



THE RELATIONSHIPS BETWEEN DISPOSITIONAL COPING AND PERSONALITY VARIABLES

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Abstract

Previous research claimed that coping resources reflect stable personality characteristics (Bouchard, Guillemette, & Landry-Léger, 2004). The aim of the present study was to explore the relations between active coping, positive reinterpretation, denial and personality variables. Active coping is the process of taking active steps to try to remove or circumvent the stressor or to ameliorate its effects (Carver, Scheier, & Weintraub, 1989). Positive reinterpretation implies the fact that a person views a stressor in more positive terms. Denial is a strategy used when a person denies the reality of a stressful event (Carver et al., 1989). To assess personality traits, we used Big-Five personality dimensions: neuroticism, extraversion, agreeableness, openness, conscientiousness. To measure participants' coping strategies when faced with stressful events, the 53-item COPE scale (Carver et al., 1989) was used. Participants in this study (N=112) also completed the NEO Five-Factor Inventory (Costa & McCrae, 1992). Pearson's correlations revealed that neuroticism, extraversion, and conscientiousness significantly relate with the use of a particular coping strategy. Multiple regression analysis demonstrated that conscientiousness and extraversion are the best predictors for the use of active coping strategies and positive reinterpretation. The research contributes to existing knowledge of how personality traits are related to coping strategies when confronted with adversity.

Keywords: coping, neuroticism, extraversion, agreeableness, conscientiousness

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Introduction

Coping is defined as the “cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). In different situations, people use various coping responses based on the nature of the events or on their own resources (Folkman & Lazarus, 1984). Previous research found that some personality traits (i.e. extraversion, optimism, neuroticism) may correlate or predict certain coping behaviours in certain situations.

Lazarus and Folkman (1984) make a distinction between coping that seeks to regulate emotional responses to the problem and coping that aims to manage the problem that is causing the distress. The transactional perspective posits that there are two broad types of coping. Problem focused coping is aimed at problem solving or doing something to alter the source of the stress. Emotion focused coping is aimed at reducing or managing the emotional distress that is associated with the situation (Connor-Smith & Flachsbart, 2007). Numerous models have been used to describe the structure of coping, with distinctions between problem- and emotion-focused coping, and various researchers have created taxonomies of coping.

For example, a notable contribution to literature about coping is the work of Carver, Scheier, & Weintraub (1989). They argue that each broad type of coping (emotion-focused coping, problem-focused coping) may involve several distinct strategies. Carver et al. (1989) developed the Coping Orientation to Problem Experience (COPE) Inventory, which measures 15 strategies that are grouped into problem-focused coping (active coping, suppression of competing activities, planning, restraint, and seeking social support for instrumental reasons), adaptive emotion focused coping (seeking social support for emotional reasons, religion, positive reinterpretation, humour, and acceptance), and potentially maladaptive emotion-focused coping (behavioural disengagement, mental disengagement, denial, use of alcohol and drugs, and focus on and venting of emotions).

Active coping is a problem-focused coping strategy and it describes a person who takes active steps to attempt to reduce or eliminate the effects of the stressor. What Carver et al. (1989) define as active coping is very similar to what Lazarus and Folkman (1984) define as problem focused coping. When a person puts other distracting projects aside in order to better deal with the

stressor, we can talk about suppression of competing activities. A person may suppress involvement in competing activities, in order to better concentrate on the challenge. Planning occurs when a person uses planning strategies to cope with the stressor. Planning involves thinking about what steps to take to handle the problem but it differs conceptually from executing a problem-focused action (Carver et al., 1989). If a person waits an appropriate opportunity to act, it presents a restraint coping. Restraint is often overlooked as a potential coping strategy, but it has adaptive functions in some situations (Carver et al., 1989). Another form of problem-focused coping is seeking social support for instrumental reasons. It appears when people seek others for advice, or information. The first form of emotion-focused coping is seeking social support for emotional reasons. People seek others for sympathy, and understanding. Carver et al. (1989) have distinguished between two social support functions because they are distinct conceptually, but in practice they often co-occur. Another form of emotion-focused coping is turning to religion to help people cope. A third form of emotion-focused coping is positive reinterpretation in which a person views a stressor in more positive terms. People may also try to maintain a sense of humour, by joking about the critical situations (Carver et al., 1989). Acceptance is a functional coping response, because a person who accepts the reality of a stressful situation would attempt to deal with the situation (Carver et al., 1989). These ways of copings are considered adaptative and have beneficial effects to one's well-being. Although the distinction between functional and dysfunctional coping is not very clear, Carver et al. (1989) identifies certain coping strategies less efficient in critical situations. One type of dysfunctional coping is behavioural disengagement, which involves a sense of helplessness. People may also use mental disengagement in which they attempt to give up thinking about the problem. Another dysfunctional type is denial, as opposed to acceptance, in which a person doesn't recognize the reality of a stressful event. Turning to the use of alcohol and drugs as a way of disengaging from the stressor represent a form of dysfunctional coping (Carver et al., 1989). Another example of dysfunctional coping is venting, when people deeply concentrate on and vents their emotions. The ways in which people cope with stressful life events depends on situation and on personality characteristics. A large body of evidence suggests that both situations and stable dispositional traits explain a significant amount of variation in coping behaviour (e.g., Mischel, 1973; Parkes, 1986). Recent

