



Does Emotional Intelligence Predict Depressed Mood? A Structural Equation Model with Elderly People

Iraida Delhom¹ · Margarita Gutierrez² · Teresa Mayordomo² · Juan Carlos Melendez¹

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Abstract It is widely accepted that older people need to perceive and understand their feelings and believe in their ability to adapt to negative situations or losses that occur in aging. In this study, we examined the relationships among emotional intelligence, coping, and depressed mood, measuring these relationships through a structural equation model (SEM). A total of 215 subjects over 60 years old with no cognitive impairment participated in the study. The results show that emotional intelligence positively predicts problem-focused coping, which in turn negatively predicts depressed mood. However, there is no significant relationship between emotional intelligence and emotion-focused coping, which positively predicts depressed mood. These results indicate that emotionally intelligent people make greater use of problem-focused strategies, and they benefit from them in achieving a positive mood and, therefore, better psychological adjustment, whereas emotional strategies foster depressed mood. It should be noted that emotional intelligence can be seen as an indicator of psychological adjustment and as a precursor of feelings associated with good mental health. Therefore, the implementation of activities that promote emotional intelligence can improve the quality of life of older people.

Keywords Emotional intelligence · Depression · Coping · Structural equation model · Elderly

1 Introduction

Old age is considered a stage in which older people have to face numerous situations related to loss, such as the risk of having diseases, loss of loved ones, or the increase in their dependence (Martin et al. 2008). Having to face these negative life events can give

☑ Iraida Delhom iraida.dp@hotmail.es

¹ Universidad de Valencia, Av. Blasco Ibañez 21, Valencia 46010, Spain

² Universidad Católica de Valencia San Vicente Martir, Valencia 46001, Spain

rise to the appearance of depressive symptoms, whose prevalence in older adults in the general population is between 10 and 15% (Steffens et al. 2009). One of the variables mentioned in the literature as a predictor of mood is emotional intelligence (EI) (Lloyd et al. 2012; Tsaousis and Nikolaou 2005); emotionally intelligent people make use of more effective coping strategies, which means they more easily maintain a positive mood state (Rey and Extremera 2012). In addition, coping strategies have also been found as variables that influence mood states at this age (Bjørkløf et al. 2013).

2 Emotional Intelligence

According to Salovey and Mayer (1990), EI is defined as the ability to perceive, evaluate, and express one's emotions with precision, the ability to access and generate feelings that facilitate thought, the ability to understand emotion and emotional knowledge, and the ability to regulate the emotions and promote emotional and intellectual growth. The dimensions of EI are attention, clarity, and repair.

These EI dimensions are closely aligned with some of the more common symptoms of clinical disorders (Keefer et al. 2009). Several aspects of self-reported EI have been found to moderate the relationship between stress and the outcomes of hopelessness, depression, and suicidal ideation (Cha and Nock 2009); Which leads us to think that people with high emotional intelligence will make good use of coping strategies, contributing to the resolution of problems, and thus producing more positive moods. That is, subjects with the ability to pay attention to the emotions (their own and others') show good interpersonal functioning, which acts as a protector in different risk situations to which the person could respond in a maladaptive way. Attention to the role emotions play in our environment and to the way their effects are expressed can foster personal and social improvement, allowing the person to use accurate reasoning to enhance the process of a positive emotional reaction (Lloyd et al. 2012). However, it is important to point out that constant attention to our emotions and mood state can lead to a ruminative process that can give rise to the intensification and maintenance of a negative emotional state (Extremera and Fernández-Berrocal 2005).

With regard to clarity, and as Salguero and Iruarrizaga (2006) indicate, people with high emotional clarity not only believe that they know whether their mood is positive or negative, but they also perceive themselves as more capable of understanding what emotions they are experiencing, how these emotions are manifested, and their causes and consequences. Having this information about our emotions allow us to reflect on them and make decisions based on them, thus reducing their intensity and facilitating their later regulation. Other authors (Extremera and Fernández-Berrocal 2005) have pointed out the relationship between the clarity dimension and attention, indicating that people who easily identify their emotions spend more time paying attention to them. Therefore, they invest fewer cognitive resources, which will allow them to evaluate alternative actions, focus their thoughts on other tasks, or use more adaptive coping strategies (Gohm and Clore 2002). In other words, people's inability to identify their emotional reactions or those of other people may reduce their ability to assess the stressor and choose the appropriate response for a positive outcome (Barissette et al. 2002).

Finally, and regarding the dimension of repairing or managing the emotions, some authors (Ciarrochi et al. 2002) have found that high scores are related to lower levels of stress, depression and hopelessness, and higher scores on mood. Therefore, people with a

strong capacity to perceive, integrate, understand, and manage their emotions would have less risk of presenting maladaptive behaviors in response to stressful events (Cha and Nock 2009).

EI involves a set of emotional skills to effectively use information from emotions, allowing people to employ adaptive coping when faced with stressful life events (Salovey and Mayer 1990). Thus, EI is considered to be an indicator of psychological adjustment and a key precursor to feelings associated with well-being (Augusto-Landa et al. 2011; Mayer and Salovey 1995). Authors such as Zeidner et al. (2012) indicate that the appropriate use of emotional skills might lead to a higher rate of positive emotional states and a reduction in negative mood, facilitating a greater sense of health and well-being.

