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Enhancing emotional intelligence according to or depending on the type of emotional regulation intervention program: Study with a group of Spanish Public Service Professionals

Wzmacnianie inteligencji emocjonalnej zgodnie z lub w zależności od rodzaju programu interwencji regulującej emocje: Badanie na grupie hiszpańskich specjalistów w zakresie usług publicznych

Abstract: This study compares two different types of *ad hoc* emotional regulation intervention programs designed and developed by the authors of this research for 62 Spanish professionals working in the health, educational and social fields. The two interventions have been designed by taking into account the needs and characteristics of the participants, bearing in mind contextual and cultural aspects in their design and implementation. The two interventions differ from each other in terms of its approach (innovative vs traditional). The effects of intervention change according to its approach and methodology was observed. The measurements were conducted using the Bar-On EI questionnaire and the Interpersonal Reactivity Index inventory. Results showed that the type of intervention differentiates participants in emotional intelligence and empathy. The more innovative the intervention

was, the more improvement in the emotional intelligence and empathy variables obtained by the participants. The control group did not show any improvement. This paper presents an overview of research on EI and discusses the effects of two types of intervention programs in emotion regulation that differ in terms of methodology.

Keywords: emotional intelligence, emotional regulation intervention programs, professionals, empathy.

Introduction

In recent years, emotional intelligence (EI) has gained widespread prominence, showing consistent and promising results associated with individuals' physical, mental health (Mikolajczak et al., 2009; Martins, Ramalho, and Morin, 2010) and personal and social well-being (Augusto-Landa et al., 2011; Lloyd et al., 2012; Sánchez Álvarez et al., 2016; Kong et al., 2019).

As a matter of fact, several studies have shown that EI is an essential predictor of human life satisfaction (Delhom et al., 2017), as there are highly significant positive correlations between both variables (Kong and Zhao, 2013).

In the same way, authors such as Liu et al. (2013), as well as Armstrong et al. (2011) have highlighted the existence of a positive relation between EI and resilience, being people with a high score in EI more resilient than those with lower scores.

It is also worth emphasizing that EI is also positively related to job satisfaction. In this respect, authors such as Chiva and Alegre (2008), among others, have observed that individuals with higher levels of EI are more satisfied with their work and have a higher learning capacity than their peers with lower levels of EI.

Furthermore, it has been shown (Sener et al. 2009) that professionals with high emotional and social competences have greater self-control, communicate more assertively (Froman, 2010), favoring a better work climate, and seem to regulate their emotions more effectively in order to reduce work stress (Nikolaou y Tsaousis, 2002; Cha et al., 2008). Besides, these individuals also show better leadership skills (Goleman, 2004; Turner, 2004; Norboevich, 2020; Gransberry, 2021), higher levels of adaptability (García, 2011; Ingram and Cangemi, 2012) and also are better at managing change situations (Nikolaou and Tsaousis, 2002).

Therefore, due to the benefits that high levels of EI could generate in people's personal, academic or professional lives, there has been a high

interest in fostering individuals' social-emotional competencies through EI intervention programs (Daus and Cage, 2008). Concerning the above, recently Kotsou et al. (2018) and Hodzic et al. (2018) conducted two systematic reviews of the results of previous studies which had examined the effects of EI training to explore whether such training programs actually improve EI.

On the one hand, Hodzic et al. (2018) concluded that EI training has a moderate effect on EI and that interventions based on EI ability models have the strongest effects. Moreover, the resulting improvements from these interventions were found to be lasting over time. On the other hand, the conclusions of the systematic review by Kotsou et al. (2018) on the effectiveness of EI training show that: 1) most intervention programs are developed with people with high levels of education; 2) the majority of the studies do not take into account cultural, contextual or gender factors; 3) they omit specifying what sort of interventions are carried out, summarizing what these interventions are like and what they consist of; 4) the studies lack, in most cases, of a control group or active control groups. 5) Comparing types of interventions, long-term interventions turn out to be more effective than short-term ones. 6) Most interventions are not followed up longitudinally and 7) finally, the meta-analysis evidences the need for more rigorous and controlled studies.