research suggests a relation between personality and coping (e.g. DeLongis & Holtzman, 2005; Lee-Baggley, Preece, & DeLongis, 2005; Murberg, 2009; González Leandro & Castillo, 2010; Ekşi, 2010; Allen, Greenlees, & Jones, 2011; Bartley & Roesch, 2011; Beauchamp, Lecomte, Lecomte, Leclerc, & Corbière, 2011). Coping has also been described as “personality in action under stress” (Bolger, 1990, p. 525).

The five-factor model and coping strategies

The study of coping begins from the idea that there are individual differences in reactions to stress. There is clear theoretical support for the relationships between personality traits and the use of certain coping strategies (Watson, David, & Suls, 1999). Researchers who examined the effect of personality-based traits on coping responses claim that coping is an active process sensitive to both situational and individual variables (Folkman & Moskowitz, 2004; Ouwehand, Ridder, & Bensing, 2006). Coping has been examined in relation to personality variables such as self-efficacy (Schwarzer, Böhmer, Luszczynska, Mohamed, & Knoll, 2005), hardiness (Kobasa, 1982), and self-esteem (Guinn & Vincent, 2002). One model of personality that provides a useful context for assessing individual differences in coping strategy use is the Five-Factor Model, a broad-based taxonomy of personality dimensions (Costa & McCrae, 1985). These personality dimensions are neuroticism (N), extraversion (E), openness (O), agreeableness (A), and conscientiousness (C). Neuroticism is associated with increased anxiety, depression, and anger, and the tendency to appraise stressful situations as threats rather than challenges (Costa & McCrae, 1985; Gallagher, 1990). Those scoring low on neuroticism tend to be calm, and emotionally stable. Extraverts have the tendency toward social interaction and positive affect (Watson & Clark, 1997). They tend to view stressful situations as challenges (Costa & McCrae, 1985; Gallagher, 1990). People high on openness tend to be imaginative, appreciate aesthetic value and a creative lifestyle (McCrae & John, 1992). Agreeableness is a domain that has often been associated with morality and the ability to get along with others (McCrae & John, 1992). Conscientiousness is often used to describe reliable, hard-working, and self-disciplined persons (Watson & Clark, 1992). Individuals scoring high on conscientiousness tend to be careful, responsible, organized, and scrupulous (McCrae & John, 1992). Personality traits are an important determinant of

subjective well-being. Malkoça (2011) found that extraverted and conscientiousness individuals express a high level subjective well-being.

According to Watson and Hubbard (1996) there are some reasons why the personality traits of the big five model should be related to coping strategies. Neuroticism is the general tendency to experience negative affect, and irrational ideas. Persons high on neuroticism may be less able to use empathic responses when they are trying to deal with interpersonal stressors. Thus, these individuals would have coping styles aimed at eliminating or minimizing stressful feelings. Peoples high on extraversion like excitement and tend to be cheerful in disposition, so it seems reasonable to suggest that they would look to others in stressful situations. Individuals with high levels of openness are more creative and thus may be better able to try a series of coping strategies until they find a suitable one. The agreeableness dimension represents the general tendency to be altruistic, trusting, and compliant, suggesting that these persons might have a more extensive social support network to rely on when confronted with adversity. Conscientiousness is the general tendency to be purposeful in cognition and behaviour, and determined. These individuals are hypothesized to be careful planners and active coppers when a stressor is encountered.

