



Personality and Emotional Regulation: Analysis of the moderating effect of sex

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Cognitive reappraisal (CR) is an emotion regulation strategy that involves changing the meaning of a situation. The expressive suppression (ES) is another strategy that includes behavioral inhibition during emotional expression (Gross & Thompson, 2007). Knowing the factors that have predictive value on the frequency of use of these strategies is of value because research shows that both have consequences and correlates in the affective, cognitive, social and academic domains of individuals' life (Jacobs & Gross, 2014; Gross, 2014). Among these factors, gender and personality traits have been highlighted (Gross & John, 2003; John & Gross, 2004; 2007). Relative to gender, some research has shown that men and women use CR at comparable frequencies (Gross & John, 2003; Gross, Richards & John, 2006), while others have found that women use this strategy further (Nolen-Hoeksema, 2012). With regard to ES, the results are more homogeneous and tend to show that men use this strategy to a greater extent than women (John & Gross, 2003). As for personality traits, the available evidence indicates that Neuroticism -in a negative sense- and Openness to Experience and Agreeableness traits -in a positive sense- are associated with CR; while Extraversion, Openness to Experience and Agreeableness traits are all associated in negative sense to ES (Gross & John, 2003; John & Gross, 2004; Wang, Shi & Li, 2009). However, it is known that personality traits vary by gender. For example, women have higher scores on Neuroticism and Agreeableness (Benet-Martínez & John, 1998; Costa, Terracciano, & McCrae, 2001; De Miguel-Negredo, 2005; Manga, Ramos, & Moran, 2004).

In synthesis, the previous review shows that sex and personality traits are factors that influence emotional regulation strategies, however, we have not found studies that analyze and compare the explanatory power of sex and personality traits in the same model on each of the strategies, nor whether there is an interaction effect with sex traits. When these factors are entered in the same model of analysis, do sex and the personality traits have the same explanatory power? And if so, is there an interaction effect or moderation? Namely, the relationship of personality and strategies, varies depending on the sex of the participants?

Aim

Analyze and compare the explanatory power of gender and personality traits on the frequency of use of the CR and ES and analyze if sex has a moderating effect on these relationships.

Participants

A sample of 400 college students were assessed.

Measures

Emotion Regulation Questionnaire ERQ by Gross and John (2003). A translated and adapted version to Spanish from Rio de la Plata by Andrés and Urujajo (Andrés, 2013) was used. This questionnaire has a format of Likert scale of 10 items that investigates the frequency of use of CR and ES with response options ranging from 1 (strongly disagree) to 7 (strongly agree). The analysis of the psychometric properties of the version to Rio de la Plata shows the formation of two factors explaining 47.5% of variance. The analysis of the factor loadings forms a first factor consists of items that assess CR strategy and a second factor composed of those items assessing ES. The reliability analysis showed a Cronbach's alpha of .72 for each subscale (CR and ES). Examples of items include: "Cuando quiero sentir más una emoción positiva (por ejemplo, sentirme más alegre o más contento), modifico lo que en ese momento estoy pensando para conseguirlo" ("When I want to feel more positive emotion (e.g. feeling more happy), I change what I'm thinking at that time to get") (CR); "Preservo mis emociones, las guardo sólo para mí" ("I Preserved my emotions, I keep only for me") (ES).

Adjective checklist to assess the big five personality factors (AEP) by Ledesma, Sánchez and Díaz-Lázaro (2011). To assess personality from the Big Five personality traits it is proposed a list of 67 adjectives in which subjects must read and indicate on a scale of 5 options the extent to which this adjective describes them, from 1 (not describe me at all) to 5 (it describes me completely). This instrument has shown a consistent factor solution with the Big Five personality traits and satisfactory internal consistency values ranging from 0.74 to 0.85.

Procedure

Participants were informed about the purpose, scope and anonymity of research and said that their participation was voluntary. Students who expressed their agreement were evaluated in groups. Before administering the tests, the socio demographic data on age, gender and highest educational level attained were collected.

Methodology

Results

Sex continued to show predictive power for the CR, in the sense that women scored higher than men; and for ES, in the sense that males reported higher frequencies of use. The Neuroticism -in a negative sense- and Openness to Experience and Agreeableness traits -in a positive direction- were associated with higher scores on CR. Extraversion, Conscientiousness and Openness to Experience were associated in a negative sense with highest frequency of use of ES.

Analysis of interaction in linear regression: Moderating effect of gender

The existence of interaction between gender and personality traits on the frequency of use of both strategies were explored. No interaction effects were observed between sex and neuroticism traits ($F(3)=5.95; p<.001; \beta=-.30; p=.29$) and Openness to Experience ($F(3)=5.31; p<.001; \beta=-.21; p=.43$) on CR. Sex moderated the relationship between Agreeableness and CR ($F(3)=12.09; p<.001; \beta=-.99; p<.001$), in the sense that Agreeableness was a predictor of more frequent use of CR among women than among men (Figure 1). Regarding the ES, gender did not moderate the relationship between Extraversion ($F(3)=19.14; p<.001; \beta=-.11; p=.69$), Conscientiousness ($F(3)=6.53; p<.001; \beta=-.001; p=.99$) and Openness to Experience ($F(3)=9.60; p<.001; \beta=-.12; p=.64$) with their frequency of use.