The current Study

Since, according to the above systematic reviews, studies on intervention programs do not delve deeply into the type of intervention carried out, as well as the majority of intervention programs do not take into account cultural and contextual factors, in the present study we attempted to overcome this gap, by examining and comparing two different kind of *ad hoc* emotional regulation intervention programs designed and developed by the authors of the current research. The first relying on traditional solutions, and the second on innovative ones.

The two interventions are designed *ad hoc*, this is considering the needs and characteristics of the participants who adhered to them, thus highlighting a special concern about including contextual and cultural aspects in their design and implementation. On the other hand, they differ from each other in the type of approach and methodologies employed.

The first one adopts a more standardized design, typical of most programs in emotional regulation (Argulló Morea et al., 2010; Perez-Escoda et al, 2013; Beckett et al, 2015; Gilar-Corbi, 2018). Based on a behaviorist paradigm (Salas Madriz, 2002; Tascón, 2003), where the facilitator is the main figure

who transmits content while participants are mere recipients of it, such type of intervention fosters emotional management through previously planned activities, focused on products and not on the process. This type of design is intended to facilitate an improvement of socioemotional competencies through the acquisition of one or another skill, the development of techniques that can be used to adequately face situations of emotional maladjustment or through emotional regulation strategies that have already been proven to be effective for the management of emotions.

The second type of intervention was intended to create value in the lives of the participants, not only by fostering better emotional regulation, but also by offering them a transformational change in the way they conceive themselves, interact within the world and behave with others. This type of program shows a new approach to foster social-emotional competencies. By employing an experiential process-oriented methodology (McWhirter, 2001) with collaborative and dialogic distinctions (Iborra et al., 2010), this kind of intervention allows participants to explore experiences in detail, by having new distinctions which enable them to create new value from challenging situations. Furthermore, this type of intervention is based on a constructivist and sociocultural paradigm of education (Tascón, 2003) where knowledge is conceived as something actively constructed through the interaction of the subject with the surrounding world. According to this paradigm, knowledge is acquired through experience and the meanings that each person will give to it will depend on his or her starting conditions, developmental environment and specific needs.

It should be mentioned that both interventions, traditional and innovative, have been designed based on a constructionist paradigm of emotions, thus moving away from the classical view of emotions, according to which the same are universal, innate and recognizable through facial expressions (Ekman, 1992; Ekman and Friesen, 1983). Indeed, according to psychological constructionism, there are no pre-conceived categories of emotions. An emotion is something that our brain actively constructs when we experience a physiological sensation triggered by an exteroceptive sensation or that manifests itself internally in the body (affect) in the shape of increased heart rate, pleasure or displeasure (valence), or arousal (arousal), (Barrett, 1995; Lindquist, 2013: Barrett and Barberán, 2020). Thus, at any moment, our brain makes certain predictions from previous experiences similar to the one it is feeling at the moment, from socially and culturally learned conceptual knowledge and linguistic labels. That is how it actively transforms a sensation into an emotion. This happens because our brain tries to make sense

of any uncertainty or ambiguity by using a known emotional category and the context in which the sensation occurs (Lindquist, 2013). Language has a fundamental role in constructing different emotional events. The human brain, in fact, turns abstract concepts into words and combines these words with vivid experiences in order to name and relate them through language. Because of language, the sensory information that the brain continuously receives from the body and the world is materialized into semantic labels that enable people to accurately remember and name the occurrences that they experience (Lindquist, MacCormack, and Shablack, 2015). Hence, people within the same culture are able to communicate and be understood by the creation of shared semantics.

By employing this approach in both intervention programs, we could take into account individual, cultural and social aspects while dealing with the participants' emotional episodes, covering the gap found in the previous studies on emotions.

It is also important to stress that the second kind of emotional regulation program was designed based on the gaps and errors found in the first type of intervention program, which was designed and implemented prior to the second.

