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Mediated Moderation or Moderated Mediation: Relationship between Length of Unemployment, Resilience, Coping and Health
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The aim of the present research was to evaluate a model of mediated moderation vs. moderated mediation that could explain the relationship between length of unemployment, dispositional resilience, coping styles and depression and social functioning of Venezuelan unemployed individuals. Self-report measures were administered to a sample of 328 unemployed residents in Caracas, Venezuela. Results indicated that emotional coping acted as a mediator in the relationship between resilience and depression. Individuals with greater resilience used more detachment coping when unemployment was longer, while individuals with poorer resilience in the same situation used less avoidance coping. Resilience acted as a protective moderating factor between longer periods of unemployment and social functioning, a process mediated by detachment coping. Overall, results supported a mediated moderation model, with resilience as the moderating factor and coping as the mediator in the relation between stress due to the length of unemployment and well-being.

Keywords: unemployment, resilience, coping styles, health, mediated moderation.
Unemployment is a stressful event that can affect the physical and psychological wellbeing of individuals (Dooley, Fielding, & Lennart, 1996), depending on their coping resources and other variables that facilitates or inhibits its effect. This study was carried out with the aim to know the relationship between length of unemployment, a group of positive personality characteristics which form a dispositional measure of resilience, coping and wellbeing or health indexes (depression and social dysfunction), analyzed under a model of mediated moderation vs. moderated mediation, as described by Muller, Judd, and Yzerbyt (2005).

**Length of unemployment and health**

Length of unemployment has been found to have a negative association with the frequency and time invested searching for new jobs. The importance attributed to work (work centrality) and the non-financial job commitment decrease as time of unemployment increases (Kulik, 2001).

Also, it has been found a relationship between length of unemployment and cognitive functioning. According to Alvaro (1992), individuals with longer periods of unemployment reported needing more time to do the same things, found it harder to concentrate, and to do their activities with the same ability as before. Unemployed individuals also indicated problems to start new tasks, remain mentally active, remember things, make decisions, and understand rapidly what other people say. On the other hand, Artazcoz, Benach, Borrell, and Cortes (2004) did not find that significant association between the length of unemployment and mental health.

Probably, the observed differences among these results is due to the moderating effect of some individual differences in the relationship between stressful factors (in this case the length of unemployment) and health, which can be protective or risk factors depending on the circumstance (Steptoe, 1991), as well as the mediation that can take place from other factors such as coping, a variable that has been used as the most proximal predictor of wellbeing in different studies regarding stress (see Bethelmy & Guarino, 2008; Guarino, Sojo, & Bethelmy, 2007; Wanberg, 1997).

**Coping and health in unemployed individuals**

Coping refers to the use of cognitive, emotional and behavioral resources after a situation is appraised as threat or taxing, with the intention of managing it (Lazarus & Folkman, 1986). Coping is typically classified in two categories: efforts to deal with the problem or effort to deal with the emotions (Latack & Havlovic, 1992).

In the research field of unemployment several studies have been carried out trying to understand the relationship between this situation, coping and health. Even though emotional coping have been reported to be related to high levels of emotional distress or depression in studies with Scandinavian and Australian unemployed individuals (Grossi, 1999; Patton & Donohue, 1998), such associations have not been found with American samples (Kinicki & Latack, 1990; Wanberg, 1997). Additionally, the use of escape strategies has been related to less psychological stress in unemployed Chinese women (Lai & Wong, 1998). Kinicki and Latack (1990) suggest that escape oriented coping strategies can be more effective to reduce the impact of unemployment on health among long term unemployment, when the perceived control over the stressor can be lower. In this condition, the use of proactive job search as a problem-focused strategy after failing repeatedly can increase stress; hence the best way to avoid tension is escaping.

The relationship between problem-focused coping and psychological wellbeing is not less ambiguous. While Wanberg (1997) and Leana and Feldman (1990) have found a significant relationship between control-oriented coping and mental health deterioration, although in Wanberg’s (1997) case this was found only in individuals with a low perception of control over the situation and not with those who perceived they were managing their unemployment situation. Others like Kinicki and Latack (1990) with American and Lai and Wong (1998) with Chinese samples of unemployed individuals could not replicate these results. On the contrary, in this latter study, problem-focused coping predicted a reduction in psychological stress and better mental health. Additionally, it is possible that cultural and economical contexts where unemployment and coping are experimented might determine the psychological results of the process (Lai & Chan, 2002).

