE5B	In my relationships with others, I clearly say what I think, regardless of the opinion they express.	No
	EVCE5C	I have control over my own feelings.	No
	EVCE5D	I can pick up on their feelings and I seem to start absorbing them.	No
	EVCE5E	I have an innate sensitivity to recognize what others are feeling.	No
	EVCE5F	I feel the interaction… I feel physically synchronized with those around me.	No

Given this information, it was obtained the following model of structural equations with a view to confirmatory factor analysis as we can observe in the Figure 1.

Figure 1 – AMOS Models: Confirmatory Factor Analysis EVCE-r33 (standardized coefficients)



EVCE1A	<---	0,741
EVCE1B	<---	0,352
ECVE1C	<---	0,697
EVCE1D	<---	0,682
EVCE1E	<---	0,701
EVCE1F	<---	0,754
EVCE1G	<---	0,648
EVCE1H	<---	0,590
ECVE2A	<---	0,731
EVCE2B	<---	0,256
EVCE2C	<---	0,052
EVCE2D	<---	0,045
EVCE2E	<---	0,004
EVCE2F	<---	0,965
EVCE2G	<---	-0,053
EVCE3A	<---	0,745
EVCE3B	<---	0,430
EVCE3C	<---	0,340
ECVE3D	<---	-0,080
EVCE3E	<---	0,603
EVCE3F	<---	0,411
EVCE3G	<---	0,618
EVCE4A	<---	0,818
EVCE4B	<---	0,855
EVCE4C	<---	0,794
EVCE4D	<---	0,509
EVCE4E	<---	0,064
EVCE5A	<---	0,691
EVCE5B	<---	0,390
EVCE5C	<---	0,356
EVCE5D	<---	0,402
EVCE5E	<---	0,821
EVCE5F	<---	0,701

After specifying and obtaining the confirmatory measure model, let's now examine some of its empirical indices that assess the goodness of fit of the obtained model:

After the statistical analysis considered for this purpose, it was found that: Virtually all indices refer to a model with a good fit. As we can observe in Table 2, only the RMSEA (*Root Mean square Error of Approximation*) with the value 0,083, refers to a Poor fit:]0.5; 0.10[, as it tends to penalize this model due to its complexity.

Given these results, it is considered that there is no need to question the model, and it should not be rejected, and which is considered the acceptance with no need for refinements through an exploratory strategy to find a model that best explains the observed data. Thus, the conditions for using the EVCE-r33 scale in the sample are met.

Table 2 – Distribution of the Absolute Indices of the Model quality assessment

Absolute indices	**Value**	**Diagnosis**
X2/df	2,718	Good fit: ≤ 2-3
Root mean squared residual	0,253	Closer to 0 than 1. Well rated model
Adjusted GFI	0,690	Good fit:]0.6; 0.8[
Root Mean square Error of Approximation	0,083	Poor fit:]0.5; 0.10[

As we can see in Table 3, the main characterizing traits of the sample of 241 nursing students, presents the sociodemographic variables, where we can observe that students present age with mean age of 20,48 years old, (standard deviation of 4.18 years), as maximum with 25 years old and the minimum with 17 years old, with the vast majority of respondents (82, 6%) being up to 21 years old. We can verify that the majority (n=215; 89,2%) are female students, and 151 (62,5%) attending in the first and second academic years, 73 students (30,3%) in the first and 78 students (32,4%) in the second academic year. When asked if they were student workers, only 30 (12.4%) of respondents answered in the affirmative, so the minority of the students who made up this sample were working students.

Table 3 – Distribution of absolute and relative values of the sample sociodemographic variables

	n	**%**
Sex		
Female	215	89,2
Male	24	10,0
Other	2	0,8
Age categories		
Up to 21 years	199	82,6
More than 21 years	42	17,4
Year attended		
1st	73	30,3
2nd	78	32,4
3rd	61	25,3
4th	29	12,0
Student worker		
No	211	87,6
Yes	30	12,4
Age: X=20,48 years (SD 4,18); Min: 17; Max: 25		

σ (sigma) – Standard Deviation

The descriptive analysis of the 5 dimensions in study, presents, in Table 4, that the reliability results were satisfactory in almost all dimensions. Only the emotional management dimension has a Cronbach's alpha value below the acceptable value (0.498<0.600).

On average, the emotional competence dimension with the highest expression in the sample is "Empathy" (mean 5.02 and standard deviation of 0.81). On the opposite side is the "self-motivation" dimension with a mean value of 4.27 (standard deviation of 0.71).

But and considering the The Psychometry of the Data Collection Instrument (DCI), to measure the EC profile, and in the 3 levels of E.C. considered, we can observe the low level, between 1 and 3.49; the moderate level between 3.50 and 5.45, and the high level between 5.46 and 7.

In analysing Table 4, it can be seen that the students in the sample present a moderate level of effectiveness, whether in each of the dimensions or in the overall CE, since all the respective average values are between 3.50 and 5.45.