3 Emotional Intelligence and Coping

Coping is defined by Lazarus and Folkman (1984) as cognitive and behavioral efforts that constantly change and are developed to deal with specific external or internal situations that are thought to overwhelm the individual's resources. The adoption of a particular coping strategy is believed to be shaped by individuals' appraisals of the situation as either challenging or threatening, relative to their personal resources and competencies (Folkman and Moskowitz 2000). Therefore, the individual's perception of his/her own self-efficacy and control over the situation will lead to the adoption of certain coping strategies based on this perception (Keefer et al. 2009).

Saklofske et al.(2007) found that EI showed a significant positive correlation with rational coping, and a significant negative correlation with emotion-focused coping. Other authors (Zeidner et al. 2012) have pointed out that people with higher scores on EI are capable of facing the stressors and risks in daily life with greater ease, and they also show higher scores on social support, which indicates that they make better use of their coping strategies. In the context of coping, EI-related abilities can be construed as appraisals and proactive responses to stressful situations, as opposed to disengaging coping responses (Keefer et al. 2009).

The evidence indicates that emotional intelligence plays an important role in emotional self-control and in the individual's adaptive capacity to face stressful situations (Martínez et al. 2011), fostering the use of strategies that alleviate negative emotions and maintain the positive ones (Martínez et al. 2011). These effective strategies reduce the affective intensity in conflict situations, increasing the levels of well-being (Rey and Extremera 2012). Moreover, emotionally intelligent people have more coping strategies to use in crisis situations, and these strategies act as a protector factor against hopelessness and negative feelings (Cha and Nock 2009). Specifically, high levels of clarity and repair are associated with adaptive coping strategies aimed at solving the problem (Velasco et al. 2006).

4 Coping and Depressed Mood

Old age is characterized by the influence of multiple and varied emotional experiences that often overwhelm the person. Sometimes, it may appear inability to manage some of these experiences, and lead to an increase in stress levels in the older adults. Due to the effects of stress on physiological and immunological functioning (Dhabhar 2014), the accumulation

of stressful events can affect well-being and health. And this would not only apply to the more significant or intense stressful events, but also to those minor stressors or daily problems that may have a cumulative effect and increase vulnerability to presenting physical and/or mental health problems (O'Neill et al. 2004).

Regarding the association between coping strategies and depression, the meta-analysis of Bjørkløf et al. (2013) signed that the majority of the studies, both cross-sectional and longitudinal, reported that emotion-oriented coping was positively related to more depressive symptoms and that more frequent use of problem-oriented (active strategies) coping was related to less depressive symptoms. Also, indicated that active and problem-focused strategies may act as adaptive coping strategies in times of stress and protect against symptoms of depression. In addition, some authors point out that older people move from a problem-focused coping style to one focused on emotion (Carver and Connor-Smith 2010), so this change in strategies may favor the onset of depressive symptoms and hopelessness.

Given the above, the evidence indicates that EI plays a very important role in the emotional self-control and in the adaptive capacity of the individual to face stressful situations (Velasco et al. 2006), enhancing the use of strategies that attenuate the negative emotions and keep the positive ones (Martínez et al. 2011). These effective strategies diminish the affective intensity in situations of conflict, increasing the levels of well-being. In addition, emotionally intelligent people have more coping strategies to deal with situations of crisis, acting as a protective factor hopelessness and negative feelings (Cha and Nock 2009). EI and the relationship of each dimension with the coping strategies are decisive to preserve a good mood state in situations of stress (Geng 2016).

Thus, in this work, we start from the fact that the dimensions of EI are determinants of the use of coping strategies. As reported, the repair is related to lower levels of stress (Ciarrochi et al. 2002), and as Extremera and Fernández-Berrocal (2005) demonstrated, emotion recognition implies a lower investment of resources Cognitive factors that allow the evaluation of alternative. Therefore, given that they facilitate the ability to cope with different stressors, there should be a direct relationship between EI and coping strategies. Thus, it is proposed as a first hypothesis to obtain a direct relationship between both constructs that will be positive with the problem-centered approach given its adaptive character, while the emotion-centered relationship will be negative. In addition, coping strategies are used to handle the different situations faced by the individual. Aging as a stage of change is exposed important modifications, being, one of the most important consequences, the difficulty of adapting the development of a depressed mood. As a second hypothesis, it is suggested that both types of strategies must show a direct relation to the depressed state, negative in the case of problem-centered confrontation, and positive from the emotion-focused. In this way, coping strategies become a mediator between EI and the depressive state. Prior to the calculation of the hypothesized model, an alternative model will be tested by adding a direct path from EI to depressed mood; if this path is significant, it would imply that the two coping strategies are not true mediators.

5 Methods

5.1 Participants

Participants were recruited from several cultural associations to which come older than 65 years in Valencia (Spain). Inclusion criteria were as follows: (a) participants had to be

older than 60 years; (b) they had to show no evidence of dementia or mild cognitive impairment, determined by a score of 23 or higher on the Spanish version of the Mini-Mental State Examination (*Mini Examen Cognitivo*; Lobo et al. 2002), (c) Not being institutionalized, (d) Participate actively in cultural activities. Finally, 215 older adults (153 women and 61 men; ages 60–90 years; M = 69.56, SD = 6.42; 74.8% were married, 8.1% single, and 17.1% widowed; education level: 11.6% read and write, 54.3% completed elementary school, 16.6% completed secondary school, and 17.6% attended university) participated in the study. All the participates were informed of the study protocols and signed informed consents to participate in the study.

