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COPING, PERSONALITY AND RESILIENCE: PREDICTION OF SUBJECTIVE RESILIENCE FROM COPING STRATEGIES AND PROTECTIVE PERSONALITY FACTORS

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Abstract

This study explored how resilience can be predicted from coping styles (problem-focused, emotion-focused, and socially-focused) and personality characteristics (sense of mastery, sense of relatedness, and emotional reactivity). The sample consisted of 430 adults (256 general population, 77 VIH/cancer patients, and 97 parents of children with cancer or developmental problems). Several analyses were carried out: correlations to test discriminant validity; regression analyses to see whether resilience in different adverse situations is predicted by different coping and resiliency variables, and structural equations models and cross-validation analyses to compare two different predictive models (M1: from coping to resiliency, and from resiliency to resilience; M2: from resiliency to coping, and from coping to resilience). Results showed that coping factors as initial predictors and resilience factors as mediators (that is, M1), explained the greater variance in resilience scores. Besides, coping and personality factors predicted resilience differently depending on the type of adversity. Psychological interventions to boost resilience should focus on modifying the use of coping strategies, avoiding the utilization of the emotion-focused coping and social-focused coping, and promoting problem-focused coping.
KEY WORDS: *resilience, resiliency, coping strategies, coping styles, protective personality factors.*

Resumen

Este estudio explora cómo la resiliencia se predice a partir del afrontamiento (centrado en el problema, en la emoción y en lo social) y las características protectoras de personalidad (sentido del dominio, sentido de relación y reactividad emocional). Participaron 430 adultos (256 población general, 77 pacientes con VIH/cáncer y 97 padres de niños con cáncer/problemas del desarrollo). Se llevaron a cabo correlaciones para estudiar la validez discriminante,

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análisis de regresión para estudiar si la resiliencia en diferentes situaciones puede predecirse por distintas variables, y ecuaciones estructurales y análisis de validación cruzada para comparar dos modelos predictivos (M1: de afrontamiento a factores protectores, y de estos a resiliencia; M2: de factores protectores a afrontamiento y de estos a resiliencia). El M1 mostró un mejor ajuste y el afrontamiento resultó ser el principal predictor de la resiliencia. El afrontamiento y la personalidad predicen la resiliencia de forma diferente en distintas situaciones. Las intervenciones para promover la resiliencia deberían centrarse en evitar la utilización de las estrategias de afrontamiento centradas en la emoción y sociales y promover las centradas en el problema.
PALABRAS CLAVE: *resiliencia, estrategias de afrontamiento, estilos de afrontamiento, factores protectores de la personalidad.*

Introduction

During the normal course of life, most adults face difficult or potentially traumatic events. Following such experiences, many people are unable to function normally, even after a long time. Some people, however, show a resilient reaction, defined as the maintenance of a relative stable trajectory of healthy functioning following trauma exposure (Bonanno, 2005; Luthar, 2006). Professionals such as counselors or psychologists need evidence-based guidance to help people achieve resilient outcomes, which in turn are related to greater satisfaction with life (Limonero, Tomás-Sábado, Fernández-Castro, Gómez-Romero, & Ardilla-Herrero, 2012), and so research needs to address two questions, why some people achieve resilience outcomes whereas others do not, and why resilience is achieved in different degree depending on the kind of adversity people face (Luthar, 2006).

Concerning the first question, researchers have tried to identify the environmental and personal factors influencing resilience (Leipold & Greve, 2009; Luthar, Cicchetti, & Becker, 2000; Prince-Embury & Saklofske, 2013, 2014). As for personal factors, they tend to agree that coping strategies are a fundamental underlying element (Folkman & Moscowitz, 2004; Limonero et al., 2012; Skinner & Zimmer-Gembeck, 2007; Villasana, Alonso-Tapia, & Ruiz, 2016). As coping responses are virtually infinite (Skinner, Edge, Altman, & Sherwood, 2003), different hierarchical models have been proposed to organize them. One of the most commonly used is the one developed by Lazarus and Folkman (1984), which groups some of the most frequent coping strategies in two styles: problem-focused coping (PFC) and emotion-focused coping (EFC).