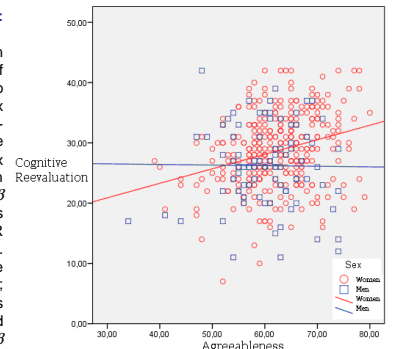


Figure 1. Moderating effect of sex in the relationship between CR and Agreeableness. The Agreeableness trait was a stronger predictor of CR for women than for men.

Descriptive analysis

Table 1
Descriptive analysis of the variables under study

	Minimum	Maximum	Mean	S.D.
CR	7.00	42.00	28.14	6.30
ESE	4.00	26.00	10.75	4.98
Neuroticism	28.00	85.00	54.40	9.81
Extraversion	17.00	50.00	36.99	6.43
Conscientiousness	17.00	65.00	45.04	7.95
Openness to Experience	17.00	49.00	33.95	6.10
Agreeableness	34.00	80.00	61.89	7.24

Table 1
Linear regression analysis: Influence of gender and personality traits on emotion regulation strategies

		CR	ES
Model 1	Sex	-.160***	.174***
	CR		
Model 2	Sex	-.158***	.119***
	Neuroticism	-.100*	.047
	Extraversión	-.008	-.252***
	Conscientiousness	.007	-.120***
	Op. to Experience	.107*	-.152***
	Agreeableness	.190***	-.033
	CR		

Note. *p<.05, **p<.01, ***p<.001 Gender coding: 0 = Women, 1 = Male. CR Model 2: F(6)=6.35, p<.001. ES Model 2: F(6)=12.46, p<.001.

Multiple linear regression analysis: influence of gender and personality traits

In Model 1 were introduced only sex as predictor and the emotional regulation strategies as dependent variables. The results indicated that sex proved to be a significant predictor of both CR ($F(1)=10.44; p<.001$) and ES ($F(1)=12.43; p<.001$). In Model 2 also personality traits were added. The inclusion of personality traits significantly improved the explanatory power of the models (change on $R^2=.06$, $F(1)=5.42; p<.001$ to CR and change on $R^2=.13$, $F(1)=12.12; p<.001$ to ES).

Discussion

The aim of this paper was to analyze and compare the explanatory power of gender and personality traits on the frequency of use of CR and ES and analyze if sex has a moderating effect on these relationships. The results show that sex and traits have explanatory power of the variability in the frequency of use of both strategies. Specifically, women reported more frequent use of CR than men. It has been suggested that the CR is a strategy that requires voluntary cognitive control (Raz, et al., 1998) and various studies show that since girls, women get higher scores in tasks that evaluate this type of capability (Eise-Quest et al., 2006), which could facilitate the acquisition and implementation of this strategy, more frequent use and higher scores on self-report questionnaires. In terms of personality, Neuroticism -in a negative direction- Openness to Experience and Agreeableness -in a positive direction- were associated with CR. Individuals with high scores in Neuroticism are likely to ruminate on negative emotions (Nolen-Hoeksema, Parker & Larson, 1994) so it is likely to focus their attention on their own negative emotions leaving few cognitive resources to generate alternative meanings necessary to CR. Individuals with strong features of Openness to Experience, are more likely to find intelligent solutions to problems (McCrae, 1994), they have greater awareness, clarity of their emotions (Costa & McCrae, 1992), and make greater attempts to regulate (John & Gross, 2007), which may explain why these individuals have a greater ability to use the CR. Individuals with high features of Agreeableness, tend to avoid confrontation, they care more for others than for his own interests (Roccas, Sagiv, Schwartz, & Knafo, 2003) and it has been suggested that tend to automatically neutralize the negative thoughts that could reduce interpersonal harmony (Meier et al., 2006; Tobin, Graziano, Vanman & Tassinary, 2000); it is probable they are likely to adopt the perspective that facilitates reducing the negative thoughts, take the perspective of others and maintaining harmony in the link, which could result in greater use of CR. Finally, in the latter association, sex proved to be a moderating factor. That is, Agreeableness is a best predictor of CR among women than among men. It is possible that women are more likely than men to take the perspective of others and maintaining harmony in the relationship, which could result in greater use of CR for this group.

Regarding the SEE, males reported more frequent use than women. One possible explanation is that the expression of feelings is usually perceived as "unmanly" in the context of western cultures (Brody, 2000). On the other hand, Extraversion, Agreeableness and Conscientiousness were negatively associated with ES. Extraversion is characterized by sociability (John & Srivastava, 1999) and frequent expression of both positive and negative emotions (Anderson, John, Keltner & Krings, 2001; Pervin & John, 2001), which would explain the lower frequency of use of the ES among individuals with high Extraversion traits. The ability to plan, organize and think about the possible consequences of an event, focusing attention on a task and the relevant characteristics for meeting objectives (Costa & McCrae, 1992), could facilitate that individuals with higher scores on Conscientiousness use other strategies such as situation selection, situation modification and attentional deployment in the deployment sequence of emotional response. All these strategies could lead to experience emotionally intense situations in lesser extent, which would be expected to have no need for ES use. Finally, the characteristics of the opposite pole of Openness to Experience are related to less understanding and spontaneity of the experience and expression of emotions which could explain the associations found with ES.

It is expected that these results contribute to establishing normative standards that allow to understand what frequencies are more expected by gender and personality, which in turn would contribute to greater understanding of the processes involved in the healthy or pathological functioning (Wiltink, 2011).

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