Thus, through the current study we sought to achieve the following main objectives:

1. Explore whether the effects and impact of the interventions change according to the type or modality of the interventions, in relation to changes in the participants, based on the quantitative results obtained using the Bar-On EI questionnaire and related indicators and the Interpersonal Reactivity Index inventory.
2. Find out if there are differences in the improvement of EI of participants, due to the different type of intervention used.
3. Verify which type of intervention is the most effective among the ones studied.
4. Insist on the importance of creating interventions designed *ad hoc*, according to the specific needs and circumstances of the participants who attend them.

We directed the intervention programs to professionals working in the health, educational and social fields, as public service interpreters and social workers.

Social work is often defined by its versatility, moving from caring for and providing assistance to vulnerable, helpless or conflicted individuals or families, to developing administrative functions and coordinating services

(Morrison, 2006). In carrying out their work, it is essential that they are empathetic, calm, flexible and open (Lázaro, 2004). The interpreters are generally required to be available around the clock and to be able to handle very different scenarios quickly and efficiently, without the additional help of non-verbal communication. In addition to possessing certain linguistic and cultural skills, they are also required to have the versatility and mental agility to adapt the tone of their voice according to the specific circumstances they are dealing with. Therefore, they must also know how to manage time and clearly distinguish between their private and professional lives, as they multitask and often have difficulty keeping these spheres of their lives separate.

However, in many cases, social workers and social interpreters lack these interpersonal skills due to the professional burnout they suffer (Siebert, 2008) and the high levels of stress to which they are subjected (Sequeira, 1995). Farther, these professionals are at risk of developing anxiety and depressive problems due to the type of work performed in these contexts and the associated stress load. Likewise, in the more specific case of social interpretation and social work, the literature on the subjects shows clear evidence of a lack of psychological support for these professionals and of emotional management programs, as well as serious problems of burnout, anxiety and stress on the part of these professionals due to their working conditions (see Lázaro, 2004; Valero-Garcés, 2006; Siebert, 2008).

In the problem field outlined as above, we formulated the following research questions:

1. Do the effects of emotional regulation intervention programs vary according to the type of intervention being provided?
2. Will participants who benefited from a more process-oriented intervention have a greater improvement in their emotional intelligence than those who joined a more traditional one?

Emotional intelligence and empathy (dependent variables) were operationalized as choices on numerical rating scales used to respond to tests questions. The sum of the selected values indicated the intensity of the measured trait. In turn, participation in intervention programs (independent variable) was labeled as the intervention group. In the case of non-participation in an intervention program, the research participant was labeled as the control group.

Method

This study was carried out using quasi-experimental design with pre- and post-test in experimental and control groups. The data analysis

model used is correlational, specifically, canonical correlation analysis was implemented.

Participants

The sample of 62 participants was recruited from population of Spanish professionals working in the health, educational and social fields in the intercultural mediation and public service interpretation domain. All participants had higher and professional education. The sample consisted of 53 women and 9 men aged 41 years (m = 41.17, sd = 10.30, me = 43.5, as = -.15, k = -.96, min = 23, max = 61). The minimum sample size was calculated using the G*Power application for linear multiple regression with $\alpha = 0.05$ and the number of predictors equal to 3 (actually one predictor, but three levels). This slightly more rigorous approach to the number of predictors yielded n = 56 . However, we included all participants who gave their consent to participate in the study.

At a more detailed level, the sample consisted of public service interpreters, working in the main and best-known social interpreting agencies in Spain. Among these interpreters, some worked face-to-face in the health, educational and social sector, providing simultaneous and consecutive interpreting services in several public hospitals, social assistance centers or schools in the Community of Madrid, while others worked telephonically throughout the country, providing language mediation services in many public services where both professionals and foreign users are unable to communicate in case of emergency situations, such as traffic accidents, medical emergencies, social and family crisis situations, etc., due to language barriers.

