

Article

Emotional intelligence and empathy in pre-primary teachers: a pilot test

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Abstract: Today, concepts such as Emotional Education and Emotional Intelligence are recognized by many authors and researchers, emphasizing the importance of their development in all people, but especially in schools, specifically in teachers or educators and children. However, we still find many shortcomings within the schools that are needed to continue working. The aim of this study is to investigate the presence of emotional intelligence and empathy in teachers, through a sample of 42 participants. The research was conducted based on two validated and highly reliable assessment tools, called TMMS-24 and TECA. The results of the TMMS-24 indicate that a large percentage of participants have an adequate score of emotional intelligence. The results of the TECA indicate that most of the participants are in the middle, high or extremely high scores in relation to the level of empathy.

Keywords: Empathy, Emotional Education, Emotional Intelligence, Emotional competences, pre-primary Education.

1. Introduction

We live in a fast-changing society, and all this is reflected in schools, and therefore in the classroom. And one of the most important elements in schools are the teachers. Different research shows that teachers with emotional competences and emotional intelligence are better prepared to relate positively and appropriately with the educational community. It is for this reason that it is considered necessary to focus on the concepts of Emotional Education and Emotional intelligence in relation to teachers, to replace the traditional role of the teacher with another with a vision of comprehensive training of students (Ávila, 2019).

The WHO defines health as physical, mental, and social well-being and as the ability to fulfil one's potential and live in a positive way. A healthy person is also considered to be a person who can develop their own potential, to live reality in a positive way and to be able to regain their well-being and balance in the most critical moments. Therefore, the relationship between emotions and health and the importance of emotional education for the maintenance of people's health is evident (Carpena and Darder, 2006).

Authors such as Goleman (1995) and Mayer & Salovey (1997), among others, affirm that emotional intelligence is a hypothetical construct from the field of psychology and that emotional competencies place the emphasis on the interaction between the person and the environment, favouring learning and development. Other authors such as Cohen (1999), and Goleman himself (1995;1999), state that the acquisition of these emotional competencies is very important, and even necessary.

Therefore, emotional education is an educational process, continuous and permanent, in charge of developing emotional competences (Bisquerra and Pérez, 2007) based on the applications of psychological research.

Emotions are present in our lives from birth and play a relevant role in the construction of our personality and social interaction and intervene in all evolutionary processes: in the development of communication, social knowledge, information processing, attachment, among others (López, 2005).

Fernández-Abascal et al. (2001) describe the three functions of emotions as: adaptive, social (relational) and motivational (goal attainment), and Bisquerra (2011b) adds a further function: the informational function.

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Etymologically, the word emotion comes from Latin, and the concept derives from the verb "emovere", which means to move. Today, however, we have a clearer and more complex idea of what emotion is.

According to Fernández-Abascal et al. (2001):

"Emotion is an adaptive psychological process, which has the purpose of recruiting and coordinating the rest of the psychological processes, when certain conditions of the situation demand a quick and effective response to adjust to changes in the environment. Therefore, emotions alter the remaining psychological processes, they load perception with affection, direct attention, activate the memory, mobilise physiological changes, plan actions, verbal and non-verbal communication, motivate action... And the aim of this emotional disturbance is precisely to coordinate all these psychological resources at a given moment, in order to give the quickest and most timely response to the triggering situation" (p. 296).

"The concept of emotion is a construct that serves to explain the reactions of the organism characterized by four specific features, which are: changes in physiological activity; subjective interpretation of these physiological changes; preparation for action or mobilization of behaviour; emotional expression or externalization of this whole complex" (p.297).

Bisquerra (2011b) describes the concept of emotion as: "a complex state of the organism characterized by an excitation or disturbance that predisposes to an organized response. Emotions are usually generated as a response to an external or internal event" that manifests itself on three different levels:

- Neurophysiological: tachycardia, sweating...
- Behavioral: of emotions in a person.
- Cognitive: feelings.