The aim of this research was to identify a set of antecedents and consequences of the coping styles adopted more frequently by a sample of unemployed individuals. More specifically, the coping model of Roger, Jarvis, and Najarian (1993) was adopted in its validated Spanish version (Guarino et al, 2007). According to these authors, coping can be evaluated through four factors: Rational coping (actions directed to solve the problem), Avoidance coping (ignore the stressful situation that has occurred), Emotional coping (negative affective responses after the stressful situations), and Detachment coping (taking an objective perspective regarding the stressful event and the emotions associated).

Based on previous research which explain the role of personality as a resource that determines the coping styles adopted to deal with stressful events (Carver, Scheier, & Weintraub, 1989; Guarino, 2004; Wanberg, 1997), and based on Guarino’s proposal (2009) who suggests that coping might act as a mediator in a complex model of moderated mediation, in this research it was also evaluated whether dispositional resilience predicts specific ways of coping, which in turn foster changes in the health status of unemployed individuals.
Resilience in the framework of the Cognitive Adaptation Theory

In their Cognitive Adaptation Theory, Taylor & Brown (1988) explain that mentally healthy individuals have high self-esteem, high perceived control or master over the environment, and high optimism. Whenever a stressful event happens, a cognitive adaptation occurs, conceived as a general and stable dispositional resource to improve the coping process. This adaptation comprises three phenomena: firstly, trying to understand why the situation has happened and its meaning for the own life, which depending on the interpretation can lead to changes in one’s meaning of life; secondly, trying to obtain a sense of control attempting to manage the situation, this could lead to behavioral changes with the intention to obtain such control; thirdly, by getting involved in actions to restore one’s self-esteem (Powell & Self, 2004).

In this way, the central elements of the theory are: 1) the search for meaning of the experience or event, 2) an attempt to get control over the situation and its consequences, and 3) the development of positive ideas (about the self and the environment) to cope with the situation. The final result is the possible restructuration of the own vision of the world and of the perception of causes and effects of the event (Powell & Self, 2004). As can be seen, these elements are highly related to the three variables with which the theory has intended to be operationalized, these are self-esteem, perceived control and optimism (Wanberg, 1997). These personality characteristics have been nominated as cognitive adaptation variables, and in previous research, Aspinwall and Taylor (1992) have proposed a mediation relationship in which these variables impact on coping, which in turn influences individuals’ general health.

Wanberg (1997) operationalized the variables of this theory using the Rosenberg Self-esteem Scale (Rosenberg, 1965), the Life Orientation Test, an optimism scale developed by Scheier and Carver (1985; revised by Scheier, Carver, & Bridges, 1994), and the perceived control scale “Mastery Scale” by Pearlin, Menaghan, Lieberman, and Mullan (1981; Pearlin & Schooler, 1978) generating a compound index named “resilience”. This dispositional measure of resilience was used as a direct predictor of the strategies to cope with unemployment, which at the same time should serve in her model as mediators of the impact of resilience on health.

In Wanberg’s (1997) study participants scoring high in dispositional resilience used two mayor coping strategies: non-work organization (management of aspects of the own life that are not related to work) and positive self-evaluation. Likewise, high levels in resilience were associated with better health (evaluated with the short version of the General Health Questionnaire, Golberg, 1972). Both coping strategies were predictors of better health, in contrast with the strategy of proactive job search, which showed a negative association with general health. At the same time, no relation was found between escape coping strategies and mental health, in this case distancing from job loss and work devaluation. Nevertheless, Wanberg (1997) did not find mediation effect of the coping strategies in the relationship between resilience and general health.

The present study

Wanberg’s (1997) results regarding the lack of mediation effect of the coping strategies in the relationship between personality and health, as well as the inconsistencies in the relationships of different measures of personality and coping, and between this latter and health (Dooley et al., 1996; McKee-Ryan, Song, Wanberg, & Kinicki, 2005), could be the result of the lack of evaluation of the moderation effect of these personality characteristics. More specifically, those studies failed to evaluate the moderation effect, which requires an initial estimation of the interaction between the predictor variable, in this case stress due to unemployment, and the moderator (resilience), as has been described by different authors (Aguinis, 2004; Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004). Likewise, in the cited studies complex relationships among this group of variables were not established, which is possible if a joint model to evaluate mediated moderation vs. moderated mediation is planned to determine the combine impact of individual differences and ways of coping on the health of individuals experiencing stressful events.