It finally should be noted that, although the professionals seem to differ in terms of the type of work they do, they do have characteristics in common that made it possible to intervene with them and group them together into two types of interventions. This ensured that the results obtained after the interventions depended on the type of program carried out and made possible to foster the development of *ad hoc* interventions.

In fact, as mentioned before, all the professionals work in public services, in contexts which require contact with foreign or vulnerable users, due to their life circumstances. All the groups of professionals with whom we intervened are at risk of problems such as stress, anxiety, burnout, among others, due to their work circumstances. For all groups, the literature to date shows that there is little or no presence of emotional management interventions in the Spain territory, and even less *ad hoc*.

Prior to starting the study, all participants signed informed consent forms, which guaranteed complete confidentiality of processed data, voluntary participation in the study, and the right to withdraw from the study at any point.

Participants of this study did not receive any form of compensation for their participation.

Instruments

The Spanish adaptation of the BarOn Ice questionnaire, EQI BarOn (Ugarizza and Pajares, 2005) to measure the emotional intelligence and the variation of each factor included in it at pre-test and post-test moments was used.

The BarOn questionnaire is commonly used to measure „a set of non-cognitive skills, competencies and abilities that influence people´s ability to adjust to the demands and pressures of the environment" (BarOn, 1997, p. 14).

The instrument consists of 133 items, grouped into five categories:

1. Intrapersonal subcategories: Self-esteem, Emotional self-awareness, Assertiveness, Independence and Self-realization.
2. Interpersonal subcategories: Empathy, Social Responsibility and Interpersonal Relationships.
3. Stress management subcategories: Stress Tolerance and Impulse Control.
4. Adaptability subcategories: Reality Testing, Flexibility, and Problem Solving
5. Subcategories of the general mood scale: Optimism and Happiness.

The questionnaire successfully passed theoretical and criterion validity tests, as well as the internal consistency for the total inventory. In unrelated studies, the value of the Cronbach's alpha coefficient ranged from .72 to .97 (see BarOn, 1997). This instrument uses a rating scale, with response intervals ranging from 1 („Rarely or almost never") to 5 („Very often or always").

According to the meta-analysis of Puertas-Molero et al. (2020), most studies on EI interventions use this instrument to measure participants' EI at pretest and posttest moments.

To measure the dispositional empathy of the participants in our study the Spanish-adapted version (Pérez et al., 2013) of the *Interpersonal Reactivity Index Questionnaire* (IRI, Davis, 1983) was used. It has psychometric characteristics similar to those of the original version tested in the

multitrait-multimethod matrix (Davis, 1983). The Spanish questionnaire is made up of two independent dimensions of 7 items each (Pérez et al, 2013). In total, the instrument consists of 28 items. The dimensions in Spanish version are as follows: perspective taking ad empathic concern. The "perspective taking" dimension indicates the ability of the subjects to adopt the point of view of others, the "empathic concern" shows the tendency of individuals to have compassion or concern for other people. This instrument uses a rating scale, with a response interval that ranges from 1 („Does not describe me at all") to 5 („Describes me very well").

Procedure

The experiment was conducted on the tree groups plan: two experimental and one control group. Traditional intervention was used in the first and innovative intervention in the experimental groups. Each of group was measured before (T1) and after (T2) the time of intervention. It the case of experimental groups two *ad hoc* intervention programs were created based on the needs of each group we worked with. These intervention programs were designed to verify whether their implementation would lead to an increase in emotional intelligence of the participants involved and if the differences found were due to the type of intervention carried out.

The first intervention program was carried out with a group of eleven subjects who presented the following picture of their initial circumstances:

1. Self-esteem issues due to the lack of recognition within their work environment.
2. High levels of empathetic concerns due to the close, direct relationships they have with clients.
3. Anxiety and stress issues due to a combination of heavy involvement and overload at work.

The second intervention program involved a number of forty-four participants, divided into two groups in order to provide them with a more personalized care.