Over the years, a multitude of studies have been carried out with the same coincidence, and that is that emotions lie on an axis from pleasure to disgust: they are known as positive emotions (joy, pride, love) and negative emotions (including anger, anxiety, shame, sadness, jealousy, disgust) and a third category, known as ambiguous emotions.

Other authors such as Lazarus (1991) call them problematic emotions, or neutral emotions (Fernández-Abascal, 1997) as they depend on the circumstances, for example surprise.

The general objectives of emotional education that must be considered are the following (Bisquerra, 2011b, 2011c): To acquire a better knowledge of one's own emotions that responds to social needs that are not addressed in ordinary academic subjects.

The aim of emotional education is the development of emotional competences, defined as "the set of knowledge, abilities, skills and attitudes necessary to become aware of, understand, express and appropriately regulate emotional phenomena" where well-being must be one of the most important milestones of education.

Numerous research studies have shown the positive effects of developing emotional competences to maintain a more harmonious personal state in accordance with the demands of the educational environment. Roa, et al. (2013) consider that the personal development of teachers improves teaching in the education system. At the same time, personal well-being favours empathy, facilitating interpersonal relationships between teachers and students (Canales and Rovira, 2016).

When Bisquerra speaks of well-being, he is referring to being able to experience positive emotions, but at the same time learning to regulate negative ones. Therefore, for teachers to be able to educate for life, both initial and ongoing training is necessary.

Therefore, the aim of education should be to give people the possibility to be able to evaluate the overall quality of their lives in a positive way. He also refers to a book entitled "Happiness and education" (Noddings, 2003) talks about the importance of schools preparing for life and not only for what the author calls "economic skills".

Carpena and Darder (2006) have studied these aspects in depth, so that they have reached the conclusion that nowadays teachers have a very good academic training, but this personal training is not considered, referring to emotions, an aspect that is essential to any profession, but above all to that of a teacher.

All these unmanaged emotional processes lead to more serious problems, both physically and psychologically, and can even cause mental illnesses such as depression or anxiety. Therefore, teachers need to be sensitized and trained in these competencies as a precondition for the education of children.

Salovey & Sluyter (1997) and Bisquerra & Pérez (2007) highlight the following characteristics in relation to the concept of emotional competence and identify five dimensions: cooperation, assertiveness, responsibility, empathy, and self-control, while Goleman (1995) divides it into five domains: emotional self-awareness, emotion management, self-motivation, empathy and social skills.

Bisquerra (2011a) considers that emotional intelligence is an important aspect of the psycho-pedagogy of emotions, as well as being one of the foundations and one of the objectives of emotional education: to train emotionally intelligent people.

Emotional intelligence is a construct that emerged with Salovey and Mayer in 1990 and became widespread with Goleman in 1995. A direct antecedent is Gardner (1995), in his theory of multiple intelligences, where he distinguishes 7 different intelligences referred to social skills, such as empathy and assertiveness, self-awareness, self-control and self-motivation (Roca, 2013).

This is not to say that emotional experience makes us wiser, but rather that the harmonious integration of emotional experience with the rest of the dimensions of the person facilitates a balanced relationship with oneself and with others (Carpena and Darder, 2006).

Emotional intelligence is: The ability to perceive, appraise, and express emotions accurately; the ability to access and generate feelings that facilitate thinking; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions and promote emotional and intellectual growth (Mayer and Salovey, 1997; Cabello et al., 2010), which is closely linked to social competence and the skills it gates are the basis for leadership, popularity and interpersonal efficiency (Rovira, 1998), so people who master these social skills are able to interact smoothly and effectively with others.

To be emotionally intelligent means to be able to manage one's own life and to establish constructive relationships with other people. Emotional intelligence is the way that affects emotions in an organising way.