The PFC style, which aims to eliminate the stressor includes strategies such as problem solving, positive thinking and thinking avoidance when the problem is unsolvable. PFC has been found to be related to better psychological outcomes including higher resilience (Alok et al., 2014; Alonso-Tapia, Rodríguez-Rey, Garrido-Hernansaiz, Ruiz, & Nieto, 2016). On the other hand, EFC pursues minimizing the distress produced by the situation and includes strategies like rumination, emotional expression, and self-blame. As it is usually measured, it has been related to worse psychological outcomes including lower resilience (Alonso-Tapia et al., 2016; Herman & Tetrick, 2009; Kato, 2015). A third coping style

termed social-focused coping (SFC) has been extensively addressed in literature as well (Folkman & Moscowitz, 2004), including strategies such as help seeking or self-isolation. Mixed results have been found in relation to its association with positive psychological outcomes (Folkman & Moscowitz, 2004) and thus its relationship with resilience needs to be further explored.

According also to literature, resilience also depends on personality factors (Olsson, Bond, Burns, Vella-Brodrick, & Sawyer, 2003). Personality factors might depend on coping strategies, as a consistent utilization of certain coping strategies can crystallize in stable habits or personal characteristics; however, it can also be argued that coping strategies depend on personality factors, as certain stable personal characteristics influence the degree of use of different coping behaviors (Carver & Connor-Smith, 2010; Oshio, Taku, Hirano & Saeed, 2018; Pelechano, 2000).

The personal characteristics that predispose to a resilient response have been termed *resiliency* (Prince-Embury, 2014) and can be grouped in the following three factors: sense of mastery, sense of relatedness, and emotional reactivity (Prince-Embury, 2007, 2014).

Sense of mastery refers to personal internal resources to face problems and is expressed through the indicators optimism, self-efficacy, and adaptability. People scoring high on these indicators tend to show higher resilience (e.g., Luthar, 2006; Sabouripour & Roslan, 2015). Sense of relatedness refers to perceived support from the environment and adequate social skills, and is manifested by the indicators trust, support, comfort, and tolerance. Sense of relatedness and resilience should be positively associated, especially as the former correlates positively with sense of mastery (e.g., Friedman & Kern, 2014; Prince-Embury, 2014). However, a recent study in adolescent population found that sense of relatedness was unrelated to resilience (Villasana et al., 2016). Thus, after deducting the degree to which sense of relatedness and sense of mastery are related, the former could be unrelated to resilience or even their association could be negative. Finally, emotional reactivity implies a lack of emotional positive self-regulation abilities, comprising the indicators sensitivity and impairment, and it has been related to lower resilience (Prince-Embury, 2007).

As for the second question, the degree of achieved resilience, as an outcome, may change depending on the specific threat faced by the individual. According to research, a person may demonstrate varying degrees of resilience depending on the kind of adversity that they encounter (e.g., a life-threatening illness, war, a natural catastrophe) (Luthar, 2006; Reaching IN... Reaching OUT, 2010; Southwick, Litz, Charney, & Friedman, 2011). This consideration is worth taking into account, as resilience in the face of different types of adversities may be explained in different ways. For instance, resilience in the face of work-related problems might depend more on the use of the PFC style, while resilience in the face of relationship problems might depend more on the EFC or the SFC styles. Thus, the investigation of the underlying processes of resilience should consider the effect of the personal factors as well as the type of adversity. Consequently, it is of great importance that researchers and clinicians assess resilience in the context of different types of adverse situations—or in the face of the specific

adversity that the person has encountered—instead of using a general index which may not be entirely adequate for the particular situation.

The complex relationships between resilience, coping, and resiliency need to be tested through models that include the three types of variables. To our knowledge, these models have not been neither developed nor tested yet. Moreover, studies testing the degree to which resilience generalizes across aversive contexts are also necessary; however, research on the situational character of resilience has been scant despite being widely recognized (Villasana et al., 2016).

Given the facts just summarized, the objective of this study was to ascertain the degree to which resilience can be predicted by resiliency and coping and to explore the relationships between the predictors in different adverse situations. In order to achieve this goal, two models will be tested. According to the first model (M1), coping is expected to have a direct effect on both resiliency and resilience and an indirect impact on resilience through resiliency factors, as the latter represent generalized dispositions of the repeated experiences of acting in a particular way (Carver & Connor-Smith, 2010; Pelechano, 2000). According to the second model (M2), resiliency is the one expected to have a direct effect on both coping and resilience, as personality traits influence both coping responses (Carver & Connor-Smith, 2010; Pelechano, 2000) and resilience (Oshio et al., 2018). Finally, considering the situational character of resilience, the type of adverse situation is expected to influence the relationships between coping, resiliency, and resilience. As this study is a cross-sectional one, no causality claims will be made. Nevertheless, testing the predictive models will show whether the results are more or less compatible with possible causality, which can guide future studies aimed at testing causal hypotheses through intervention designs.