They presented the following picture of their initial circumstances:

1. Problems related to stress management
2. Problems with communication and interpersonal relationships
3. Elevated levels of involvement and work overload
4. Problems related to empathy

Baseline data were collected on the first day of each intervention program. Each intervention program was made up of 3-h class sessions distributed across three months. Finally, post-test data were collected on

the last session of each intervention program. The differences between the measurement of T2 and T1 in experimental and control groups were used as dependent variables in the data analysis. Due to the improvement of the dependent variables´ distribution in terms of skewness and dispersion, the data were logarithmically transformed. Then, the transformed data was included in the analysis.

The data were subjected to canonical analysis (CA), which is a generalization of multiple regression analysis for many explained variables. The use of regression analysis to assess the model for each of the dependent variables not only distorts the image of the studied phenomenon, but also raises the value of type I error (α). Then it is referred to as alpha inflation (α*) which is that the value of alfa increases correspondingly to the number of repeated analyses (c). To avoid this, it is necessary to use analytical solutions to build a model of the phenomenon covering all the assumed dependent variables included in the research project.

Canonical analysis involves examining the relationships of latent variables, which are created by summing weights of standardized original independent variables (IV) and summing weights of standardized original dependent variables (DV). These weighted sums of independent (U) and weighted sums of dependent (V) variables are called canonical variables. Paired together, they form the canonical roots (CR). The weighted sums in each of the two sets of input variables are selected so as to maximize the correlation between the first pair of canonical variables and then the correlation between the successive pairs of canonical variables.

The assumptions of canonical analysis were fulfilled:

- minimum number of observations at least $4 \cdot N_{variables}$ (Laessig, Duckett, 1979),
- no outliers in testing based on review of standardized residuals,
- lack of collinearity between two independent variables traditional and innovative intervention (tolerance values definitely higher than 0 and variance inflation factor (VIF) close to 1, where limit value VIF>1): tolerance equal .55, VIF equal 1.82.

Statistical inference was conducted at the assumed level of statistical significance $\alpha = .05$.

Results

The overview of descriptive statistic (Table 1) shows the general higher differences (T2 – T1) in the control group regards to Perspective Taking and Empathic Concern. This is expressed in a greater similarity of results within the group (lower variance for a given average difference value). The opposite is true for the rest of explained variables. The latter means that the differences are higher and, at the same time, the variability of the differences in the groups with the intervention programs is lower. These results justify the deeper analysis of the relationship structure between emotional intelligence, empathy and emotional regulation intervention program.

Table 1. Descriptive statistics of dependent variables (differences T2 – T1) by groups

Variable	Control			Traditional			Innovative		
	m	sd	c_v	m	sd	c_v	m	sd	c_v
Perspective Taking	.34	.06	.19	.30	.10	.35	.32	.10	.30
Empathic Concern	.28	.08	.29	.26	.11	.41	.33	.11	.33
Intrapersonal	.34	.08	.25	.36	.08	.22	.35	.06	.18
Interpersonal	.33	.10	.29	.30	.06	.22	.30	.07	.24
Adaptability	.31	.06	.19	.34	.06	.17	.35	.07	.20
Stress Management	.30	.07	.22	.35	.07	.21	.37	.07	.19
General Mood	.33	.14	.43	.32	.09	.28	.36	.06	.17

m – arithmetic mean, sd – standard deviation, c_v – coefficient of variation
Source: Author's research.

In the analysis of structure of the relationship between the measured variables, a model including all independent and dependent variables (Model 1) was tested, as well as models formed after successive removal of variables with the lowest factor loadings. For the main presentation, three models were selected that provide the most information about the structure of the relationships studied (Table 2). In each model, a statistically significant correlation occurred between the U and V canonical variables in only one pair. The model 1 covering all canonical roots is characterized by a correlation of two weighted sums (the weighted sum of independent variables and the weighted sum of dependent variables) equal to .56 and explains 32% of the variance of original variables by canonical variables. According to the calculation, in the case of significant canonical root no. 1 (CR1) the canonical