It is also possible for personality variables, coping styles and stress to have different impacts on different indexes of health. In this way, the result obtained measuring health with depression and social dysfunction indexes separately was expected to diver from those obtained with a unique measure of global health.

In the present research, the analytical strategy of Muller et al. (2005) was used with the aim to evaluate at the same time a model of mediated moderation and moderated mediation, that can determine the interaction between resilience and length of unemployment in their effect on health, specifically indicators of depression (constant sentiments of hopeless and handicap) and social dysfunction (difficulties with making decisions, maintaining oneself active, and being satisfied with daily activities), through the mediation of coping. In this way, resilience was expected to moderate the effect of the length of unemployment on depression and social dysfunction, a process that was hypothesized to be mediated by coping, assuming also the possibility of an interaction between resilience and coping in their ultimate effect on these two indicators of health.
Method

Participants

The 328 surveyed unemployed individuals were residents of the Capital District of Venezuela, 50.6% were men (n = 166) and 49.4% women (n = 162); mean age was 31 years old (ranging from 18 to 65 years old; SD = 9.43) and in average they had been unemployed for one year (ranging from 1 month to 11 years; SD = 1.57). Participants were contacted directly in the waiting rooms of two different job agencies, one of the Ministry of Work, and a Non-governmental Organization, both dedicated to counsel, train and find jobs for unemployed individuals.

Instruments

- Demographics variables: evaluated through direct questions in the survey, after the informed consent letter and before presenting the other two scales. Participants were asked for their age, gender and time of unemployment in months.
- Coping Styles Questionnaire (CSQ- Spanish version of Guarino, Sojo, & Bethelmy, 2007). This 40 item questionnaire measures the individuals’ coping dispositions in four dimensions: Emotional Coping (EMO), Rational Coping (RAT), Detachment Coping (DET), and Avoidance Coping (AVO). Means across all relevant items per scale were obtained, higher scores on these dimensions reflect that the individual reacts frequently with that style to manage stressful situations, ranging from 1 = Never to 4 = Always.
- Resilience: the compound index of resilience as a positive personality characteristic, was obtained from three instruments: “Life Orientation Test” (Scheier & Carver, 1985; Spanish version of Ferrando, Chico, & Tous, 2002) consists of 10 items addressing the perceived value of the surrounding world is for the individual. Rosenberg Self-Esteem Scale (1965), consists of 10 items addressing the perceived value of the self. Mastery Scale (Pearlin, Menaghan, Lieberman, & Mullan, 1981), consists of 7 items referring to the beliefs about the mastery the individual has over the environment. For the three scales participants indicated their level of agreement with each item, ranging from 1 = Strongly disagree to 4 = Strongly agree. Means across all relevant items per scale were obtained, higher scores indicate more presence of the personality characteristic.
- Depression and Social Dysfunction Sub-scales from the GHQ– General Health Questionnaire – (Spanish version of Molina & Andrade, 2002). This scale consists of 28 items which describe symptoms of anxiety, somatization, depression and social dysfunction, to which participants have to report the frequency of occurrence in the last weeks, ranging from 4 = No at all, to 1 = More than the habitual (Goldberg, 1972; Molina & Andrade, 2002). Means across all relevant items per scale were obtained, higher scores reflect better health.

Alpha Coefficients for internal consistency of the scales are presented in table 1. The coefficients of the optimism, detachment coping, avoidance coping and rational coping scales presented values from $\alpha = .500$ to $\alpha = .700$, which can be a limitation of this study and results involving these scales should be interpreted with care.

Procedure

A questionnaire-based cross-sectional study was carried out, collecting information during 6 months. Two clinical psychologists working as research assistants asked unemployed individuals looking for jobs at the two agencies to answer the questionnaires in the same order as they were described above in this article. The research assistants explained each participant the nature of the study and that their participation was completely voluntary and non-related to the services of the institutions where they were contacted.

Data Analysis

Considering Wanberg’s (1997) proposal regarding the measure of resilience and that in the present study correlations between the scales of self-esteem, optimism and perceived control were higher than $r = .500$ (see table 1), these variables were transformed into $z$ standardized scores, in order to generate an average score of the three, which was used as a compound measure of dispositional resilience, as was explained in the introduction. Taking into account the results from gender and age as factors related to other studied variables (see table 1) it was decided to control for them, introducing them in the first step of the regression analyses conducted. Descriptive statistics of the variables are also presented in table 1.