Method

Participants

Three different groups of participants were recruited to ensure variability in the degree of confronted stress. The first subsample (n= 256) was composed by general population adults, the second subsample (n= 77) were adults living with VIH or cancer, and the third (n= 97) were parents of children with cancer or developmental or sensorial problems. The inclusion of these samples was made because facing health problems or being a parent of a child with a health-related condition or a disability may be an important source of stress. The final sample was composed of 430 adults from Spain, of which 69.8% were women. Regarding age, 33.3% of the participants were aged 20-30, 22.8% were 31-40, 26.3% were 41-50, 14.9% were 51-60, and 2.8% were aged 61 or older. As for educational level, 70.46% had a university degree and 29.53% had a primary, secondary, or professional education.

Instruments

a) *Situated Subjective Resilience Questionnaire for Adults* (SSRQA; Alonso-Tapia, Garrido-Hernansaiz, Rodríguez-Rey, Ruiz, & Nieto, 2018). This questionnaire comprises 20 items to assess resilience as the ability to bounce back from stress (e.g., 'When I myself have had a health issue that afflicted me very much, I easily recovered from that uneasiness.') in five different situations (work-related problems, problems with close relationships, own health problems, health problems of a close person and financial problems). Respondents rate items on a 5-point agreement Likert scale (1= *Strongly disagree*, 5= *Strongly agree*). Higher scores indicate higher levels of resilience. Cronbach's α of the scores of the general resilience scale was α= .90 in the sample of this study, with subscales' reliability ranging α= .71-.84.
b) *Situated Coping Questionnaire for Adults* (SCQA; Alonso-Tapia, Rodríguez-Rey, Garrido-Hernansaiz, Ruiz, & Nieto, 2016). This questionnaire comprises 40 items, which take into account eight different coping strategies grouped in three coping styles. Problem-focused coping (PFC) (ω= .98 in our sample) includes the strategies problem solving, positive thinking, and thinking avoidance (ω ranging .90-.94). Emotion-focused coping (EFC) (ω= .92 in our sample), comprises the strategies rumination, emotional expression, and self-blame (ω ranging .91-.94). Social-focused coping (SFC) (ω= .97 in our sample) includes help seeking and self-isolation (ω= .94 and .93, respectively). The items are rated on a 5-point frequency Likert scale (1= *Never*, 5= *Almost always*). Scores for each of the eight specific coping strategies can be obtained, as well as for the three general coping styles. Higher scores indicate higher use of the specific coping strategies or the more global styles.
c) *Resiliency Questionnaire for Adults* (RQA; Alonso-Tapia, Garrido-Hernansaiz, Rodríguez-Rey, Ruiz, & Nieto, 2017). This questionnaire is composed of 36 items (e.g., 'In general, I tend to think that things will turn out well'), evaluating nine personal characteristics grouped in three general factors: 1) sense of mastery (ω= .98 in our sample), which includes optimism, self-efficacy, and adaptability; 2) sense of relatedness (ω= .96), that includes trust, support, comfort, and tolerance; and 3) emotional reactivity (ω= .97), that includes sensitivity and impairment. The reliability of the general scale was ω= .98. The items are rated on a 5-point agreement Likert scale (1= *Strongly disagree*, 5= *Strongly agree*). Higher scores indicate that the individual presents a higher degree of the specific personal characteristic or the more global factor.

Procedure

Ethics approval for this study was granted by the Research Ethics Committee at the first author's University. General population data were collected by asking University workers to spread an invitation to participate among their acquaintances. Several NGOs were contacted regarding the collection of the

health-distressed samples data, and were asked to send out invitation emails, which contained information about the study and a link to the informed consent and the questionnaires. Those willing to participate completed the questionnaires online. All participants completed all questionnaires, so there were no missing data.

Data analysis

With the aim of gathering initial information on discriminant validity, the correlations between the general scales of each questionnaire were calculated, following the criterion proposed by Fornell and Larcker (1981) and accepted by Hair et al. (2013). According to such criterion, the square root of the average variance extracted (AVE) should be greater than the square of the correlation between the two constructs.