correlation between canonical variables U and V is .22 and the canonical R^2 is .20. It should be noted that the value of R^2 depends on the number of variables in the model, so as the number of variables was reduced, the value of the canonical correlation decreased with successive models, albeit slightly. For Model 3, which contains four rather than seven original dependent variables, the value of the canonical correlation coefficient dropped from .56 to .46, corresponding to a 22% explained variance. The change is not large, indicating that the successively removed variables were less significant for the relationship between the sets of IV and DV variables. This is particularly evident in the transition from model 1 to model 2. The removal of one variable from model 1, i.e., Perspective Taking, actually did not result in more pronounced changes in the parameters of model 2 (Table 2). A more complex case involves the variables Interpersonal and Intrapersonal. When they are removed from the model then the canonical correlation stopped to be significant (CR1: Canonical R = .38, chi^2 (10, 110) = 1.36, p = .209, Wilk's λ = .79; CR2: Canonical R = .27, chi^2 (4, 56) = 1.09, p = .372, Wilk's λ = .93). Moreover, the only option with the maximum reduction in the number of variables due to the weakest canonical loadings is model 3. It could mean that the variables Interpersonal and Intrapersonal play a special role in establishing the relationship between the variables included in the original model (Model 1).

Wilk's λ value reporting the extent of unexplained variance V by variates U decreases from model to model, which should be explained by the decreasing number of original variables in each successive model.

Table 2. The test of canonical roots significance

Model	Removed	Canonical R	Canonical R^2	chi^2	df	p	Wilk's λ
1	0	.56	.32	2.18	14, 106	.013	.60
	1	.34	.12	1.19	6, 54	.327	.88
2	0	.56	.31	2.42	12, 108	.008	.62
	1	.31	.10	1.18	5, 55	.333	.90
3	0	.46	.21	2.20	8, 112	.033	.75
	1	.24	.06	1.15	3, 57	.339	.94

Source: Author's research.

Table 3 presents information about the variance of varieties explained by canonical roots (canonical variates). Regard to significant canonical root

(CR1), the general amount of extracted variance by CR in model 1 (i.e., the original variables replaced by CR) are: 74% of IV set and close to 10% of DV set. General amount of the extracted variance is the arithmetic mean of the squared factor loadings that are indicators of the variance of the original variables explained by the canonical root. The redundancy, defined as the percent of variance in the one set of original variables explained based on the second set and its input to the canonical roots, is respectively 24% of IV and 3% of DV. These results were slightly improved in subsequent models. The original independent variables were replaced in 58% in model 3, compared to 74% in model 1. Admittedly, the redundancy decreased, but in a way that confirms the main role of the original variables in model 3. Thus, in model 1, the range of explained variance of the DV set was explained in close to 10% by the IV set, and after removing the original variables with the lowest canonical loadings from the DV set, this range was close to 25% (model 3). This means that primarily those original variables that remain in model 3 are affected by the variability of IV. This conclusion is justified also by the value of total extracted variance. This value increased from .20 in model 1 to .43 in model 3.

Table 3. Extracted variance and redundancy

Model	Set	Measure	Canonical Root (CR)		Total
			1	2	
1	IV	s^2	.743	.257	1.00
		Rd	.236	.030	.266
	DV	s^2	.095	.105	.200
		Rd	.030	.012	.042
2	IV	s^2	.764	.236	1.00
		Rd	.238	.023	.261
	DV	s^2	.109	.137	.246
		Rd	.034	.013	.047
3	IV	s^2	.577	.423	1.00
		Rd	.120	.024	.144
	DV	s^2	.245	.183	.428
		Rd	.051	.010	.061

IV - the set of independent variables, DV - the set of dependent variables, s2 - extracted variance, Rd - redundancy index

Source: Author's research.