Using the guidelines of Aiken and West (1991) and Friedrich (1982) to estimate interaction effects using multiple regression, all variables were transformed into $z$ standardized scores, and gender into a dummy variable, analyzing the unstandardized $b$ coefficients.

Following Muller et al.’s (2005) description regarding the evaluation of the processes of moderated mediation vs. mediated moderation, equations were calculated to evaluate the direct effect of gender, age, length of unemployment (LU) and dispositional resilience (Res), likewise their interaction on each of the health indices (equation 1) and on each of the coping styles (Cop) separately (equation 2). Then, a regression for each of the health indexes
was calculated which included gender, age, length of unemployment, resilience, the interaction term between these last two, the coping style which should be used as mediator and the term of interaction between the specific coping style and the measure of resilience (equation 3). The latter means that equation 3 was calculated for each coping style separately. Mathematical formulations of the three equations are presented next:

\[ Y_{\text{depression}} = b_0 + b_1 \text{Gender} + b_2 \text{Age} + b_3 \text{LU} + b_4 \text{Res} + b_5 \text{LU} \times \text{Res} + e_i \]  \hspace{1cm} (1)

\[ Y_{\text{coping}} = b_0 + b_1 \text{Gender} + b_2 \text{Age} + b_3 \text{LU} + b_4 \text{Res} + b_5 \text{LU} \times \text{Res} + e_i \]  \hspace{1cm} (2)

\[ Y_{\text{mediation}} = b_0 + b_1 \text{Gender} + b_2 \text{Age} + b_3 \text{LU} + b_4 \text{Res} + b_5 \text{LU} \times \text{Res} + b_6 \text{COP} + b_7 \text{COP} \times \text{Res} + e_j \]  \hspace{1cm} (3)

According to Muller et al. (2005), to have evidence of a mediated moderation, the term of interaction between the independent variable (length of unemployment) and the moderator (resilience) in its effect on the criterion variable (index of health) must be significant (equation 1). Then, at least one of the following patterns must be present, either both the interaction term between the independent variable and the moderator in its effect on the mediator (coping styles) (equation 2), and the direct effect of the mediator on the criterion variable in equation 3 (complete model) must be significant, or both the effect of the independent variable on the mediator (equation 2) and the interaction term between the mediator and the moderator in its effect on the criterion in equation 3 must be significant. Furthermore, in all these cases, the interaction term of the independent variable and the moderator should not be significant in its effect on the criterion variable in equation 3.

According to the cited authors, in cases of moderated mediation it is expected a direct significant effect of the independent variable (length of unemployment) on the criterion variable (index of health) in equation 1, and the interaction term of the independent variable and the moderator (resilience) on the criterion variable must be non-significant. Then, at least one of the two following pattern of results must occur, one significant interaction between the independent variable (length of unemployment) and the moderator (resilience) in their effect on the mediator (coping styles) in equation 2, followed by a partial effect of the mediator on the criterion variable in equation 3, or a significant interaction between the mediator (coping styles) and the moderator (resilience) in their partial effect on the criterion variable, when the direct effect of these variables, of the independent variable and the interaction between the independent and the moderator (equation 3) have been controlled for, preceded by a direct significant effect of the independent variable on the mediator in equation 2.

### Results

This section has been structured based on the two health indexes studied (depression and social dysfunction), presenting for each one only significant results of the equations 1, 2 and 3 described above. Equation 2 was calculated for each one of the four coping styles and results will be presented only if they are significant, if they are relevant to the description of its mediating role or if their impact on health is moderated by the measure of resilience. Likewise, \(R^2\) of the equation with their significance test are presented only when \(b\) are indicated for the first time, in order to express the total variance explained for all the variables included, this information was not repeated when referring again to the same \(b\).

Regarding depression, results indicated a partial mediation of emotional coping in the impact of resilience on the symptoms of depression of unemployed individuals. Specifically, significant relations were observed in equation 2, \(F(6,295) = 21.99, p < .01, R^2 = .31\), between dispositional resilience and emotional coping, \(b = -.65, t(291) = -11.16, p < .01\), and in equation 1, \(F(6,283) = 8.03, p < .01, R^2 = .15\),