Six regression analyses were performed to explore the degree to which each predictor (coping styles and resiliency factors) contributed to resilience after partialling out its association with the remaining ones. The first analysis had the general measure of resilience as criterion. The remaining five had the five situational resilience subscales as criteria to explore the effect of the type of adverse situation on the relations between resiliency factors, coping, and resilience.

Finally, two structural equations models (SEM) were conducted to test the hypothesized models (M1 and M2). Then, two cross validation analyses (CVA) were carried out (CVA1 and CVA2). The sample was randomly divided into two subsamples, one for the initial analyses (n_1= 224) and the other for the cross-validation analyses (n_2= 206). Estimates were obtained using the maximum likelihood method after examining whether data were adequate for the analysis (Mardia coefficient= 49.38< 70; Rodríguez & Ruiz, 2008). We used absolute and incremental fit indices (χ^2, χ^2/df, CFI) and indices based on residuals (RMSEA, SRMR) to assess model fit. Criteria for acceptance or rejection were based on the degree of adjustment described by Hair, Black, Babin, and Anderson (2010; *p* non-significant for χ^2, χ^2/df< 5, CFI≥ .90, RMSEA and SRMR≤ .08). Besides, the Akaike information criterion (AIC) and the Bayesian information criterion (BIC) were used to compare the fit of both models. All analyses were conducted using SPSS 23 (IBM Corporation, 2015) except for the SEM and CVA, carried out with AMOS 23 (Arbuckle, 2014).

Results

Correlation analyses

Table 1 shows the results of the correlation analyses between the factor scores on general resilience and on coping and resiliency, using the whole sample. Table 2 shows correlations between raw scores on resilience in the face of specific stressful situations and coping and resiliency. Concerning validity of the measures, R^2 between each pair of constructs was always lower than the square root of AVE,

which is evidence of discriminant validity. This fact implies that the constructs used are different not only on conceptual grounds, but also on an empirical basis.

Table 1
Correlations between factor scores in resilience, resiliency and coping variables, and square root of average variance extracted (AVE) of each construct

Coping styles, resilience, and AVE	Sense of mastery	Sense of relatedness	Emotional reactivity	General resilience	√AVE
Problem focused coping	.67***	.48***	-.58***	.45***	.65
Social focused coping	.41***	.62***	-.41***	.17**	.78
Emotion focused coping	-.61***	-.41***	.75***	-.64***	.70
General resilience	.60***	.36***	-.65***		.65
√AVE	.75	.69	.65	.65	

Notes: AVE= average variance extracted. ***p< .001; **p< .01; *p< .05.

Table 2
Correlations between raw scores in resiliency and coping variables with resilience in each one of the specific situations considered

Resiliency factors and coping styles	Resilience in the face of problems related to:				
	Work	Relationship with a close person	Own health	Close person's health	Finances
Sense of mastery	.37***	.36***	.39***	.36***	.43***
Sense of relatedness	.27***	.20***	.22***	.12*	.28***
Emotional reactivity	-.39***	-.39***	-.37***	-.34***	-.42***
Problem focused coping	.31***	.24***	.28***	.23***	.26***
Social focused coping	.02	.12*	.10*	.03	.16**
Emotion focused coping	-.35***	-.38***	-.42***	-.41***	-.42***

Note: ***p< .001; **p< .01; *p< .05.

Concerning the correlations between resilience and resiliency factors, sense of mastery and sense of relatedness were positively associated with resilience, and emotional reactivity was inversely associated with it, both for general and situated resilience in all cases. Looking at coping styles, PFC was positively associated with resilience while EFC showed a strong negative correlation with it, both for resilience in general and in all situations. Lastly, SFC was significant and positively associated with resilience, again both for general and situated resilience. Finally, concerning the correlations between coping and resiliency, PFC and SFC were positively correlated with sense of mastery and sense of relatedness, and negatively correlated with emotional reactivity. The pattern of correlations

between EFC and the resiliency factors was the opposite: negative with sense of mastery and sense of relatedness, and positive with emotional reactivity.