Studies have shown that less-adaptive personality traits were associated with less-adaptive coping strategies and with psychological distress, whereas the reverse was found regarding adaptive coping strategies (McWilliams, Cox, & Enns, 2003). There is some evidence that neuroticism correlated significantly with emotion-focused strategies, that extraversion and openness to experience are associated with task-oriented coping strategies, and that agreeableness is associated with avoidance-oriented coping strategies (Ratsep, Kallasmaa, Pulver, & Gross-Paju, 2000). McCrae and Costa (1986) found that neuroticism was correlated with the use of hostile reaction, passivity, self-blame, withdrawal, wishful thinking, and indecisiveness, whereas extraversion was associated with increased use of rational action, positive thinking, and restraint.

Roesch, Wee, and Vaughn (2006) also studied the relationship between personality and coping. The results of their study showed that some personality traits (extraversion, openness, and conscientiousness) were positively related to both indices of emotion-focused coping (humour, positive reframing) and problem-focused coping (planning, active coping). Quirk and McCormick

(1998) found that individuals with the highest level of neuroticism and lowest levels of agreeableness and conscientiousness exhibited the highest level of escape-avoidance coping and the lowest level of problem solving or positive reappraisal. Compared to low- neurotic individuals, high-neurotic individuals used less-adaptive coping strategies (e.g., hostile reaction) and reacted with more distress in response to some types of coping strategies (Gunthert, Cohen, & Armelli, 1999).

A meta-analysis by Connor-Smith and Flachsbart (2007) focused on the relationship between personality and coping and showed that extraversion and conscientiousness predicted problem-focused coping styles, and that neuroticism predicted maladaptive coping styles.

The present study

One of the main objectives of the present study is to examine the extent to which certain personality characteristics would predispose people to cope in certain ways when confronted with negative life events. We wanted to test the hypothesis that preferred ways of coping with stress derive from traditional personality dimensions.

The purpose of this study is to examine the relationships between personality traits and specific types of functional coping (problem- and emotion-focused coping) and dysfunctional coping. Only three forms of coping dimensions were analyzed. The first dimension served as a measure of *active coping*, and indicated a form of problem-focused coping characterized by directing efforts toward the stressor, by attempting to control the stressor and related emotions (Carver & Scheier, 1994). We chose to study active coping because it is a common characteristic of many coping taxonomies (Hudek-Knežević, Kardum, & Vukmirović, 1999). Another reason for choosing this coping strategy is that various behaviors fall under the label of active coping. Instead of viewing stressors as obstacles, people who utilize active coping view stressors as challenges and are motivated to find better ways to succeed. *Positive reinterpretation and growth* was also included in our study, as an emotional-focused coping strategy. Positive reinterpretation predicted positive adjustment and appeared to be an adaptive coping strategy used to deal with many emotional stressors (Cheshire, Barlow, & Powell, 2010). People who use positive reinterpretation show how it is possible to turn the negative experience into something more positive. This coping strategy was strongly related to

perceived future growth (Frazier et al., 2009). Another form of coping we focused on in this study is *denial (dysfunctional coping)*. It is characteristic of early childhood development and many people use denial in their everyday lives to avoid dealing with stressful situations. This is why we chose to study this form of dysfunctional coping. At the same time, we have focused on the Big Five dimensions of personality: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Costa & McCrae, 1985).

In order to explain the differential role of certain personality factors in the three types of coping strategy, it can be hypothesized that certain personality characteristics would predispose people to cope in certain ways when confronted with adversity.

Method

Participants

The sample consisted of 112 people, all students at Alexandru Ioan Cuza University from Iasi. They were 3rd year students. About 96% were women. The age of the participants ranged from 20 to 34 years, with a mean age of 21.26 years. No information regarding their education or families' socioeconomic status was collected. Participants were informed about the purpose of the study. They were also assured that data collected would be kept confidential and would only be used for purposes of this study. All participants volunteered.

Instruments

NEO Five-Factor Inventory. Personality was assessed using the NEO Five-Factor Inventory (NEO-FFI) (Costa & McCrae, 1992). The NEO-FFI is a 60-item self-report measure of the five major domains of personality: Neuroticism, Extraversion, Openness, Agreeableness and, Conscientiousness. Participants self-rated on a 5-point Likert scale, ranging from 'strongly disagree' to 'strongly agree'. Neuroticism assesses general mental stability/instability and includes items about anxiety, hostility, depression and vulnerability. Extraversion involves gregariousness and positive emotions. Openness refers to fantasy and appreciating ideas. Agreeableness refers to trust, altruism, compliance and tender-mindedness. Conscientiousness includes items related to competence, order, achievement striving and self-discipline.