### Table 1

| Variables        | M   | SD  | α    | t Test Gender | t Test Women | t Test Men | M | M | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------------------|-----|-----|------|--------------|--------------|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Self-esteem    | 3.37| 0.48| .756 | -.431        | 3.35         | 3.38       |    |    |    |    |    |    |    |    |    |    |    |    |
| 2 Optimism       | 3.12| 0.50| .535 | -.375        | 3.11         | 3.13       | .576**|    |    |    |    |    |    |    |    |    |    |    |    |
| 3 Perceived control | 3.21| 0.54| .732 | .012         | 3.23         | 3.19       | .618**| .599**|    |    |    |    |    |    |    |    |    |    |    |
| 4 Resilience     | 0.00| 0.85| -.174| .010         | 0.00         | .060       | .862**| .838**| .853**|    |    |    |    |    |    |    |    |    |    |
| 5 Detachment Coping | 2.49| 0.40| .776 | 1.99         | 1.99         | 1.96       | -.559**| -.332**| -.512**| .550**| .055|    |    |    |    |    |    |    |    |
| 6 Emotional Coping | 2.71| 0.73| .679 | 1.150        | 1.150        | 1.26       | -.161**| -.091| -.226**| -.187**| .236**| .313**|    |    |    |    |    |    |    |
| 7 Avoidance Coping | 3.14| 0.45| .803 | -.2132*      | 3.19         | 3.31       | .177**| .106| .114*| .153**| .178**| -.201**| -.011| .184**|    |    |    |    |
| 9 Social Dysfunction | 3.25| 0.49| .803 | -.2132*      | 3.19         | 3.31       | .177**| .106| .114*| .153**| .178**| -.201**| -.011| .184**|    |    |    |    |
| 10 Depression    | 3.77| 0.49| .803 | -.2132*      | 3.19         | 3.31       | .177**| .106| .114*| .153**| .178**| -.201**| -.011| .184**|    |    |    |    |
| 11 Age           | 30.85| 9.43| -.092| .009         | .051         | .056       | .041| .098| .038| .075| -.185**| -.028|    |    |    |    |    |    |    |
| 12 Length of Unemployment | 0.97| 1.58| -.1002| 3.001*       | 1.17         | 0.79       | -.138*| -.140*| -.124*| -.157**| -.002| .096**| -.076| .011| -.156**| -.039| .250**|

\*p < .01; \*p < .05.
between resilience and depression, \( b = .45, t(289) = 6.79, p < .01 \), which in equation 3, \( F(8,281) = 10.65, p < .01, R^2 = .23 \), decreased its absolute value, while the association between emotional coping and health is still significant, \( b = -.29, t(289) = -4.34, p < .01 \). Sobel test (Preacher y Hayes, 2004) was \( t = 4.04, p < .001 \), which indicates a significant indirect partial effect of dispositional resilience on depression through emotional coping. Another interesting result was found in the interaction between emotional coping and resilience in their effect on depression in equation 3, \( b = .13, t(289) = 2.34, p < .05 \). Calculating the simple slopes for this interaction (Preacher et al., 2006) the two predictors were dichotomized based on the medium score for each one ± 1 SD, this procedure was followed for the calculation and graphic representations of all the simple slopes in this study. It was observed in this case that individuals who scored high in resilience (more than 1 SD above the medium score) did not show significantly more depression when they used emotional coping \( (b = -.16, t = 1.65, p > .05) \). Nevertheless, in the case of individuals with low resilience scores (more than 1 SD below the medium) there was more depression when they used emotional coping \( (b = -.42, t = 5.62, p < .01) \). This relation is illustrated in figure 1.

For avoidance coping, in equation 2, \( F(6,295) = 3.84, p < .01, R^2 = .07 \), a significant relationship was found with gender, women used more this type of coping than men, \( b = -.17, t(291) = -2.02, p < .05 \), and at the same time this type of coping was negatively associated with resilience, \( b = -.25, t(291) = -3.63, p < .01 \), and a significant interaction was found between length of unemployment and resilience in their impact on avoidance coping, \( b = .15, t(291) = 2.55, p < .05 \). The simple slopes for this interaction (Preacher et al., 2006) showed that for people with more resilience (more than 1 SD above the medium) there was no relationship between avoidance coping and length of unemployment \( (b = .05, t = 0.52, p > .05) \). On the other hand, for individuals with low scores in resilience (more than 1 SD below the medium) there was a significant and negative relationship between length of unemployment and avoidance coping \( (b = -.25, t = -3.36, p < .01) \). The relation is illustrated in figure 3.