A review of the canonical weights and canonical loadings (Table 4) indicates that among the independent variables, Intervention I and Intervention T[1] contribute the most to the model. In turn, among the dependent variables, the order is as follows: Emphatic Concern, Stress Management, and General Mood. While canonical loading reports the contribution of the original variable to a function such as CR (according to the rule of thumb the value of canonical loading should be ≥ .45), canonical weight can be interpreted similarly to the standardized beta coefficient in multiple regression. Therefore, when the intervention is changed on innovative, the General Mood, Emphatic Concern and Stress Management goes up, and the Interpersonal goes down. Canonical weights might be interpreted similarly to the beta coefficients in multiple regression. According to this: the change intervention on innovative, the value of the first canonical variable corresponding to the set of original independent variables changes by .97 points. In turn, the change of General Mood by 1-point results in an increase in the value of the first canonical variable corresponding to the set of original dependent variables by 1.12 points. Similarly, the change of Interpersonal by 1-point results in a decrease in the canonical variable by -.049 points. The rest of variables are interpreted relevantly.

Table 4. Canonical weights and loadings in the first CR

Original variable	Model					
	1		2		3	
	w	l	w	l	w	l
Variable U						
Traditional Intervention	-.05	**-.70**	-.11	**-.73**	.34	**-.47**
Innovative Intervention	.97	**.99**	.92	**.99**	1.20	**.97**
Variable V						
Perspective Taking_A	-.14	.06	-	-	-	-
Empathic Concern_A	.56	**.47**	.54	**.48**	.60	**.54**
Adaptability_A	.40	.23	.37	.22	-	-
Stress Management_A	.16	**.45**	.13	.44	.34	**.65**
Intrapersonal_C	-1.06	-.06	-1.08	-.07	-	-
Interpersonal_C	-.48	-.14	-.46	-.13	-.76	-.26
General Mood_C	1.12	.40	1.14	.41	.58	**.46**

w - canonical weight, l - canonical loading
Source: Author's research.

[1] I Intervention refers to Innovative Intervention, while T Intervention refers to the traditional one.

In summary, the canonical correlation value indicates a definite relationship between the sets of independent and dependent variables. However, three of the dependent variables measured appeared to be specifically determined by the form of the therapeutic intervention. These are: Emphatic Concern, which is the most stable from model to model; Stress Management, whose canonical weight is not high in model 1, but definitely increases in model 3 and at the same time has the highest canonical loading from the other dependent variables; and General Mood, whose canonical loading is also among the highest and improves from model to model.

Discussion

The present study attempted to answer the research question by designing, implementing and comparing two *ad hoc* intervention programs, the first being more based on a traditional approach and the second more innovative, relying on a process-oriented methodology with dialogic and collaborative nuances.

Both programs addressed cultural and social aspects, as these were not taken into consideration by the previous studies cited by the aforementioned reviews.

The research results showed that type of intervention differentiates the participants' scores in two EI scales and in one important factor of Empathy.

Looking in more detail, it can be noted that, more specifically, there are three dependent variables which are significantly determined by the type of intervention carried out. In fact, for the variables empathic concern, stress management and general mood, it can be observed that, when moving from a more traditional type of intervention to a more innovative type of intervention based on a process oriented and collaborative methodology, there is an important increase in them, which can clearly be explained by the change in the type of intervention.

These results seem to be significant to us. Indeed, several studies have demonstrated the existence of a positive correlation between high scores on the variables of emotional intelligence and empathy, emphasizing that people with high levels of empathy and empathic concern seem to have a better understanding of their own emotions and of what others feel (Davis, 1983; Doherty, 1997; Eisenberg and Miller, 1987; Konrath and Grynberg, 2013), thus performing more adequately in the world.

It should be noted that the variable stress management and general mood are two very important dimensions of the five scales of Emotional

Intelligence measured by the EQI BarOn (Ugarizza and Pajares, 2005) which englobe other variables in them.

According to Ugarizza and Pajares (2005), in fact, people who tend to score high on the Stress Management dimension are usually skilled at coping with stress while maintaining control. They are usually calm, rarely impulsive, and work well under pressure. They can perform work that provokes tension or anxiety or involves some danger. High stress management is necessary for those who work in stressful or dangerous situations, such the professionals who took part in our study.