Regression analyses

Table 3 shows the results of the regression analyses that were performed to explore the degree to which each predictor (coping styles and resiliency factors) contributed to resilience, indicating each regression coefficient after partialling out its association with the remaining ones. Forty percent of the variance in general resilience was predicted by coping and resiliency factors, and the proportions ranged .22-.26 for resilience in the face of each type of adversity. Sense of mastery and emotional reactivity had, respectively, a positive and a negative weight in most situations. Sense of relatedness had a significant negative weight only for problems related to a close person's health. PFC had a positive weight on resilience in most situations, and EFC had a negative one in all of them. Lastly, SFC had a significant negative weight only for work-related problems.

Table 3
Regression analyses of resilience predictors

Predictors	Total resilience	Resilience in the face of problems related to:				
		Work	Relationship with a close person	Own health	Close person's health	Finances
SM	.23***	.11	.15*	.18**	.27***	.19**
SR	-.09	.02	-.08	-.05	-.20**	-.01
ER	-.21***	-.19**	-.19**	-.10	-.09	-.16**
PFC	.16***	.18***	.10	.14**	.11*	.07
SFC	-.10*	-.18***	-.03	-.08	-.09	-.02
EFC	-.32***	-.21***	-.22***	-.29***	-.30***	-.25***
R^2	.40***	.24***	.22***	.25***	.25***	.26***

Notes: Presented regression coefficients are standardized. SM= Sense of mastery; SR= Sense of relatedness; ER= Emotional reactivity; PFC= Problem-focused coping; SFC= Social-focused coping; EFC= Emotion-focused coping. ***p< .001; **p< .01; *p< .05.

Structural equations models

Structural equations model for M1. This SEM tested the direct and indirect (through resiliency factors) effects of coping on resilience. The first randomized subsample was used for this analysis (SEM1). The direct effects were non-significant (p> .05). Thus, we repeated the analysis without them, which produced a refined model, depicted in Figure 1 with the standardized estimates and the squared multiple correlations. Sense of mastery was a positive direct predictor of resilience, while sense of relatedness and emotional reactivity were negative predictors. However, the combined direct effects of coping factors on resiliency factors explained most of variance in the last ones (100% of sense of mastery, 86% of sense of relatedness, and 93% of emotional reactivity). Besides, the

indirect effects of coping factors on resilience through resiliency factors (.46 for PFC, -.16 for SFC, and -.48 for EFC) explained 47% of variance in this construct. Therefore, according to this model, though coping and resiliency explained 56% of the variance in resilience, only 9% can be attributed to the specific effect of resiliency factors.

Figure 1
Model 1: initial standardized solution of the structural equations model