For detachment coping, in equation 2, \( F(6,295) = 2.49, p < .05, R^2 = .05 \), it can be observed that people more resilient also showed more this kind of coping style \( (b = .17, t(291) = 2.42, p < .05) \) and a significant interaction was present between the length of unemployment and resilience in their impact on this type of coping, \( b = .14, t(291) = 2.41, p < .05 \). The simple slopes for this interaction (Preacher et al., 2006), revealed that individuals with more resilience (more than 1 SD above the medium) showed higher detachment for longer periods of unemployment \( (b = .19, t = 1.99, p < .05) \). However, in the case of individuals with low resilience scores (more than 1 SD below the medium) even though the slope is negative, there is no significant relationship between length of unemployment and detachment coping \( (b = -.09, t = 1.24, p > .05) \). This relation is illustrated in figure 2.

![Figure 1](image1.png)

**Figure 1.** Interaction between resilience and emotional coping in their effect on depression.

![Figure 2](image2.png)

**Figure 2.** Interaction between resilience and length of unemployment in their effect on detachment coping.

![Figure 3](image3.png)

**Figure 3.** Interaction between resilience and length of unemployment in their effect on avoidance coping.
In the prediction of social dysfunction, it was observed in equation 1, $F(6,285) = 5.18, p < .01, R^2 = .10$, that younger people described themselves as more socially adjusted, $b = -.22, t(291) = -3.71, p < .01$, and this relation was held after controlling for all the other variables in equation 3. On the other hand, more resilient individuals also had a better social functioning, $b = .15, t(291) = 2.13, p < .05$, and a significant interaction was found between length of unemployment and resilience in their impact on health, $b = .13, t(291) = 2.11, p < .05$, as was observed in equation 1. The simple slopes of the interaction between resilience and length of unemployment (Preacher et al., 2006) showed that people with higher resilience (more than 1 SD above the medium) had a better social functioning regardless of their length of unemployment ($b = .05, t = 0.56, p > .05$). On the other side, people with lower resilience (more than 1 SD below the medium) had a worse social functioning ($b = -.20, t = -2.43, p < .05$) when the length of unemployment was longer. The relation is illustrated in figure 4.

![Figure 4. Interaction between resilience and duration of unemployment in their effect on social dysfunction.](image)

Results suggested a possible mediating role of emotional coping in the impact resilience had on social dysfunction of the unemployed participants. Specifically, significant relationships were observed in equation 2 between resilience and emotional coping, $b = -.65, t(291) = -11.16, p < .01$, and between resilience and social dysfunction, $b = .15, t(291) = 2.13, p < .05$, in equation 1, which became non-significant when the other factors were controlled for, $b = .03, t(291) = 0.41, p > .05$. In equation 3, $F(8,283) = 4.82, p < .01, R^2 = .12$, the relationship between emotional coping and social dysfunction remained marginal, $b = -.13, t(291) = -1.77, p = .08$. Considering this possibility, the Sobel test was conducted, which was $t = 1.75, p = .08$, suggesting not enough evidence of mediation.

On the other hand, there were signs of the mediating role of detachment coping in the impact resilience had on social dysfunction of the sample. A path of significant relationships was present between resilience and detachment coping in equation 2, $b = .17, t(291) = 2.42, p < .05$, and between resilience and social dysfunction in equation 1, $b = .15, t(291) = 2.13, p < .05$, which turned non-significant, $b = .11, t(291) = 1.55, p > .05$, while the relationship between detachment coping and social dysfunction stayed the same, $b = -.14, t(291) = 2.38, p < .05$, in equation 3. Even more interesting is the fact that there was an interaction between length of unemployment and resilience in their effect on detachment coping in equation 2, $b = .14, t(291) = 2.41, p < .05$, preceded by an interaction between length of unemployment and resilience in their effect on social dysfunction in equation 1, $b = .13, t(291) = 2.11, p < .05$, which turned non-significant, $b = .10, t(291) = 1.65, p > .05$, while the relationship between detachment coping and social dysfunction remained the same in equation 3, $b = .14, t(291) = 2.38, p < .05$. These results indicated a moderating role of resilience in the relationship between length of unemployment and social dysfunction, which at the same time was mediated by detachment coping, in other words, a case of mediated moderation (Muller et al., 2005).