5.2 Instruments

Trait Meta-Mood Scale TMMS; Salovey et al. (1995). The 24-item version adapted to the Spanish population was applied (Fernández-Berrocal et al. 2004). This self-report scale offers a measure of perceived emotional intelligence based on the theoretical model by Salovey and Mayer (1990). The scale contains three key dimensions: Attention to emotions, Emotional clarity, and Repair and regulation of emotions, evaluated on a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree). The Attention dimension refers to the degree to which people think they pay attention to their emotions and feelings (8 items; i.e., "I think about my mood constantly"). The Clarity dimension refers to how people think they perceive their emotions (8 items; i.e., "I am often wrong about my feelings"). Finally, the Repair dimension reflects the subject's belief about his/her capacity to interrupt and regulate negative emotional states and prolong the positive ones (8 items; i.e., "Although I sometimes feel sad, I usually have an optimistic point of view"). Fernández-Berrocal et al. (2004) obtained alphas of .90, .90 and .86, respectively.

Coping Strategies Questionnaire This 42-item, self-report measure (Likert scale from never [0] to almost always [4]) was designed to assess seven basic coping styles reflecting a tendency to react in a certain manner in the presence of a stressor: (1) problem-solving coping ("I tried to fix the problem by following well thought-out steps"); (2) negative selffocused coping ("I resigned myself to accepting things as they were"); (3) positive reappraisal ("I realized other things mattered more to me than this problem"); (4) overt emotional expression ("I took my bad mood out on others"); (5) avoidance coping ("I tried to forget everything"); (6) social support seeking ("I found a family member or friend to listen when I needed to express my feelings"); and (7) religious coping ("I had faith that God would remedy the situation"). This questionnaire was developed by Sandín and Chorot (2003) and validated in the Spanish population (Tomás et al. 2013). Confirmatory Factor Analysis was applied to these seven coping dimensions to test a two-factor solution: problem-focused coping and emotion-focused coping. Problem-focused coping encompassed problem-solving coping, positive reappraisal, and social support seeking. Emotionfocused coping included negative self-focused coping, overt emotional expression, avoidance coping, religious coping, and social support seeking. This two-factor model has been defended in the literature (Baker and Berenbaum 2007).

Beck Hopelessness Scale (BHS; Becket al.1974). The BHS reflects an individual's negative expectations about the probability of attaining important goals. Twenty items representing the types of pessimistic statements usually made by psychiatric patients are answered true or false, and the scale is scored for pessimism, with a score of 20 reflecting the highest degree of pessimism. The BHS shows good reliability (Nekanda-Trepka et al. 1983).

Centre for Epidemiologic Studies-Depression (CES-D; Radloff 1977). The *CES-D* is a short, self-report scale designed to measure depressive symptomatology in the general population. It consists of 20 items assessing symptoms of depression during the week before the test. The CES-D is widely used in research with adults of all ages (Radloff 1977; Radloff and Teri 1986), with high reliability, internal consistency, and discriminant and construct validity (Radloff and Teri 1986). A cutoff score of 16 is typically used to indicate clinically significant symptoms.

5.3 Procedure

After contacting the retirement communities for older adults, participants who gave their consent and met the inclusion criteria were included in the study. Different evaluators who were blind to the objectives of the study administered the scales. The evaluators were previously trained in the administration of the scales by the authors of this study. Participants were tested individually in one session lasting 60 min.

5.4 Analysis

The statistical analyses included structural equation models (SEMs) to test for the effects among the constructs, which were estimated in the EQS 6.0. The plausibility of any CFA and/or SEM models are assessed using several fit criteria. Given that the size of the sample greatly influences the decision to accept or reject a model based on statistical grounds, a number of fit criteria have emerged to assess the structural model. The robust maximum likelihood (MLR) estimator was chosen: (a) the Chi square statistic; (b) a comparative fit index (CFI) of more than .90 (and ideally greater than .95); (c) a root mean squared error of approximation (RMSEA) of .08 or less (and ideally less than .05).

6 Results

Before showing the results obtained through structural equation model, the relationships between the variables in the model can be seen in Table 1.

Structural equation modelling was used to assess to what extent emotional intelligence, problem-focused coping, and emotion-focused coping predict depressed mood. These four latent constructs were comprised by different observed variable: emotional intelligence (attention, clarity and repair), problem-focused coping (problem-solving coping, positive reappraisal and social support seeking), emotion-focused coping (negative self-focus, overt emotional expression, avoidance, social support seeking and Religion.) and depressed mood (CES-D and BHS). The observed variables were obtained combining the different items of the subscales that make up the instruments. We initially examined the proposed measurement models to determine whether the observed variables effectively measured their respective latent constructs, as adequate indices on the measures provide justification for the conceptual relations.