Cronbach alphas for the current sample were .77, .76, .54, .59 and .84, respectively, for Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness.

The Coping Orientations to Problems Experienced Scale (Carver, Scheier, & Weintraub, 1989) is a theoretically based, 53-item self-report measure. Participants are instructed to report what they usually do when they are under stress. Respondents chose their answers on a 4-point scale, from *not at all* (1) to *a lot* (4). The COPE scale consists of three main dimensions with five scales per dimension: (a) problem-focused coping: active coping, planning, restraint coping, seeking social support for instrumental reasons, and suppression of competing activities; (b) emotion-focused coping: positive reinterpretation and growth, religion, acceptance, denial, and seeking social support for emotional reasons; and (c) dysfunctional coping: focus on and venting of emotions, behavioral disengagement, mental disengagement, and alcohol or drug use. In the present sample, we used the active coping scale, the positive reinterpretation scale and the denial scale.

In our study, we hypothesized and tested the following relationships between personality and coping:

1. Personality traits will be correlated with the use of coping strategies.
 - 1a. Students' scores on neuroticism, extraversion, openness, agreeableness and conscientiousness will be correlated with the use of active coping strategy.
 - 1b. Students' scores on neuroticism, extraversion, openness, agreeableness and conscientiousness will be correlated with the use of positive reinterpretation coping strategy.
 - 1c. Students' scores on neuroticism, extraversion, openness, agreeableness and conscientiousness will be correlated with the use of denial coping strategy.
2. Personality traits will predict the use of coping styles.
 - 2a. Extraversion, openness, agreeableness and conscientiousness will be significant predictors of active coping strategy.
 - 2b. Extraversion, openness, agreeableness and conscientiousness will be significant predictors of positive reinterpretation coping strategy.
 - 2c. Extraversion, openness, agreeableness and conscientiousness will be significant predictors of denial coping strategy.

Procedure

Data was collected from participants during one session. Students were informed that they would be participating in a study on the ways in which people cope with stressful events in their lives. Participants completed the NEO-FFI, and COPE Inventory. The questionnaires were administered in class by the researchers. At the beginning of the class the students were informed that their participation was voluntary and confidential. Students were instructed to complete the questionnaire anonymously. The importance of answering truthfully was emphasized.

Results*Preliminary analyses*

Descriptive statistics for the target study variables are presented in Table 1. Positive reinterpretation and active coping were the most often used coping strategies by this sample. For the Big Five personality traits the sample scored higher for Conscientiousness, and Agreeableness.

Table 1. Descriptive statistics for the study measures

Measure	M	SD
Coping		
Active coping	13.57	2.37
Positive reinterpretation	16.04	2.53
Denial	8.55	2.75
Big Five personality traits		
Neuroticism	36.22	7.31
Extraversion	40.28	6.76
Openness	39.97	5.26
Agreeableness	43.57	5.62
Conscientiousness	45.00	6.75

The personality traits and coping strategies scores were normally distributed (the Kolmogorov-Smirnov Z were between 0.78 and 1.26, $p > .08$ for all variables). These coefficients are presented in table 2.

Table 2. Kolmogorov-Smirnov Test of normality of the distribution

	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
Active coping	1.192	.117
Positive reinterpretation	1.269	.080
Denial	1.100	.178
Neuroticism	1.010	.259
Extraversion	1.114	.167
Openness	.786	.568
Agreeableness	1.204	.110
Conscientiousness	1.228	.098

Before proceeding to multiple regression analysis, we computed bivariate correlations in order to identify associations between personality traits and coping strategies.

Pearson correlations among study variables

Hypothesis no. 1: Personality traits will be correlated with the use of coping strategies.

The Pearson correlations were conducted to examine bivariate associations among all study variables. A Bonferroni correction was applied to correct for multiple testing and alpha was set at .01.

The students' scores on active coping were positively and significantly correlated with conscientiousness ($r=.46$, $p<.01$) and extraversion ($r=.23$, $p<.01$). A greater use of active coping is associated with a higher level of conscientiousness and extraversion. There were no significant correlations between participants' scores on active coping and their scores on openness, agreeableness, and neuroticism.