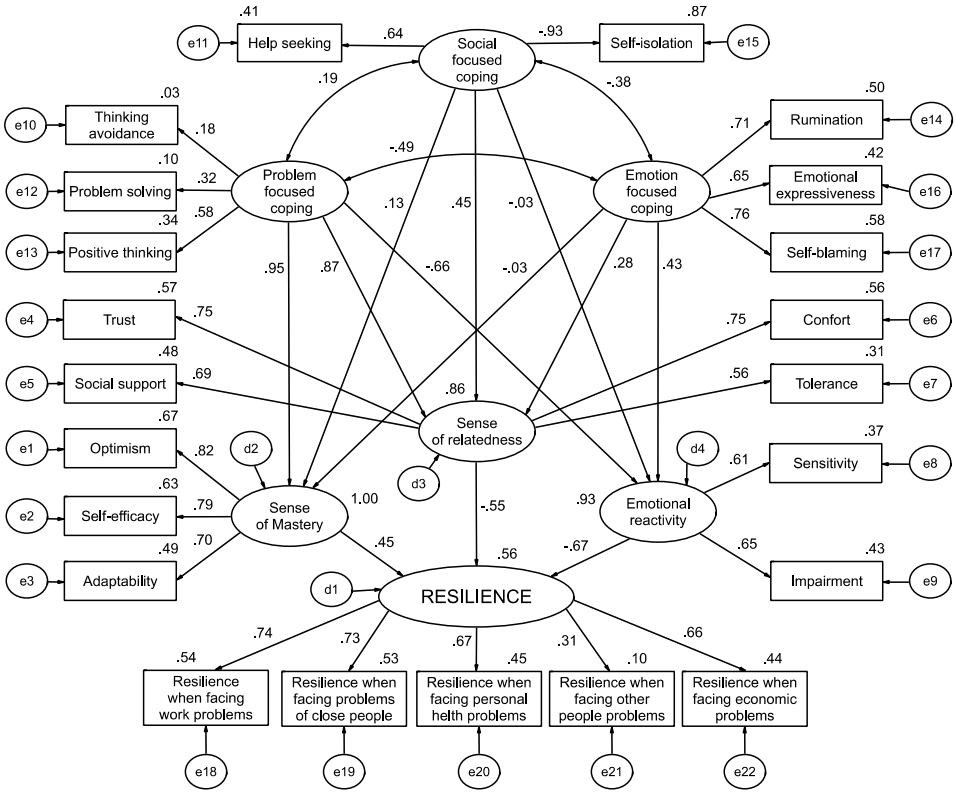


Table 4 shows the fit indices for SEM1. Chi-square statistic was significant, probably due to the sample size (Hair et al., 2010), but the ratio χ^2/df= 2.49< 5, RMSEA= .08≤ .08, and SRMR= .07< .08, were inside the limits for model acceptance. The CFI index fell short of the standard limits. CFI fit index could have been increased, for example, if the model had been more complex by including correlations between structural errors corresponding to resiliency factors, and if the measurement model of the latent variable PFC had been modified by deleting the observed variable *thinking avoidance*, whose loading was quite low. However, in these cases the amount of explained variance in resilience does not increase. Therefore, it was preferred to show the simplified model.

Table 4
Goodness of fit statistics for structural equations models and for cross validation analyses

Analyses	χ^2	*df*	*p*	χ^2/df	CFI	RMSEA	SRMR	AIC	BIC
M1: SEM1[1]	486.23	195	< .001	2.49	.85	.08	.07	602.23	800.11
M1: CVA1[2]	1112.79	448	< .001	2.48	.83	.06	.08	1270.38	
M2: SEM2[1]	443.41	198	< .001	2.24	.87	.08	.08	553.41	741.05
M2: CVA2[2]	1020.30	396	< .001	2.57	.84	.06	.08	1240.29	

Notes: M1= model 1; M2= model 2; SEM= structural equations model; CVA= cross-validation analysis.
[1]Baseline model, n_1= 224. CVA, n_2= 206.

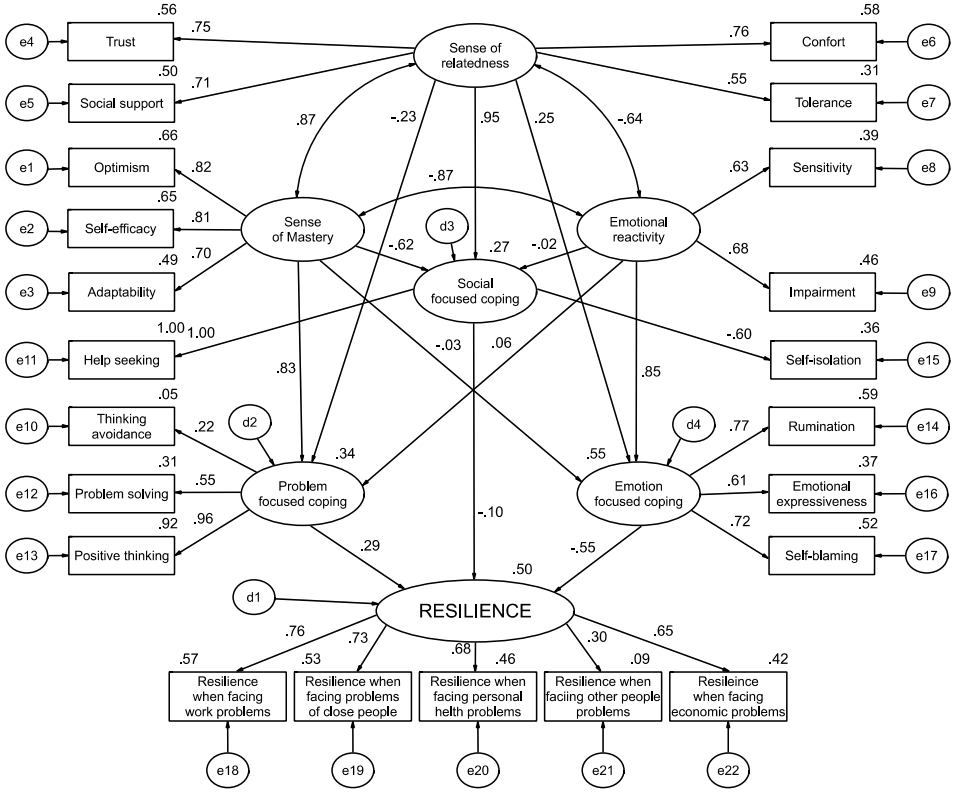
The model was then cross-validated across the two randomized subsamples (CVA1). Table 4 shows the fit indices, which were very similar to those of the SEM1, with a noticeable improvement in RMSEA. Moreover, fit was not significantly reduced in relation to the model without restrictions when equality restrictions were imposed between groups for measurement weights ($\Delta\chi^2$= 19.35, *p*= .20), structural weights ($\Delta\chi^2$= 35.39, *p*= .13), structural covariances ($\Delta\chi^2$= 44.99, *p*= .08), structural residuals ($\Delta\chi^2$= 47.73, *p*= .09), and measurement residuals ($\Delta\chi^2$= 71.18, *p*= .11), which supports the invariance of the model across the subsamples.