After obtaining the measurement indices, we computed the measurement model with each observed variable thought to contribute significantly to the measurement of its respective latent construct and the significant covariance assumed between each pair of latent constructs. Adequate fit indices were obtained (χ^2 (g.l. = 43) = 96.46, *p* < .001), as the Comparative Fit Index for this model falls within accepted parameters (CFI = .904), as

Table 1	able 1 Correlations between the	veen the compon	components of the model	lel							
	Attention	Clarity	Repair	PSC	NSF	PR	OEE	AVO	SSS	RLG	CES-D
Clarity	.472**										
Repair	.314**	.537**									
PSC	.203*	.369**	.404**								
NSF	.170*	.082	.100	.104							
PR	.288**	.345**	.428**	.570**	.242**						
OEE	.059	026	076	035	.450**	.218**					
AVO	.157*	.055	.115	.198**	.492**	.329**	.336**				
SSS	.169*	.122	.062	.335**	.374**	.363**	.411*	.387**			
RLG	.211**	.130	.248**	.292**	.335**	.267**	$.156^{*}$.292**	.279**		
CES-D	860.	027	096	211**	.322**	015	.354**	.258**	760.	620.	
BHS	.017	131	146	244**	.248**	136	.248**	.091	102	037	.480**
<i>PSC</i> probl <i>CES-D</i> Ce	PSC problem-solving coping, NSF negative self-focus, PR positive reappraisal, OEE overt emotional expression, AVO avoidance, SSS social support seeking, RLG religion, CES-D Centre for Epidemiologic Studies-Depression, BHS Beck Hopelessness Scale	ng, NSF negative iologic Studies-I	e self-focus, <i>PR</i> Depression, <i>BHS</i>	positive reappra Beck Hopeless	tisal, OEE ove sness Scale	rt emotional ex	pression, AVO	avoidance, SS	SS social suppor	t seeking, RL	7 religion,
p < .01;	* $p < .01$; ** $p < .001$										

nts of the model an the Table 1 Correlations betwee does the root mean square error of approximation (RMSEA = .079). These results show that the observed variables in both models contribute significantly to the measurement of their respective latent constructs, with values for t > |2.57|. Composite reliability indices were also calculated for each latent variable. This index allows taking into account all the constructs involved in the scale, not a one-to-one analysis. This statistic is analogous to Cronbach's alpha and makes it possible to estimate the internal consistency of the participants' responses on the scales. The reliability indices obtained were .72 for emotional intelligence, .71 for problem-focused coping, .72 for emotion-focused coping, and .72 for depressed mood. The coefficients obtained are within the accepted parameters, so that groupings of observed variables under their respective latent constructs appear to be interrelated.

Given the viability of the measurement model, structural models were estimated. The first model in which there was a direct relationship between EI and depressed mood did not obtain satisfactory adjustment indices ($\chi^2(43) = 102.43$, p < .001; $\chi^2/df = 2.38$; CFI = .893; RMSEA = .085 (90% CI = .063-.105). In this way, the second model was tested, in which the mediating role of the two coping strategies in the prediction of depressed mood was hypothesized and obtain satisfactory goodness of fit indices $\chi^2(45) = 83.51$, p < .001; $\chi^2/df = 1.85$; CFI = .931; RMSEA = .067 (90% CI = .044-.088). The estimations of all the effects involved in the model are presented in Fig. 1. As this graphic representation shows, the three dimensions of EI predict one unique factor, which in turn significantly predicts coping oriented toward problem-solving, while the factor that includes the emotional strategies does not obtain a significant relationship. Moreover, both coping factors predict a depressed mood factor, but with opposite signs.

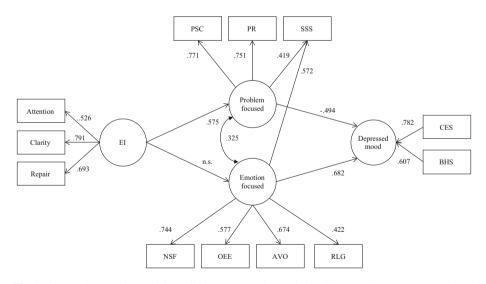


Fig. 1 Structural equation model predicting depressed mood in older people. *Note EI* emotional intelligence, *PSC* problem-solving coping, *NSF* negative self-focus, *PR* positive reappraisal, *OEE* overt emotional expression, *AVO* avoidance, *SSS* social support seeking, *RLG* religion, *CES* Centre for Epidemiologic Studies-Depression, *BHS* Beck Hopelessness Scale

7 Discussion

Various studies, both predictive and relational, have addressed the possible relationships between EI and depressed mood (Rey and Extremera 2012). However, very few of these studies have focused on EI in aging, especially in relation to depressed mood. Based on the objective proposed, a prediction model was tested to determine the influence of emotional intelligence on depressed mood, through coping strategies.

The results obtained for the EI factors coincide with the model proposed by Mayer and Salovey (1997), measured with the TMMS test. Attention had the least factorial weight in the construct, whereas Clarity was the dimension with the most weight, followed by Repair. Other studies point out that attention to the emotions, whether excessive or lacking, is not considered an indicator of high EI (Sánchez-Álvarez et al. 2015), with the intermediate scores on attention indicating a good fit in this construct. Regarding Clarity and Repair, they are considered highly explanatory of EI and beneficial for individuals in their relationships with their own emotions and those of others (Lloyd et al. 2012; Salovey et al. 1999; Sánchez-Álvarez et al. 2015). In other words, people with EI follow a pattern of high scores on Clarity and Repair, and moderate scores on Attention.