Moreover, given that, in our culture, the emphasis has always been on the education of reason and behaviour, leaving aside the education of emotions, the first thing that should be done is to begin the discovery of emotional experience, without forgetting the cognitive and behavioural dimensions. This is not to say that emotional experience makes us wiser, but rather that the harmonious integration of this with the rest of the dimensions of the person facilitates a balanced relationship with oneself and with others (Carpena and Darder, 2006).

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For Goleman (1995) and Roca (2013), empathy is a key factor in interpersonal emotional intelligence and involves being able to tune in to subtle signals that indicate what others need or fly and to express to the other that we have understood them and that we are able to see things from their point of view or Carpena's (2015) as: "A natural capacity that develops in interrelation with others and within a culture that defines the kind of human we are expected to be, that defines how participation with the suffering of the other has to be and that signals with which others".

The concept of empathy is linked to the acquisitions of what is acceptable, good and fair and is known as "moral development" (Catalá, et al., 2011).

According to Goleman (1999) as cited in Carpena (2015), children learn empathy from early childhood.

When we talk about empathy, it is also necessary to talk about mirror neurons. They were a discovery made by the authors Rizzolatti and Iacoboni (2006). This discovery and the subsequent study of mirror neurons have expanded knowledge about some aspects of empathy. A deficiency in the functioning of mirror neurons could imply an inability to put oneself in the place of the other (Bisquerra, 2011b).

The discovery of the existence of mirror neurons shows that the values that make us social are innate. They are evidence of emotional contagion. As expressed by Anna Carpena, (2015): "Compassion is an expression of love, generosity and respect for all people. It involves avoiding pejorative labelling and implies understanding that behind emotions and feelings such as envy or anger, there are other emotions such as fear or pain".

Catalá, et al. (2011) state that we must work throughout compulsory schooling to achieve good levels of empathy not only with those who are sympathetic, but also with those who arouse hostility. Thus, a mature empathic capacity will lead us to identify and generate positive feelings not only with the people closest to us, but also with human beings in general.

For all these reasons, the aim of this study is to evaluate the perceived intrapersonal emotional intelligence and empathic capacity from a cognitive and affective approach in a sample of Early Childhood Education teachers

2. Materials and Methods

The study was carried out following a quantitative methodology with a non-experimental design (Cancela, et al., 2010), with a descriptive approach of a single group (Bernardo and Caldero, 2000) based on two questionnaires, with a total duration of between 5 and 10 minutes each.

2.1 Sample

The sample consists of a random sample of 42 pre-school teachers from both public and private schools in the Balearic Islands.

2.2 Evaluation instruments.

Two assessment instruments validated by López-Pérez, B., et al. (2019) have been used: TMMS-24 and TECA.

2.2.1 TMMS-24

The first instrument aims to assess, measure and detect the level of intrapersonal emotional intelligence as perceived by the teacher, namely to be aware of our emotions, as well as our ability to regulate them. The authors are Fernández-Berrocal, Extremera, and Ramos (2004), who made an adaptation of Salovey and Mayer's Trait Meta-Mood Scale.

This modified version of the scale consists of 24 items, scored on a five-point Likert-type scale (from 1: disagree to 5: strongly agree) assessing the following 3 dimensions:

1. Emotional Attention (EA): refers to the perception of one's own emotions, i.e. the ability to feel and express emotions appropriately.
2. Emotional clarity (EC): assesses one's perception of one's understanding of one's own emotional states.
3. Emotional repair (ER): Shows the perceived ability to regulate one's own emotional states correctly.

2.2.2 TECA

- The TECA (Test of Cognitive and Affective Empathy) aims to assess empathic capacity from a cognitive and affective approach by measuring the following items:
- Perspective-taking (PA): refers to the intellectual or imaginative ability to put oneself in the place of another person.
 - Emotional understanding (EQ): refers to the ability to recognise and understand the emotional states, intentions and impressions of others. This scale is included in the cognitive dimension, since understanding is a cognitive capacity of the empathetic person.
 - Empathic stress (ES): The ability to share the negative emotions of another person, i.e. to tune in emotionally to that person.
 - Empathic joy (EC): refers to the ability to share the positive emotions of another person. This concept refers to the positive side of the previous scale.

