

EMOTIONAL COMPETENCE VEIGA SCALE (ECVS) CONFIRMATORY VALIDATION

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This Data Collection Instrument (DCI), the ECVS

The Scale, ECVSr33, as Data Collection Instrument (DCI), includes 33 items to operationalize the **five dimensions of E.C.**, as the following:

- 1st dimension, Self-awareness, 8 items, one of which, is an inverted item;
- 2nd one, Emotion Management: 7 items, three of which, are inverted items;
- 3rd dimension, Self-motivation: 7 items, two of which, are inverted items;
- the 4th dimension, Empathy: 5 items, four of which are inverted items;
- 5th, Management of Social Emotions, 6 items, without inverted items.

These items, 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.

Methodology

Psychometry of the Data Collection Instrument (DCI)

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.

Data Analysis Methodology

The data analysis process took place in two phases. The first, focused on the validity, reliability, and confirmation of the EC 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.

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
	EVCE1C	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	EVCE2A	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
	EVCE3D	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

About AMOS RESULTS

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.

It was observed that 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 those 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.

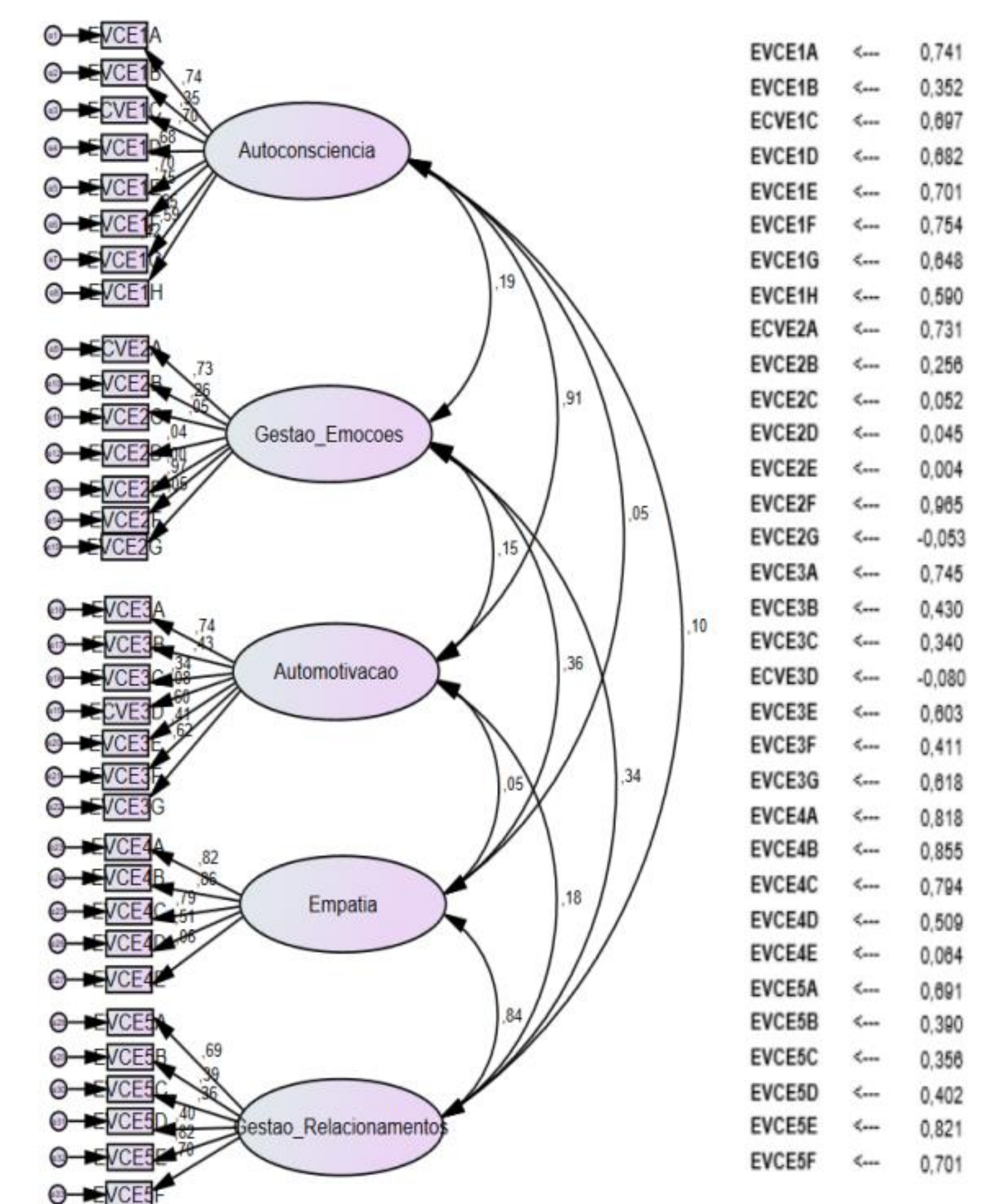
Thus, the conditions for using the EVCEr33 scale in the sample are met.

One word about Emotion

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..." (Damásio, 2000), 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.

It's essential to understand the value of learning self-awareness – the EC first dimension - from body self-awareness... because, as Damásio explains, "... like emotion, conscience is based on the representation of the body..." (Damásio, 2000), 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".

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



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