Moreover, there were signs of the mediating role that rational coping could play in the impact resilience had on social dysfunction. A path of significant relationships was observed in equation 2, $F(6,295) = 4.35, p < .01, R^2 = .08$, between resilience and rational coping, $b = .31, t(291) = 4.63, p < .01$, and between resilience and social dysfunction in equation 1, $b = -.15, t(291) = 2.13, p < .05$, which turned non-significant, $b = .06, t(291) = 0.87, p > .05$, in equation 3, $F(8,283) = 5.84, p < .01, R^2 = .14$, while the relationship between rational coping and social dysfunction stayed significant, $b = -.20, t(291) = 3.46, p < .01$. However, the interaction between length of unemployment and resilience in their effect on social dysfunction was still significant even after controlling for rational coping, $b = .14, t(291) = 2.43, p < .05$. The Sobel test was $t = 1.07, p > .05$.

**Discussion**

The aim of the present study was to examine the possibility of mediated moderation and moderated mediation effects in the relationship between length of unemployment as a stressful event and health indexes in Venezuelan unemployed individuals, assuming resilience as a moderator and coping styles as mediators of the process. Among the four coping styles explored, emotional coping works as mediator in the relationship between resilience and individuals' health. Specifically, participants with lower resilience, that is individuals who evaluate themselves more negatively, who are less optimistic, and who perceive having less control over the environment, adopt more emotional coping and react with more negative affectivity than those higher in resilience, resulting all this in more depressive symptoms.
On the other hand, an interaction between dispositional resilience and emotional coping in their effect on depression was also found, which means that people who evaluate themselves positively, are optimistic and keep a sense of personal control over situations, show less depressive symptoms, even when dealing with stress using more emotional coping, compared with those lower in resilience. This result can be seen as counterintuitive, due to the fact that positive and negative emotions are occurring at the same time, however Folkman (2008) and Folkman and Moskowitz (2000) explain that it is possible and also necessary for positive emotions to be experimented during stressful events, even more if these are for longer periods of time and generate negative affective responses. Possibly, the experience of positive affect during coping with stressful events could interrupt the process of rumination, typical of negative emotional coping, which has been related to more mental deterioration in other studies (Brosschot, Pieper, & Thayer, 2005; Herrera & Guarino, 2008).

At the same time, it was also found that under longer periods of unemployment individuals with higher resilience use more detachment coping, while people with lower resilience use less avoidance coping in similar circumstances. These results illustrate how resilient people who experience stressful situation for long time adopt a useful mechanism to protect themselves from the situation, which means taking emotional distance from the event, in order to experience less negative emotions in a situation that can be uncontrollable. On the contrary, people with lower resilience use more avoidance coping in shorter periods of unemployment, which can put in risk their re-employment opportunities, but the use of this resource is less frequent in longer periods of unemployment, which means that they stop escaping as time goes by, a response that can be harmful for mental health during unemployment (Kinicki & Latack, 1990).

Overall, resilience acted as a protective factor of the social functioning for longer periods of unemployment. Individuals high in resilience keep making important decisions in their lives and feel satisfied with themselves and with what they do regardless of how long they have been unemployed for, while the social functioning of people low in resilience can be affected by longer periods of unemployment. Even more, this relationship is mediated by detachment coping, which means that individuals high in resilience use detachment coping in periods of longer unemployment, which helps them to function cognitively well and feel satisfy with themselves, contrary to those individuals low in resilience. This is an example of mediated moderation according to Muller et al. (2005).

In the same way, rational coping mediated the relationship between resilience and social functioning. Individuals who evaluate themselves positively, are more optimistic and have higher perceived control of their circumstances use more coping strategies oriented to the problem, which is associated to a better social adjustment under the experience of unemployment. In synthesis, a higher resilience seems to activate more rational ways of coping with more clear perspective of reality, protecting unemployed individuals from impairment of their social functioning, keeping them more active, with better decision making resources and in general with more satisfaction, even during their difficult circumstance. Similar results regarding the protective effect of resilience and adaptive ways of coping on the mental health of unemployed individuals were reported by Kinicki and Latack (1990) with American and Lai and Wong (1998) with Chinese samples. In general, similar results were reported by other studies with different populations (Beasley, Thompson, & Davidson, 2003; Campbell-Sills, Cohan & Stein, 2006).

The relevance of the present study consists not only in confirming previous results regarding the impact of resilience and certain forms of coping on individuals’ health in stressful circumstances, but also for analyzing the interactions between those variables in a model of mediated moderation, which assumes the interaction between stressful events and individual differences acting as antecedents in the adoption of particular ways of coping, which results in the maintenance or deterioration of health during the experience of stress.

References


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