With regard to coping, following the model by Lazarus and Folkman (1984), two large and related dimensions were obtained. On the one hand, problem-focused coping, composed of three strategies, focusing on problem-solving, positive reappraisal, and seeking social support, with the first two having greater weight, and the latter having less factorial weight also saturates in the emotion-focused coping dimension. With regard to the emotion-focused coping dimension, composed of four strategies, negative self-focus, open emotional expression, avoidance, and religion, negative self-focus has the greatest factorial weight, and religion has the least. Regarding the dimension seeking social support, it is part of both problem-focused and emotion-focused strategies, as in other studies in the older adults and other populations (Mayordomo et al. 2015; Mayordomo et al. 2016). It should be noted that this type of strategy by its definition can be either focused on the problem (that others help me to implement a concrete solution or help me look for alternatives), as focused on emotion (seek solace in others, or the help of other people to feel better emotionally). Finally, the last dimension in the model, depressed mood, consists of the levels of depression and hopelessness, with the latter having less factorial weight.

Regarding the first hypothesis, the relation between EI and the coping styles, the results point to a positive relationship with the problem-focused strategies, whereas EI did not show a significant relationship with the emotion-focused strategies. Various studies indicate that EI predicts the use of problem-focused strategies, as our results show; the use of these strategies foments adaptation to situations of stress or conflict (Barker 2007; McMahon et al. 2013; Sánchez-Álvarez et al. 2015).

Based on the transactional stress paradigm (Lazarus and Folkman 1984), authors such as Keefer et al. (2009) suggest that, in an effort to resolve, tolerate, or escape from a stressful situation, individuals purposefully engage in various coping behaviors that can either offset or aggravate the adverse effects of stress. Emotionally intelligent people show a greater capacity to adapt to the changes in stressful circumstances, and to evaluate stress as a challenge rather than a threat (Sánchez-Álvarez et al. 2015), which has important long-term mental health benefits (Rey and Extremera 2012), given that they use more adaptive coping strategies in difficult situations, increasing the probability of success and minimizing the chance for failure (Cha and Nock 2009; Fernández-Berrocal et al. 2001, 2012; Lloyd et al. 2012). Thus, confidence in one's coping abilities and perceptions of personal

control over the situation would enable active coping through constructive emotion-regulation and problem-solving strategies (Keefer et al. 2009). In this context, EI acts as a personal resource for this coping, thus being a predictor of it and contributing to the individual's adaptation in difficult circumstances.

Furthermore, Gohm et al. (2005) point out that EI predicts positive reappraisal strategies, focusing on problem solving, the elaboration of action plans, and the search for social support, all of which are considered adaptive coping responses. Moreover, high attention to emotion and low emotional clarity have been shown to be related to emotion-focused coping strategies, and they can be manifested passively (focused on rumination and avoidance) or aggressively (based on the relief produced by fear, sadness or anger) (Sánchez-Álvarez et al. 2015). The initial emotional mismanagement in the face of a conflict situation would lead to the appearance of an emotional state also in conflict in which the person must intervene in some way, being thus very likely the application of coping strategies directed to these emotions. Based on this proposal, older adults need to perceive and understand their feelings clearly and believe they are capable of managing their emotional states in order to carry out efficacious coping (Rey and Extremera 2012). People who identify, understand, and manage their emotions are considered less likely to fall apart in high-pressure situations, and they usually take more proactive measures to regain their balance and problem-solving, supporting the argument that adaptive coping could be conceptualized as EI in action (Keefer et al. 2009).

If we take into account the EI model by Salovey and Mayer (1990), people with EI regulate their emotions, achieving greater clarity of thought and, therefore, problem-focused strategies to cope with stress, and not necessarily through the use of emotion-based strategies.

Unlike other studies that found a negative relationship between the levels of EI and the emotion-focused coping style (Ciarrochi et al. 2002; Fernández-Berrocal et al. 2001), this confirmatory model did not obtain a significant relationship. This result suggests that attention, control, and emotional regulation make it possible to manage thoughts with greater efficacy in order to directly confront problems. The IE skills exert their function in managing the psychological stress triggered by the conflictive situation so that a state of emotional disorder does not occur that requires the application of specific forms of coping. In this way, the IE construct would provide the necessary skills to reduce the source of psychological stress.

Furthermore, some studies point out that rumination, characterized by being focused on emotion, implies directing one's attention toward negative feelings in a passive and repetitive way (Fernández-Berrocal et al. 2001). This leads to a tendency toward a negative self-focus and repetitive thought suppression attempts to try to alleviate some ruminations that can harm mental health (Salovey et al. 1995).

EI is conceived of as an indicator of psychological fitness and a key precursor of feelings associated with well-being (Sánchez-Álvarez et al. 2015). The results obtained show that EI has this effect through problem-focused coping, which acts as a mediator between EI and depressed mood.