At a level of 0.01, there were no significant correlations between participants' scores on denial and their scores on neuroticism, extraversion, conscientiousness, openness and agreeableness.

The participants' scores on positive reinterpretation and growth coping scale were positively and significantly correlated with extraversion ($r=.49$, $p<.001$) and conscientiousness ($r=.31$, $p<.01$). Another finding worth noting is the significant and negative correlation of neuroticism with positive reinterpretation and growth coping scale ($r=-.28$, $p<.002$). There is no

significant correlation between openness to experience, agreeableness and positive reinterpretation and growth coping scale. A greater tendency for positive reinterpretation is associated with a higher level of extraversion, conscientiousness and a lower level of neuroticism.

The results are summarized in Table 3.

Table 3. Pearson correlations between personality traits and coping (active coping, positive reinterpretation and denial)

	Correlations							
	1	2	3	4	5	6	7	8
1. active coping	-							
2. positive reinterpretation	.471**	-						
3. denial	.017	.041	-					
4. neuroticism	-.145	-.288**	.179	-				
5. extraversion	.235*	.491**	-.041	-.462**	-			
6. openness	.177	.127	-.163	-.012	.057	-		
7. agreeableness	.158	.227*	-.213*	-.071	.116	.133	-	
8. conscientiousness	.468**	.317**	-.163	-.290**	.156	.103	.253**	-

Note: * Correlation is significant at the 0.05 level (2-tailed); ** Correlation is significant at the 0.01 level (2-tailed)

Two hierarchical multiple regression analyses were used to test the predictions of active coping and positive reinterpretation, based on Big Five personality traits. We did not use a regression analysis to test the prediction of denial, because there were no significant correlations between denial and personality traits included in this study.

Personality and active coping

Hypothesis no 2: Personality traits will predict the use of coping strategies.

To examine the extent to which personality traits accounted for differences in active coping, a hierarchical regression analysis was conducted. The first variable entered in regression equation was extraversion (Step 1) and conscientiousness was entered in the equation in Step 2. The regression analysis showed that model 2, containing extraversion and conscientiousness, explained the best the use of active coping. This model is highly significant,

$F(2,102)=14.35$, $p<.0001$. The best significant predictors for active coping is conscientiousness ($r_{sp} = .40$).

The results are presented in Table 4.

Table 4. Hierarchical multiple regression analysis predicting active coping from the personality traits independent variables

		ΔR^2	β	r_{sp}
Model 1	Extraversion	.05	.235*	.23
Model 2	Extraversion	.22	.169	.23
	Conscientiousness		.411**	.40

Note 1: Dependent Variable: active coping; Note 2: * $p < .05$; ** $p < .001$

Personality and positive reinterpretation

To examine the extent to which personality traits accounted for differences in positive reinterpretation and growth coping, a hierarchical regression analysis was conducted. In this prediction, neuroticism was entered in the equation in Step 1; extraversion was entered in the equation in Step 2 and conscientiousness was entered in the equation in Step 3. The regression analysis showed that model 3, containing extraversion, neuroticism, and conscientiousness, explained positive reinterpretation and growth coping scale the best. The model is highly significant, $F(3,101)=14.75$ $p<.001$). The best significant predictors for positive reinterpretation and growth coping are extraversion ($r_{sp}=.40$), and conscientiousness ($r_{sp}=.24$).

The results are presented in Table 5.

Table 5. Hierarchical multiple regression analysis predicting positive reinterpretation and growth coping from the personality traits independent variables

		ΔR^2	β	r_{sp}
Model 1	Neuroticism	.07	-0.27*	-.27
Model 2	Neuroticism	.27	-.059	-.05
	Extraversion		.467**	.41
Model 3	Neuroticism	.30	-.012	.01
	Extraversion		.458**	.40
	Conscientiousness		.252*	.24

Note 1: Dependent Variable: positive reinterpretation and growth; Note 2: * $p<.05$; ** $p<.001$

The results showed that the extraversion ($\beta=.16$, $p=.059$) and conscientiousness ($\beta=.41$ $p<.001$) are predictors of active coping. Moreover, extraversion ($\beta=.45$, $p<.001$) and conscientiousness ($\beta=.25$, $p=.005$) are significant predictors for positive reinterpretation coping. Participants with higher levels of extraversion and conscientiousness reported a greater use of active coping and positive reinterpretation of negative experiences. Neuroticism, agreeableness, and openness were not significant predictors in predicting active coping or positive reinterpretation.