However, it appears that there is a part of the sample, which presents a low level of effectiveness, in any of the dimensions with minimum values between 2.13 (sd=0,91) for self-awareness, 2.14 for emotional management (sd=0,75) and self-motivation (sd=0,71), and for Relationship Management (X=2, 33; sd=0,79). Conversely, it also appears that some of the students presenting a high level of effectiveness in terms of the five dimensions, as we found maximum values the high level of (X=7.00) in terms of self-awareness (sd=0,91), empathy (sd=0,71), and relational emotional management (sd=0,79).

The highest level found was Empathy, with an average of 5.02 indicating that students present a moderate level in this dimension, and with a Cronbach value (α =0,743) indicating that there is a good level of internal consistency between the items.

The lowest mean value (X=4,33) in the sample indicates that it has moderate level in Relationship Management but also the value of Minimum (2,33) also indicate that a part of students are in low level in that dimension.

Table 4 – Values of Descriptive analysis of the EVCE-r33 dimensions and Global Emotional Competence

	No Items	**α**	**Min**	**Max**	**x**	**σ**
Self-awareness	8	0,851	2,13	7,00	4,41	0,91
Emotional management	7	**0,498**	2,14	6,57	4,51	0,75
Self-motivation	7	0,602	2,14	6,14	**4,27**	0,71
Empathy	5	0,743	3,00	7,00	**5,02**	0,81
Relationship Management	6	0,729	2,33	7,00	4,33	0,79
Global Emotional Competence	33	**0,865**	3,27	6,36	**4,48**	0,57

σ (sigma) sd -Standard Deviation; α - α de Cronbach

In global of the sample, we can verify a Moderate General Emotional Competence Female Profile (X=4,47; sd=0,55) and Male Profile (=4,65; sd=0,66), and with no statistically significant differences between (p=0,148) genders sample. Male profile is higher due to the significantly higher Emotional management profile.

There are statistically significant differences in the self-awareness dimension according to gender, with male respondents presenting a significantly higher mean (X=4,84; sd=1,06) and (p<0.05), different of female sample with average 4,38 (sd=0,88). Close to statistical significance (p=0.057) is also the highest mean value of those respondents in the Emotional management dimension, and female students with 4,49 (sd=0,75).

On the contrary, but without statistically significant differences, female sample present higher mean in the Empathy dimension (X=5,05; sd=0,81) and p<0.145, and Relationship Management dimension with mean 4,36 (sd=0,78), with respectively lower values of male sample with average 4,80 (sd=0,82) in the Empathy dimension, and Relationship Management with the mean of 4,24 (sd=0,84), but the both in the moderate profile.

Table 5 – Values of Mean and stand deviation (St.Dv.) of the five EVCE-r33 dimensions according to gender

	Female		**Male**		
	Mean	**Standard deviation**	**Mean**	**Standard deviation**	***p***
Self-awareness	4,38	0,88	4,84	1,06	<0,05
Emotional management	4,49	0,75	**4,80**	0,76	0,057
Self-motivation	4,25	0,69	4,52	0,77	0,073
Empathy	5,05	0,81	4,80	0,82	0,145
Relationship Management	4,36	0,78	4,24	0,84	0,484
General Emotional Competence	4,47	0,55	4,65	0,66	0,148

σ (sigma) sd -Standard Deviation

Observing Table 6, we can see that both groups - students up to 21 years and more 21 years – present the higher profile in Empathy dimension, with youngers mean of 5,06 (sd=0,80) and the others with mean of 4,82 (sd=0,88), but we can see that in this difference, respondents aged up to 21 years have a significantly higher mean in the dimension related to empathy.

The lower profile of two groups students - up to and more than 21 years - is in Relationship Management with mean 4,37 (sd=0,79) and 4,17 (sd=0,76) respectively, without statistical significance (p=0,130)

Table 6 – Values of Mean and stand deviation (St.Dv.) of the five EVCE-r33 dimensions according to age categories

	Up to 21 years		More than 21 years		
	Mean	Standard deviation	Mean	Standard deviation	*p*
Self-awareness	4,39	0,91	4,53	0,91	0,351
Emotional management	4,53	0,76	4,43	0,75	0,409
Self-motivation	4,25	0,72	4,38	0,64	0,284
Empathy	**5,06**	0,80	4,82	0,88	<0,05
Relationship Management	4,37	0,79	4,17	0,76	0,130
General Emotional Competence	4,49	0,56	4,45	0,61	0,734

σ (sigma) sd -Standard Deviation

It is observed, in Table 7 that the highest profile is in Empathy dimension for both groups, with mean of 5,04 (sd=0,80) to No student worker group, and to Student worker group the value of 4,90 (sd=0,94). Differently, the lowest dimension's profile, is in Self-motivation dimension (X=4,26; sd=0,72) for No student worker group, and for the Student workers, the lowest dimension's profile, is in Self-awareness dimension (X=4,35; sd=0,95).

But we can see that there are no statistically significant differences in the EVCE-r33 dimensions depending on being a student worker or not.

All dimensions, as well as the Global Emotional Competence, present average values that express a moderate profile, for both groups: No student workers with the mean of 4,48 (sd=0,56) and Student workers with the mean of 4,46 (sd=0,61).