As for the second hypothesis, problem-focused coping negatively and significantly predicts this mood state with a significant value, which can be explained by the adaptive nature of the strategies in this coping style. These strategies are an important resource for dealing with stress and the effects of its poor management on mood (Cha and Nock 2009).

On the one hand, some authors (Lloyd et al. 2012; McMahon et al. 2013) have shown that coping oriented toward problem-solving is associated with lower levels of depression, hopelessness, and anxiety. Thus, the way older adults manage their emotions and thoughts

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in times of sadness and despondency influences the severity and duration of the later symptoms (Rey and Extremera 2012), with the problem-focused strategies acting as resources to reduce the duration of the stressful experiences and the probability of developing health problems (Keefer et al. 2009).

On the other hand, emotion-focused coping acts as a positive predictor of the depressive mood state. These results indicate that the adoption of emotion-focused coping strategies would be harmful to the individual's mental health, as they are related to high levels of depressive symptomatology and hopelessness, as well as low self-esteem (McMahon et al. 2013). Moreover, as other authors have observed (Barker 2007), the model obtained shows higher relations of depressed mood with emotion-focused coping (with a positive sign) than with problem-focused coping (with a negative sign).

The correlational evidence in the general population shows positive associations between EI and the variables of life satisfaction, positive stress management, social support, happiness, and self-esteem, among others (Austin et al. 2005; Montes-Bergues and Augusto 2007; Rey and Extremera 2012), and negative associations between EI and depression, suicidal ideation, psychological anguish, hopelessness, and alexithymia (Austin et al. 2005; Cha and Nock 2009). Specifically, the Repair and Clarity dimensions show a negative relationship with significant scores on the BDI. Subjects with a positive mood state present moderate levels on Attention to feelings and higher scores on Clarity and Repair of the emotional states on the TMMS (Fernández-Berrocal et al. 2001).

The results indicate that the relationship between EI and mental health is mediated by the coping style, so that, as indicated in the first studies on the predictive power of EI in areas of personal functioning (Martínez-Pons 1997), EI can protect against poor mental health. Thus, examining EI could be a way of evaluating the predictors of depression and hopelessness (Lloyd et al. 2012), which means that high levels of EI can reduce the risk of experiencing these states and contribute to making positive appraisals and reactions in emotionally salient situations. People's incapacity to identify emotional reactions, both their own and those of others, can reduce their ability to assess the stress factor and, consequently, choose the best response for a positive result (Lloyd et al. 2012). By contrast, adequate attention to the emotions and their comprehension increases the probability of positively managing them, thus preventing harmful mental health states.

Taking into account the results obtained, we can consider EI to be a good protector against the appearance of symptoms associated with poor mental health. Adequate emotional skills favor the use of problem-focused strategies, reducing vulnerability to stress and the appearance of symptomatology related to depression and hopelessness (Martínez et al. 2010).

As possible limitations of the study, we should mention that it is a cross-sectional study that only considers the characteristics of a certain population, people over 60 years old, The sample is made up of mostly women, although statisticians indicate that there is homogeneity in the variances to be able to carry out the analyzes. Another limitation is that the work is geographically localized, so we cannot establish comparisons with other races or cultures, since all participants are from the West.

As future lines of research, based on the protective value of EI in older adults' mental health, intervention programs could be initiated to evaluate its effect on the improvement of skills associated with EI. Other emotional education programs increase EI in other age groups. It would be interesting to evaluate whether adapting these types of programs to older adults could increase their levels of EI and, therefore, improve their adaptation to unfavorable situations and foster a favorable mental state, reducing depressed mood.