3. Results and discussion

In terms of emotional attention (EA) most of the participants have adequate emotional attention, therefore, they have the ability to feel and express their emotions adequately.

That is why in this first dimension it has to be taken into account that too low or too high a score can lead to some problems. Paying little attention to one's feelings is the opposite of paying too much attention to them. Extremera and Fernández-Berrocal (2006) report a close relationship between a high score on this item with anxious and depressive symptomatology, as well as low scores on this item with difficulties in emotional role, social functioning and mental health.

As for the emotional clarity (CL) item, as in the previous item, we can see that the majority of the participants still have an adequate score, while people with low emotional clarity account for almost a third of the respondents.

As for the third item (Emotional repair - ER), the results are very similar to the results of the first item, following the ideas of the authors Extremera and Fernández-Berrocal (2006), who show that high scores on the items of emotional clarity (item 2) and emotional repair (item 3) are related to high scores on physical role, social functioning, mental health, high vitality and good personal health and adequate expectations of change with respect to one's own health. These two categories have the lowest percentages.

First, we analyzed the results of the first assessment instrument called TMMS-24, item by item, based on the following table of percentages (Table 1 and Table 2).

Table 1. TMMS-24 (Mean ± standard deviation)

AT	CL	RE
1,9±0,66	1,74±0,59	2,05±0,99

Table 2. Percentage of TMMS-24 categories

	AT	CL	RE
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Few (1)	26,19%	30,95%	28,57%
Adequate (2)	57,14%	66,67%	54,76%
Too much (3)	16,67%	0,00%	0,00%
Very high (4)	0,00%	2,38%	16,67%

Therefore, the three dimensions that make up this instrument inform us about the relationship between physical health, social health and mental health. Bisquerra (2007), considers that working on the management of emotions and personal wellbeing becomes a basic element in favoring the comprehensive development of pupils. At the same time, they are key elements to work on with future teachers in their initial training. This author also states that emotionally competent teachers are better prepared to relate positively and appropriately with the educational community.

Limonero, et al. (2012) conducted research that concluded that emotional regulation mediates life satisfaction and coping with stressful events.

The results of the TECA test are summarized in table 3.

From this first item, we can interpret that most of the participants have high levels of empathy, to a greater or lesser extent (52.97% of participants have high or medium total empathy), a very positive characteristic in the teaching profession, and in the low or very low scores it is practically nil.

As for the Perspective Adoption (PA) item, it indicates that people in this scale have a facility for communication, tolerance, and interpersonal relationships. People in the medium, low or extremely low categories are characterized by less flexible thinking and may have more difficulties in understanding the mental states of others, this being an obstacle for teacher development in the early stages, presenting deficits in relationship and communication skills with other people due to a very rigid style of thinking.

We can see that this is a very low percentage but considering that we are talking about a small sample, and the participants are teachers, it is important to take this into account, and to think about what it might mean if there are teachers with such low scores on this item.

As for the Emotional Understanding (EQ) item, 35.29% have an extremely high emotional understanding, which implies excessive attention to the emotional states of others to the detriment of their own.

These people are characterized by a great facility for emotional reading of the verbal and non-verbal behavior of others.

These people show difficulties in this capacity, which means that interpersonal relationships and social skills are of lower quality. In the case of having people with this score, we are talking about people with great problems in social skills, an aspect related to emotional difficulties at an intrapersonal level.

As for empathic stress (ES), 26.47% of teachers have extremely high empathic stress and 35.29% high empathic stress, these people are characterized by self-reported high

neurotic levels. In most cases, this can interfere negatively in people's lives, even distorting the suffering of others with a tendency to become overly involved in the problems of others. People with average or low scores are unemotional, not easily moved, emotionally detached, and have little difficulty distinguishing their needs and emotions from those of others.