Structural equations model for M2. We conducted a second SEM (SEM2) for M2, which tested the direct and indirect (through coping factors) effects of resiliency factors on resilience. The first randomized subsample was used for this analysis. The direct effects of resiliency factors were non-significant (*p*> .05). Thus, the analysis was repeated without them, which produced a refined model, shown in Figure 2 with the standardized estimates and the squared multiple correlations. PFC was a positive direct predictor of resilience, whereas EFC and SFC were negative direct predictors. The combined direct effects of resiliency factors on coping factors explained less than half of the variance in the latter (34% for PFC, 27% for SFC, and 55% for EFC). Besides, the indirect effects of resiliency factors on resilience through coping factors (.32 for sense of mastery, -.29 for sense of relatedness, and -.44 for emotional reactivity) explained 38.9% of the variance in this construct. Therefore, of the 50% of the variance in resilience explained by coping and resiliency, 11.1% can be attributed to the specific effect of coping factors.

Table 4 shows the fit indices for the SEM2. As in the case of indices corresponding to M1, Chi-square statistic was significant, probably due to the sample size (Hair et al., 2010), but the ratio χ^2/df= 2.24< 5, RMSEA= .06 and SRMR= .08, both≤ .08, were inside the limits for model acceptance. The CFI index fell short of the standard limits. CFI fit index could have been increased using the

same procedures mentioned in the case of M1 but, for the same reasons there exposed, it was preferred to show the simplified model.

Figure 2
Model 2: initial standardized solution of the structural equations model



The model was then cross-validated across the two randomized subsamples (CVA2). Table 4 shows the fit indices for CVA2, which were very similar to those of SEM2, with a noticeable improvement in RMSEA. However, fit was significantly reduced in relation to the model without restrictions when equality restrictions were imposed between groups for measurement weights ($\Delta\chi^2$= 25.98, p= .03), structural weights ($\Delta\chi^2$= 44.79, p= .01), structural covariances ($\Delta\chi^2$= 49.69, p= .03), and structural residuals ($\Delta\chi^2$= 50.43, p= .03), but not when restrictions were imposed for measurement residuals ($\Delta\chi^2$= 72.18, p= .06).

Fit comparison between M1 and M2 fit. Given the difference in the fit indices of the two models, M2 is very slightly better than M1. This conclusion is supported also by the comparison between the AIC and BIC indices, also shown in Table 4. However, adjustment in M2 is greatly reduced in group comparison when restrictions are imposed, what suggests that M2 might not be the best one.

Discussion

This study explored how personal factors (i.e., coping and resiliency) can contribute to explain resilient outcomes (i.e., healthy functioning), while also taking into account the type of adversity. Results showed that coping and resiliency are different (but to some extent related) constructs, which can explain over half of the variance in resilience, supporting previous literature which has highlighted their importance (Leipold & Greve, 2009; Olsson et al., 2003; Prince-Embury & Courville, 2008; Villasana et al., 2016).

Moreover, the results of the comparison of the two models indicated that if coping styles are the initial predictors, the explained variance in resilience is greater than if the initial predictors are resiliency factors. However, in both models, the factors considered as initial predictors explained a greater amount of variance than the factors considered as mediators. Nonetheless, both models had similar goodness of fit, with adjustment in M2 decreasing greatly in group comparison when restrictions were imposed, which suggests that M1 might be a more consistent model (and, as noted, M1 is also the one explaining the greater variance in resilience scores). These results are congruent with the idea that coping behaviors tend to favor the development of some personality traits and that these traits, for their part, tend to favor the use of particular coping strategies (Carver & Connor-Smith, 2010; Pelechano, 2000).