Results revealed that personality traits, as a group, were found to add significant incremental validity in predicting active coping strategy, explaining 20.4% of variation in active coping, $F(2, 102) = 14.35$, $p<.001$). The global effect size of this model is medium (Cohen, 1988). Neuroticism, extraversion, and conscientiousness explained, all together, 28.4% of variation in positive reinterpretation and growth, $F(3, 101)=14.75$, $p<.001$). For positive reinterpretation, the global effect size of the model is large (Cohen, 1988).

Table 6. Summary of hierarchical multiple regression analyses showing amount of variance in active coping and positive reinterpretation accounted for by neuroticism, extraversion, and conscientiousness

	Problem-focused coping	Emotion-focused coping
	Active coping	Positive reinterpretation
	Personality traits	
	Extraversion Conscientiousness	Neuroticism Extraversion Conscientiousness
R ² adj.	0.204	.284
F	14.35	14.75
P	<.001	<.001

The results of multiple regression analyses indicate that the more students were extravert, and conscientious, the more they used positive reinterpretation and active coping to solve their difficulties.

Because we use young students to collect data for this study, all these results are relevant only for young women with the mean age of 21.26 years.

Discussion

The aim of the present study was to explore the relationships between active coping, positive reinterpretation of reality and denial as coping strategies, and some stable factors, by examining the big five personality traits. In this study, we focused on three coping strategies: a problem-focused coping strategy (active coping), an emotion-focused coping strategy (positive reinterpretation), and a form of dysfunctional coping (denial).

Overall, the results of our study support the idea that the coping strategies are related to some personality traits. Extraversion and conscientiousness were positively related to both indices of problem-focused coping (active coping) and emotion-focused coping (positive reinterpretation). In our study, individuals with higher levels of extraversion and conscientiousness show a greater use of active coping and positive reinterpretation of negative experiences, when confronted with stressful life events. These personality traits reflect the tendency to perceive events as challenges rather than threats and to make positive evaluations of daily experiences (Vollrath, 2001). These characteristics could explain the significant correlations between extraversion, conscientiousness and the use of active coping and positive reinterpretation. Our results are in accordance with recent empirical findings (Vollrath & Torgersen, 2000; Carver & Connor-Smith, 2010).

In our study, neuroticism was associated only with positive reinterpretation of negative reality. Past literature also indicates that neuroticism is associated with certain forms of emotion-oriented coping (Uehara, Sakado, Sakado, Sato, & Someya, 1999). Not surprisingly, the findings from our studies show that persons with greater levels of neuroticism use positive reinterpretation as coping strategy less frequently. These findings are similar to those of Vollrath and Torgersen (2000) who have found that individuals low in neuroticism were relatively resistant to stress and can manage distress emotions. Those with higher levels of neuroticism are less able to manage their negative emotions and to turn the critical situations into something positive. In our sample, there was no significant correlation between neuroticism and active coping. A similar result was found by Beauchamp, Lecomte, Lecomte, Leclerc, and Corbière (2011). In their study neuroticism was linked to the passive coping outcome. Also, there was no significant correlation between neuroticism and denial. These null findings with respect to denial coping strategy are

curious in light of the fact that individuals who are high in neuroticism are more prone to irrational thoughts and are less able to control their impulses (Costa & McCrae, 1992). Thus, we expected that these individuals will have the tendency to deny the painful reality. It is possible that these individuals might prefer passive acceptance of the situation when the stressor cannot be eliminated. The type of stressful event (controllable vs. uncontrollable) could have an important role in choosing specific ways of coping. This possibility needs to be explored further.

Our results, stating that extraversion is associated with the use of active coping and positive reinterpretation, are in line with the results of previous studies (McCrae & Costa, 1986; Parkes, 1986). Extraversion has been correlated with problem-solving coping (equivalent to active coping) across a variety of stressors (O'Brien & DeLongis, 1996). McCrae and Costa (1986) found that extraversion was consistently associated with the increased use of rational action and positive thinking. In a study concerning the effects of the big five personality dimensions on sport-related coping, Allen, Greenlees, and Jones (2011) found that extraverted athletes reported a greater use of problem-focused coping strategies. Those who score higher on extraversion should rely more on active, problem-focused coping strategies because of their tendency to see problems as challenges. This would account for the absence of significant correlation between this personality trait and denial coping strategy. These individuals are very active when they are confronted with adversity (Brebner, 2001). Extraversion involves positive emotions, sociability, assertiveness, and high energy (McCrae & John 1992). These characteristics could explain the positive relationships between active coping strategies, positive evaluations of experiences and this personality trait.