The General Mood component of the inventory (Ugarizza and Pajares, 2005), on the other hand, measures a person's ability to enjoy life, outlook on life, and general contentment. High scores are usually obtained by positive, and optimistic people who enjoy life. This dimension is fundamental in social interactions as well as it influences the ability to solve problems and be stress tolerant.

Being on the one hand these two dimensions, (which are particularly relevant for an adequate emotional management), significantly correlated with the type of intervention carried out and, on the other hand, having participants' scores in these dimensions increased significantly when moving from a more traditional approach to a more innovative one, could be considered as evidence to support our initial hypotheses.

As mentioned above, another variable to highlight is empathic concern, which has also improved significantly in participants when we have moved to a more innovative type of intervention. Generally, having high empathic concern promotes feeling compassion for others, to care about less fortunate people, leading them to be more altruistic, to get involved in volunteer activities or to provide selfless help to those who need it most (Davis, 1983; Grühn, Rebucal, Diehl, Lumley, and Labouvie-Vief, 2008; Konrath, Ho, and Zarins, 2016).

The fact that the participants were more empathetic after a more tailored and less standardized type of intervention not only benefited them in their personal and professional lives but is further relevant evidence that the improvement of socioemotional skills is related to the type of intervention provided, a factor which is not generally considered when evaluating the benefits of emotional education programs.

The surprising result was the non-excludable role of variables Interpersonal and Intrapersonal in the model. It could be derived from the fact that by working more deeply on aspects related to the self, to their way of being in the world, of perceiving the world and behaving in it, participants were

able to work on improving aspects related to their inner self, to their way of feeling, interpreting and expressing their emotions and, at the same time, to handle interpersonal relationships in a healthier and more suitable way.

The study indicates an irreducible contribution of the type of therapeutic intervention in explaining these dependent variables, even though the rest of the variance is explained by factors outside the model. This is certainly a valuable result directing attention to other variables as well and pointing to the need to revise expectations of therapeutic intervention modalities.

Among the weaknesses of represented study the lack of sample randomization is one of the major limitations. It is worth pointing out that at the beginning of our research we aimed to have statistical representativeness, but we faced several difficulties in obtaining the units because we were working with a new and original population, in some cases. As an example, for Public Service Interpreters and Telephone Interpreters, their careers are quite new in the labor field in Spain and around the world, so most of them are self-employed and it is very difficult to obtain information about them. In fact, they represent a hard-to-reach population. This is why we needed to acknowledge the terrain of the research and, since we intended to cover as many aspects of the phenomenon as possible. Hence we focused more on typological rather than statistical representativeness. Moreover, all research participants worked daily in care, social and health contexts, which required their involvement for many serious reasons (emergency situations affecting vulnerable population groups) at different times of the day. It was thus very hard to organize intervention programs that could cover the schedule and geographical availability of all the professionals involved, or even to recruit participants who would be able to join them.

The broken rule of randomization is an important limitation, but with this knowledge about the studied population and the possibilities of reaching it, it should also be considered as a condition optimizing the possibility of getting to know the phenomenon and in fact increasing sample representativeness, not lowering it. We plan to conduct future research based on solutions for hard-to-reach populations. In addition, based on the experience and results obtained from the current project, we will plan the exploration of the properties of this hard-to-reach population, e.g. by building an ethnographic map of this community. We also anticipate obtaining an environmental recommendation, which will help in the promotion of further research and increase readiness to participate in them.

Conclusions

In the present study, we attempted to analyze whether the effects of these interventions relate to the type of methodology used and the type of program carried out.

Both interventions were designed considering social and cultural aspects, since they were not addressed in the rest of the emotional regulation programs examined by recent systematic reviews.

The study results showed distinctions in the participants' scores on two dimensions of emotional intelligence as well as in empathic concern which were determined by the specific type of intervention carried out. We insist on promoting intervention programs in emotional regulation that take into account the cultural and social characteristics of the participants and the context in which they are developed, as well as the type of methodology adopted, and the design of the intervention implemented.

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