References

- Augusto-Landa, J. M., Pulido-Martos, M., & Lopez-Zafra, E. (2011). Does perceived emotional intelligence and optimism/pessimism predict psychological well-being? *Journal of Happiness Studies*, 12, 463–474. doi:10.1007/s10902-010-9209-7.
- Austin, E. J., Saklofske, D. H., & Egan, V. (2005). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Differences*, 38, 547–558. doi:10.1016/j.paid.2004. 05.009.
- Baker, J. P., & Berenbaum, H. (2007). Emotional approach and problem-focused coping: A comparison of potentially adaptive strategies. *Cognition and Emotion*, 21, 95–118. doi:10.1080/02699930600562276.
- Barissette, I., Scheier, M. F., & Carver, C. S. (2002). The role of optimism in social network development, coping, and psychological adjustment during a life transition. *Journal of Personality and Social Psychology*, 91, 780–795. doi:10.1037/0022-3514.82.1.102.
- Barker, D. B. (2007). Antecedents of stressful experiences: Depressive symptoms, self-esteem, gender, and coping. *International Journal of Stress Management*, 14, 333–349. doi:10.1037/1072-5245.14.4.333.
- Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The hopelessness scale. *Journal of Consulting and Clinical Psychology*, 42, 861–865. doi:10.1037/h0037562.
- Bjørkløf, G. H., Engedal, K., Selbæk, G., Kouwenhoven, S. E., & Helvik, A. S. (2013). Coping and depression in old age: A literature review. *Dementia and Geriatric Cognitive Disorders*, 35, 121–154. doi:10.1159/000346633.
- Carver, C. S., & Connor-Smith, J. (2010). Personality and coping. Annual Review of Psychology, 61, 679–704. doi:10.1146/annurev.psych.093008.100352.
- Cha, C. B., & Nock, M. K. (2009). Emotional intelligence is a protective factor for suicidal behaviors. Journal of the American Academy of Child and Adolescent Psychiatry, 48, 422–430. doi:10.1097/CHI. 0b013e3181984f44.
- Ciarrochi, J., Deane, F. P., & Anderson, S. (2002). Emotional intelligence moderates the relationship between stress and mental health. *Personality and Individual Differences*, 32, 197–209. doi:10.1016/ S0191-8869(01)00012-5.
- Dhabhar, F. S. (2014). Effects of stress on immune function: the good, the bad, and the beautiful. Immunologic Research, 58, 193–210. doi:10.1007/s12026-014-8517-0.
- Extremera, N., & Fernández-Berrocal, P. (2005). Perceived emotional intelligence and life satisfaction: Predictive and incremental validity using the Trait Meta-Mood Scale. *Personality and Individual Differences*, 39, 937–948. doi:10.1016/j.paid.2005.03.012.
- Fernández-Berrocal, P., Berrios-Martos, M. P., Extremera, N., & Augusto, J. M. (2012). Emotional Intelligence: 22 years of empirical progress. *Behavioral Psychology/Psicología Conductual*, 20, 5–13.
- Fernández-Berrocal, P., Extremera, N., & Ramos, N. (2004). Validity and reliability of the Spanish modified version of the Trait Meta-Mood Scale. *Psychological Report*, 94, 751–755. doi:10.2466/pr0.94.3.751-755.
- Fernández-Berrocal, P., Ramos, N., & Extremera, N. (2001). Inteligencia emocional, supresión crónica de pensamientos y ajuste psicológico [Emotional intelligence, chronic suppression of thoughts and psychological adjustment]. Boletín de Psicología, 70, 79–95.
- Folkman, S., & Moskowitz, J. T. (2000). Positive affect and the other side of coping. American Psychologist, 55, 647–654. doi:10.1037/0003-066X.55.6.647.
- Geng, Y. (2016). Gratitude mediates the effect of emotional intelligence on subjective well-being: A structural equation modeling analysis. *Journal of Health Psychology*, 3, 1–9. doi:10.1177/ 1359105316677295.
- Gohm, C. L., & Clore, G. L. (2002). Four latent traits of emotional experience and their involvement in wellbeing, coping, and attributional style. *Cognition and Emotion*, 16, 495–518. doi:10.1080/ 02699930143000374.
- Gohm, C. L., Corser, G. C., & Dalsky, D. J. (2005). Emotional intelligence under stress: Useful, unnecessary, or irrelevant? *Personality and Individual Differences*, 39, 1017–1028. doi:10.1016/j.paid.2005. 03.018.
- Keefer, K. V., Parker, J. D. A., & Saklofske, D. H. (2009). Emotional intelligence and physical health. In I. Nyklícek, L. Temoshok, & A. Vingerhoets (Eds.), Assessing emotional intelligence; theory, research and applications (pp. 191–222). Canada: The Springer Series on Human Exceptionality.
- Lazarus, R. S., & Folkman, S. (1984). Stress appraisal and coping. New York: Springer.
- Lloyd, S. J., Malek-Ahmadi, M., Barclay, K., Fernandez, M. R., & Chartrand, M. S. (2012). Emotional intelligence (EI) as a predictor of depression status in older adults. *Archives of Gerontology and Geriatrics*, 55, 570–573. doi:10.1016/j.archger.2012.06.004.