People with extremely low EE are characterized by excessive emotional coldness, i.e. they have great difficulty in being moved by what is happening to another person, which can have a negative impact on the interpersonal and attachment relationships that occur in childhood.

As for empathic joy (EC), half of the participants show extremely high empathic joy, which may mean that one's own happiness depends on the happiness of others, and that the person forgets his or her milestones or even remains in the background. Therefore, we can see that a high percentage of participants share these characteristics, and this can be a negative aspect, as they are people with low emotional regulation.

Table 3. TECA test results (in percentages)

Percent.	Total	AP	EC	USA	AE
Extr.High	44,12%	26,47%	35,29%	26,47%	52,94%
High	20,59%	32,35%	29,41%	35,29%	20,59%
Media	32,35%	26,47%	26,47%	20,59%	23,53%
Baja	2,94%	11,76%	8,82%	14,71%	2,94%
Extr.Low	-	2,94%	-	2,94%	-

20.59% have high empathic joy. These people find it easy to feel joy with positive successes that happen to others, which is related to a good quality social network; 23.53% have medium empathic joy; 2.94% have low empathic joy. These people tend to share the positive emotions of others to a lesser extent. Finally, 0% have extremely low empathic joy. Although the score in this case is 0%, people with extremely low scores tend to show indifference to the positive events of others. This is related to having a low quality social network.

Table 4. Correlation between the categories of the two instruments

		TECA				TMMS		
		AP	EC	USA	AE	AT	CL	RE
TECA	AP	1,00						
	EC	0,48	1,00					
	USA	0,46	0,41	1,00				

	AE	0,44	0,26	0,49	1,00			
TMMS	AT	0,14	0,02	0,10	-0,09	1,00		
	CL	0,15	0,08	-0,14	0,05	0,12	1,00	
	RE	0,14	0,03	-0,08	0,28	0,16	0,40	1,00

Note: Correlations are set as low (between 0.1-0.3), medium (between 0.3-0.5) and high (greater than 0.5). Source: Own elaboration.

Another noteworthy aspect is that, of the four specific items assessed, the one with the highest percentage is empathic joy. Both extremely high and extremely low scores are out of the normal range, since, on the one hand, extremely high scores on this item are higher than the rest, and on the other hand, in the case of extremely low scores, the percentage is 0.

López and Fernández (2007), carried out a study in which the aim was to empirically determine whether or not the relationship between empathy was limited to the component of understanding or emotional clarity of emotional intelligence, which is why a correlation was made between the scores of the different items assessed, which can be seen in table 4. Therefore, it could be considered that empathy would include aspects related to both the perception of the emotions of others and their understanding, aspects that are totally linked to empathy.

It is for this reason that it can be very useful to carry out both tests (TMMS-24 and TECA), since they provide a broader picture, because they are not "related" to each other, and therefore, the result of one of them will not provide reliable information in relation to components of the other, i.e. one questionnaire cannot be deduced from the other.

4. Conclusions

The study shows, even though it is a pilot test, the need to assess the emotional and empathic skills of aspiring teachers, or teachers already working in the early childhood education profession.

Consider it a positive aspect that a high number of participants have a high level of empathy. Therefore, these are teachers with the necessary sensitivity to be aware of pupils' personal states. However, the most important thing to note is that a higher number of participants with extremely high scores indicate an excessive level of personal involvement, which can lead many teachers to accumulate tension, stress or even depression, states that are not advisable when carrying out educational work.

More than half of the participants have adequate emotional intelligence, slightly less than half of them have low emotional intelligence, resulting in a very low percentage of participants with excellent emotional intelligence. We can consider it a major drawback that the percentage of low scores is much higher than the percentage of high scores, because it means that there are more female teachers with difficulties in managing and controlling emotions than non-teachers with highly developed emotional intelligence.

In the two instruments used, it has been shown that the majority of teachers have scores that can be considered optimal, but that one third of them have different shortcomings.

5. Patents

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