Lastly, our findings suggest that the relationship between resilience and its predictors (i.e., coping and resiliency) is impacted by the specific type of adversity, which gives support to the notion that resilience varies to a certain degree depending on the adverse situation (Luthar, 2006; Reaching IN... Reaching OUT, 2010; Southwick et al., 2011).

Concerning the different predictors, PFC acted as a protective factor whereas EFC acted as a risk one, which is in line with previous studies (Alok et al., 2014; Alonso-Tapia et al., 2016; Herman & Tetrick, 2009). SFC showed a positive link to resilience but only in the correlation analyses and sometimes weak, suggesting that it is fundamentally unrelated to resilience, what is in line with results by Villasana et al. (2016). Moreover, in M1, the protective and risk effects of coping appeared to be mainly indirect through resiliency factors. Specifically, EFC contributed positively to sense of relatedness and emotional reactivity, which in turn were associated to lower resilience. SFC contributed positively to sense of relatedness, again leading to lower resilience. Lastly PFC contributed positively to sense of relatedness, which was associated to lower resilience. However, it also contributed positively to sense of mastery and negatively to emotional reactivity, leading to higher resilience. Therefore, it could be that a high degree of sense of relatedness in the absence of high sense of mastery (and high PFC) may impair resilient trajectories, although this remains a hypothesis that needs further testing and replication.

With regard to resiliency factors, sense of mastery acted as a protective factor for resilience and emotional reactivity as a risk factor, which is in line with previous studies (Luthar, 2006; Prince-Embury, 2007; Prince-Embury & Saklofske, 2013, 2014). Sense of relatedness, for its part, was positively correlated with resilience,

but its weight in the regression analyses and SEMs was negative, acting as a risk factor when it was considered together with the rest of predictors. This latter finding is against more classical studies (Luthar, 2006; Prince-Embury, 2007; Prince-Embury & Saklofske, 2013, 2014), as was also a recent study conducted in adolescent population which found no relation between the two constructs (Villasana et al., 2016). A high sense of relatedness may imply relying on others to solve one's problems, and so it could lead to lower resilience once the variance shared with sense of mastery has been accounted for. This explanation, again, remains a hypothesis that needs further testing and replication.

A fact that deserves additional attention is the negative association of PFC with EFC and emotional reactivity. It may be that PFC is also associated with the use of positive emotional self-regulation strategies. Such use would be incompatible with the use of the strategies underlying EFC, as it is usually assessed (rumination, emotional expressiveness, self-blaming), and would therefore favor the decrease of emotional reactivity. This possibility should be tested as, if supported by data, it would have direct implications for intervention.

Limitations concerning the generalizability of the results must be duly noted. First, the cross-sectional nature of our data makes longitudinal and intervention studies necessary in order to test causality. Second, online recruitment limited participation to those with access and knowledge about computers, emails, and web-browsing, which implies that our sample could be biased, for instance, towards a higher educated section of the population. Third, the selected coping questionnaire included only eight strategies, while more of them are possible and should be explored in future studies. Finally, the results cannot be generalized to situations different to the five considered in the SSRQA, so resilience in the face of other adverse experiences remains to be studied.

Our findings have some implications for resilience assessment and promotion. First, as coping was the main predictor for resilience, professionals such as psychologists, educators, and therapists should focus on modifying the use of coping strategies towards an advisable pattern in order to foster resilience. Based on our data, individuals should be aided to use PFC and avoid EFC, so as to increase their sense of mastery and decrease their emotional reactivity. Besides, our results showed that the impact of resiliency and coping on resilience varies across situations, which stresses the need to carefully consider the kind of adverse situation both in resilience assessment and in intervention design. Psychologists and other health caregivers should identify which coping strategies are potentially more advisable for the specific type of adversity and help promote their use. Moreover, flexibility in the use of the most adaptive coping strategies across contexts should be promoted, as some strategies have an effect in the face of one kind of adversity but not in the face of another.

In conclusion, this study showed how coping and personality factors can help explain resilient outcomes and highlighted the significant role that the type of adversity plays.

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