Table 7 – Values of Mean and stand deviation (St.Dv.) of the five EVCE-r33 dimensions depending on student worker

	No student worker		Student worker		
	Mean	σ	Mean	σ	*p*
Self-awareness	4,42	0,91	4,35	0,95	0,680
Emotional management	4,53	0,74	4,40	0,86	0,363
Self-motivation	4,26	0,72	4,37	0,63	0,408
Empathy	5,04	0,80	4,90	0,94	0,457
Relationship Management	4,32	0,76	4,42	0,99	0,517
Global Emotional Competence	4,48	0,56	4,46	0,61	0,827

σ (sigma) sd -Standard Deviation

As we can see in Table 8, students from all years of learning in nursing, have the highest average values in the Empathy dimension, but the highest between these groups are the 3rd (X=5,09; sd=0,87) and the 1st year (X=5,02;sd=0,85), and in contrast, it appears that the dimension with lower averages is Self-motivation, namely for the students in the 1st year (X=4,21; sd=0,77) and the 2nd year (x=4,29; sd=0,73),

and the Relationship Management presents also the lower overages in the 2nd (X=4,29; sd=0,76) and to the 4th (X=4,33;sd=0,75) years students.

Global Emotional Competence, with no statistically significant differences between groups (p= 0,599), presents in all academic years values up the cut point, but lower in 2nd (4,44; sd=0,52), and the highest is of 4th years students (X=4,58; sd=0,53).

Considering the values of standard deviations, the variables that represent each of the dimensions of Emotional Competence present a normal distribution. There are no statistically significant differences in the EVCE-r33 dimensions depending on the year the nursing student attends.

Table 8 – Values of Mean (X) and stand deviation (ð)relative the five EVCE-r33 dimensions depending on the sample academic year attended.

EC Dimensons	**1st**		**2nd**		**3rd**		**4th**		
	x	**σ**	**x**	**σ**	**x**	**σ**	**x**	**σ**	**p**
Self-awareness	4,42	0,97	4,32	0,85	**4,36**	0,96	4,74	0,74	0,198
Emotional Mangt	4,46	0,86	4,47	0,66	4,62	0,77	4,56	0,66	0,576
Self-motivation	**4,21**	0,77	**4,29**	0,73	4,28	0,66	4,36	0,57	0,784
Empathy	**5,02**	0,85	**4,98**	0,74	**5,09**	0,87	**4,98**	0,84	0,859
Relationship Mangt	4,30	0,82	4,29	0,76	4,43	0,83	**4,33**	0,75	0,735
Global EC	4,45	0,64	4,44	0,52	4,52	0,57	4,58	0,53	0,599

σ (sigma) sd -Standard Deviation; X-mean;

In brief conclusion and with regard to statistical analysis, it appears that the variables under study present a normal distribution, and that most of them do not present significant statistical differentiation power, in relation to the values of the profiles found.

The five dimensions of EVCEr33 present a Moderate Profile, as well as Global Emotional Competence.

Each of these dimensions can be learned, reinforced

There are two very brief metacognitive exercises in the conceptual-labour field of health care that need to be addressed, even if briefly. The first is that it is not true that the only emotionally challenging contexts are those in which clinicians deal with life-or-death decisions. Especially because not even in these they are completely alone. The second is that it is urgent to deconstruct the idea that classical training is enough. More than this, it is important to add that it is absolutely healthy and developmental, for any professional field, to expand the respective areas of exercise and training, and that this is precisely an expressive window of the state of the art of caregivers in general and nursing development in particular. And previous training completed cannot, and should never, be sufficient for the human fabric of any profession. If it is prior to the now, it does justice to and concerns an eventually current and emerging reality, but which is never static or immutable. And not just for professionals... Users, patients, and even family members, are currently consuming more culture and information, which is why, in their status as citizens, they learn to discover rights, and in these, the right to quality. And so, they tend to progressively demand more and better quality of care.

They prioritize details, dominate expressive languages of this quality, adding to the technical instrumental executory component, the attentional and relational component to feel therapeutic.

And studies have often shown that health professionals in general, and nurses in particular, without training or with insufficient training in emotional competence and intra and interpersonal communication skills, - namely in the expression of specific competences in the area of nursing related to a person in a critical situation,(38, 40, 44) – experience greater and more evident levels of stress and emotional exhaustion when trying to control their own emotions and those of others (47, 48,49, 40, 51), in different Nursing contexts, from the pre-hospital area to intensive care units.

It remains to be said, and as already presented above, that the criteria units related to the specific competences are explicit with regard to the interactions that build and promote the therapeutic relationship, and like all activities/executive actions, from decisions to the implementation of plans in stressful environments, require good levels of emotional self-awareness and emotional management, not least self-motivation. And considering the profiles already studied in nursing, their predictive power for Emotional Competence in nurses was verified (37).

However, there is still a lot to study and understand about how we can reinforce the skills and dimensions that constitute Emotional Competence. It is essential to continue producing specific training in Emotional Education to develop all human beings in general in this type of soft skills, considered essential for relational interactions in the professional fabric of health contexts.

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