- Lobo, A., Saz, P., & Marcos, G. (2002). Adaptación del Examen Cognoscitivo Mini-Metal [Adaptation of Cognitive Mini-Mental Exam]. Madrid: Tea Ediciones.
- Martin, P., Kliegel, M., Rott, C., Poon, L. W., & Johnson, M. A. (2008). Age differences and changes of coping behavior in three age groups: Findings from the Georgia Centenarian Study. *The International Journal of Aging & Human Development*, 66, 97–114. doi:10.2190/AG.66.2.a.
- Martínez, A. E., Piqueras, J. A., & Inglés, C. J. (2011). Relaciones entre inteligencia emocional y estrategias de afrontamiento ante el estrés [Relations between emotional intelligence and coping strategies to stress]. *Revista Electrónica de Motivación y Emoción*, 14.
- Martínez, A. E., Piqueras, J. A., & Ramos, V. (2010). Inteligencia emocional en la salud física y mental [Emotional intelligence in the physical and mental health]. *Electronic Journal of Research in Educational Psychology*, 8, 861–890.
- Martínez-Pons, M. (1997). The relation of emotional intelligence with selected areas of personal functioning. *Imagination, Cognition & Personality*, 17, 3–13. doi:10.2190/68VD-DFXB-K5AW-PQAY.
- Mayer, J. D., & Salovey, P. (1995). Emotional intelligence and the construction and regulation of feelings. Applied & Preventive Psychology, 4, 197–208. doi:10.1016/S0962-1849(05)80058-7.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), Emotional development and emotional intelligence: Implications for educators (pp. 3–31). New York: Basic Books.
- Mayordomo, T., Meléndez, J. C., Viguer, P., & Sales, A. (2015). Coping strategies as predictors of wellbeing in youth adult. Social Indicators Research, 122, 479–489. doi:10.1007/s11205-014-0689-4.
- Mayordomo, T., Viguer, P., Sales, A., Satorres, E., & Meléndez, J. C. (2016). Resilience and coping as predictors of well-being in adults. *The Journal of Psychology*, 150(7), 809–821. doi:10.1080/ 00223980.2016.1203276.
- McMahon, E. M., Corcoran, P., McAuliffe, C., Kleeley, H., & Perry, I. J. (2013). Mediating effects of coping style on associations between mental health factors and self-harm among adolescents. *Crisis*, 24, 242–250. doi:10.1027/0227-5910/a000188.
- Montes-Bergues, B., & Augusto, J. M. (2007). Exploring the relationship between perceived emotional intelligence, coping, social support and mental health in nursing students. *Journal of Psychiatric and Mental Health Nursing*, 14, 163–171. doi:10.1111/j.1365-2850.2007.01059.x.
- Nekanda-Trepka, C. J. S., Bishop, S., & Blackburn, I. M. (1983). Hopelessness and depression. British Journal of Clinical Psychology, 22, 49–60. doi:10.1111/j.2044-8260.1983.tb00578.x.
- O'Neill, S. C., Cohen, L. H., Tolpin, L. H., & Gunthert, K. C. (2004). Affective reactivity to daily interpersonal stressors as a prospective predictor of depressive symptoms. *Journal of Social and Clinical Psychology*, 23, 172–194. doi:10.1521/jscp.23.2.172.31015.
- Radloff, L. S. (1977). The CES-D scale a self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385–401. doi:10.1177/014662167700100306.
- Radloff, L., & Teri, L. (1986). Use of the center for epidemiological studies-depression scale with older adults. *Clinical Gerontologist*, 5, 119–136. doi:10.1300/J018v05n01_06.
- Rey, L., & Extremera, N. (2012). Inteligencia emocional percibida, felicidad y estrategias distractoras en adolescentes [Perceived emotional intelligence, happiness and distracting strategies in adolescents]. *Boletín de Psicología, 104,* 87–102.
- Saklofske, D. H., Austin, E. J., Galloway, J., & Davidson, K. (2007). Individual difference correlates of health-related behaviours: Preliminary evidence for links between emotional intelligence and coping. *Personality and Individual Differences*, 42, 491–502. doi:10.1016/j.paid.2006.08.006.
- Salguero Noguera, J. M., & Iruarrizaga Díez, I. (2006). Relaciones entre inteligencia emocional percibida y emocionalidad negativa: ansiedad, ira y tristeza/depresión [Relationship between perceived emotional intelligence and negative emotionality: Anxiety, anger and sadness/depression]. Ansiedad y Estrés, 12, 207–221.
- Salovey, P., Bedell, B. T., Detweiler, J. B., & Mayer, J. D. (1999). Coping intelligently: Emotional intelligence and the coping process. In C. R. Snyder (Ed.), *Coping: The psychology of what works* (pp. 141–164). New York: Oxford University Press.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination Cognition Personality*, 9, 185–211. doi:10.2190/DUGG-P24E-52WK-6CDG.
- Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: exploring emotional intelligence using the Trait Meta-Mood Scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, and health* (pp. 125–154). Washington: American Psychological Association.
- Sánchez-Álvarez, N., Extremera, N., & Fernández-Berrocal, P. (2015). The relation between emotional intelligence and subjective well-being: A meta-analytic investigation. *The Journal of Positive Psychology*, 10, 1–10. doi:10.1080/17439760.2015.1058968.

- Sandín, B., & Chorot, P. (2003). Cuestionario de Afrontamiento del Estrés (CAE): Desarrollo y validación preliminar. [The Coping Strategies Questionnaire: Development and preliminary valdation]. Revista de Psicopatología y Psicología Clínica, 8, 39–54. doi:10.5944/rppc.vol.8.num.1.2003.3941.
- Steffens, D. C., Fisher, G. G., Langa, K. M., Potter, G. G., & Plassman, B. L. (2009). Prevalence of depression among older Americans: The aging, demographics and memory study. *International Psychogeriatrics*, 21, 879–888. doi:10.1017/S1041610209990044.
- Tomás, J. M., Sancho, P., & Meléndez, J. C. (2013). Validación del Cuestionario de Afrontamiento del Estrés (CAE) para su uso en población mayor española. [Validation Stress Coping Questionnaire (CAE) for use in the Spanish population]. *Behavioral Psychology/Psicología Conductual*, 21, 103–122.
- Tsaousis, I., & Nikolaou, I. (2005). Exploring the relationship of emotional intelligence with physical and psychological health functioning. Stress & Health, 21, 77–86. doi:10.1002/smi.1042.
- Velasco, C., Fernández, I., Páez, D., & Campos, M. (2006). Perceived emotional intelligence, alexithymia, coping and emotional regulation. *Psicothema*, 18, 89–94.
- Zeidner, M., Matthews, G., & Roberts, R. D. (2012). The emotional intelligence, health, and well-being nexus: What have we learned and what have we missed? *Applied Psychology: Health & Well-Being*, 4, 1–30. doi:10.1111/j.1758-0854.2011.01062.x.