Previous findings showed that extraverts use a variety of ways of coping (Lee-Baggley et al., 2005), including active problem solving and positive re-evaluation (DeLongis & Holtzman, 2005). The preference of extraverted individuals for social interactions may have an influence on the choices they make for coping, particularly for active coping strategies.

The fact that conscientiousness is associated with active coping and positive reinterpretation has theoretical support in stress and coping literature. It is worth noting that these results replicate those of González Leandro and Castillo (2010). Significant positive relations of conscientiousness with problem-focused strategies were consistently found in several other studies

(e.g. Hooker, Frazier, & Monahan, 1994; Watson & Hubbard, 1996; Bishop et al., 2001; Hambrick & McCord, 2010; Burgess, Irvine, & Wallymahmed, 2010; Bartley & Roesch, 2011). These results suggest that conscientiousness enables the individual to actively plan to moderate the effect of the stressor. High scores on conscientiousness are associated with determination, self-discipline, organization, and an achievement orientation (McCrae & John, 1992). Conscientious individuals tended to appraise stressors as less threatening (Bouchard et al., 2004). The properties of this trait should facilitate problem solving and positive reinterpretation of negative experiences (Vollrath & Torgersen, 2000; Vollrath, 2001). Given the fact that highly conscientious individuals tend to be organized and responsible (McCrae & John, 1992), the lack of associations between these personality traits and denial is not a surprising finding.

The results of the current study are less consistent with past research when we consider the relations between agreeableness, openness and coping strategies. Our findings demonstrate that there were no significant correlations between the agreeableness, openness and coping strategies (active coping, positive reinterpretation and growth, denial). Previous research has shown that agreeableness is related to indices of emotion-focused coping and active coping (O'Brien & DeLongis, 1996; Watson & Hubbard, 1996; Roesch, Wee, & Vaughn, 2006; Burgess et al., 2010). Openness to experience was related positively to active coping (Roesch, Wee, & Vaughn, 2006), positive reappraisal (O'Brien & DeLongis, 1996; Bishop et al., 2001; Roesch, Wee, & Vaughn, 2006), and problem solving (Kato & Pedersen, 2005). In the current study, these relations were not found, and specifically no significant relations were found between big five personality traits and coping strategies studied here.

Overall, the present study indicated that several Big Five traits were associated with daily coping efforts. Extraversion and conscientiousness predicted greater use of coping strategies. More specifically, conscientiousness and extraversion were related to active coping and positive reinterpretations of negative experiences.

Limitations and conclusions

This study has some limitations. One is related to the fact that all variables were measured using self-reports. Like the majority of studies, this

has been cross-sectional and required participants to recall coping efforts they usually used under stress. In this case, reports of coping responses may be subject to memory biases as the time between the coping efforts and the coping assessment increases (Moore, Sherrod, Liv, & Underwood, 1979; Peterson, 1980). More accurate reports about coping strategy use may be obtained by measuring it soon after the stressful episode occurs (Bolger, 1990; Ptacek, Smith, Espe, & Raffety, 1994; Stone & Neale, 1984).

One of the main limitations of this study is the lack of data triangulation. Future longitudinal studies should combine quantitative (questionnaires) and qualitative (interviews of the participants regarding their preferred ways of coping) methods to collect data. Another limitation of the present study concerns the generalization of the findings. Because there was a small number of men in our sample, the results of our study are most applicable to women. In addition, the mean age of the participants in our sample is low and we can not be sure if the COPE instrument was efficiently evaluate stable coping strategies. Further research should openly address both men and women of different ages, and investigate gender differences related to the use of coping styles. More research involving exploration of specific coping strategies across higher numbers of participants is needed to test the reliability and validity of these findings. Despite these limitations, the present study confirms the results of previous investigations demonstrating the link between personality traits and coping strategies.

In conclusion, results converge to suggest that personality traits are likely to play an important role in predicting variance in coping. Further research should take into consideration the possibility that specific personality facets would better predict coping than do broad traits. Understanding coping and individual differences is an important step to regulation of stressful emotions and the management of the sources of stress.

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