



Psychological Demands and Health: An Examination of the Role of Core Self-evaluations in the Stress-Coping Process

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Abstract This study examined the direct and interactive effects of core self-evaluations (CSEs), psychological demands (i.e., quantitative and emotional demands) and coping strategies on mental and physical health in a sample of Argentinian managers. A total of 112 managers completed an online survey on CSEs, psychological demands, coping strategies, mental health, and physical health. First, the results of the hierarchical regression analyses revealed that both quantitative and emotional demands were significant predictors of individuals' mental and physical health. Second, CSEs were found to significantly explain individuals' mental health but not their physical health. Third, the findings showed that CSEs moderated the relationship between emotional demands and physical health, suggesting that the negative effects of emotional demands on physical health are greater for those individuals with less positive CSEs. Fourth, the results demonstrated that CSEs moderated the relationship between problem-solving coping and physical health, which suggests that this strategy is more effective when individuals have more positive CSEs. Finally, practical implications, limitations and future lines of research are discussed in this article.

Keywords Core self-evaluations · Psychological demands · Coping · Physical health · Mental health · Managers

Introduction

The mechanisms through which individuals experience strain in the workplace have always attracted much of the managerial and scholarly interest, as they may not only affect organizational effectiveness (e.g., performance, insurance costs, absenteeism; see Harrison, Newman, & Roth, 2006) but also individuals' mental and physical states (e.g., exhaustion, physical symptoms; see Pindek, Arvan, & Spector, 2019). However, only recently has organizational psychology research begun to explore the reasons why some employees experience more positive states than others when exposed to similar working conditions (Kammeyer-Mueller, Judge, & Scott, 2009; Rey & Extremera, 2015). An exploration, then, of the mechanisms that help individuals cope with job stressors and experience positive mental and physical states is vital to advancing scholarly understanding of organizational phenomena.

This paper responds to this call to further explore the processes underlying the stressor-health relationship and examines the direct and interactive effects of CSEs, psychological demands and coping strategies on individuals' mental and physical health. This study contributes to the stress literature by shedding light on the mechanisms through which employees cope with psychological demands and experience more positive mental and physical health, extending, as a result, the nomological network of the CSEs construct. Moreover, since this study provides empirical evidence on the role of CSEs in the stress-coping process, it also extends the empirical validity of the

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construct, as most previous studies have mainly focused on its motivational effects on positive affective states such as job satisfaction. In doing so, this study also sheds light on the role of CSEs in the effectiveness of problem-solving coping (the differential effectiveness hypothesis by Kammeyer-Mueller et al., 2009) which has been scarcely explored to date.

In addition, this study shows the important moderating impact that CSEs can have on the stressor–strain relationship (the differential reactivity hypothesis by Kammeyer-Mueller et al., 2009), specifically on the relationship between psychological demands and health, whereas most previous studies have focused on CSEs as the main effect predictor of other important outcomes, such as performance (Harris, Harvey, & Kacmar, 2009). Moreover, by examining the interactive effects of CSEs we extend the evidence of this construct’s incremental validity, as the nature of the interplay between CSEs, job stressors, and coping remains largely unclear (Chang, Ferris, Johnson, Rosen, & Tan, 2012; Hentrich et al., 2017).

Finally, since the findings reported in this study involve data collected in a Latin-American sample, where the effects of CSEs remain limitedly explored (for an exception, see Pujol-Cols, 2018; Pujol-Cols & Dabos, 2019), it also provides evidence of the cross-cultural validity of the CSE construct. We selected a group of managers as the occupational context of this study as past research has suggested that managers are a highly vulnerable group, prone to experiencing occupational distress and deterioration of their mental and physical health (Pujol-Cols, 2018, 2019; Pujol-Cols & Foutel, 2019). Thus, understanding the mechanisms that help managers cope with job stressors and experience positive states remains a vital, but often under-researched, concern, as the latter is not only fundamental to organizational effectiveness but also to promoting a healthy work life for managers (Braithwaite, Westbrook, & Mallock, 2007). Moreover, by selecting a sample of individuals who are likely to face high job stressors to test our hypotheses, we go one step further than previous studies, as they have mostly relied on samples of employees who face rather low job demands (see Van Doorn & Hülshager, 2015; Hentrich et al., 2017).

Literature Review

Drawing on the principles of the Conservation of Resources (COR) theory (Hobfoll, 1989), the presence of high job stressors, such as excessive psychological demands, may deplete valued resources (see the idea of object, condition, personal and energy resources in Grandey and Cropanzano 1999) and compromise the individual’s ability to cope with future stressful events, which is likely to lead to the

experience of strain and, therefore, to lower levels of mental and physical health. From this perspective, “individuals are most likely to experience stress when they perceive threats of resource loss, experience actual resource losses, perceive a work situation where demands exceed resources, or when invested resources do not result in the anticipated returns” (Harris et al., 2009, p. 154). In this light, numerous studies have consistently reported that perceptions of higher job stressors are associated with several negative psychological (e.g., job dissatisfaction, frustration), physical (e.g., headaches, cardiovascular diseases), and behavioral responses (e.g., substance abuse, isolation) that are relevant to predict individuals’ well-being and health (Pindek, Arvan, & Spector, 2019). Based on this evidence, in this study, we propose that:

Hypothesis 1 (H-1) Increasing quantitative and emotional demands will be negatively related to physical and mental health.

Beyond the effects of situational forces, a vast body of research has also demonstrated the existence of individual differences in employees’ responses to job stressors (Pujol-Cols & Dabos, 2019). In this regard, several studies and meta-analyses have consistently reported that a relatively new, personal resource construct, named core self-evaluations (henceforth CSEs), which consists of a higher-order personality trait that reflects individuals’ beliefs about their worthiness, competence, capabilities and control (Wu & Griffin, 2012), play a vital role in explaining individuals’ well-being (see Chang et al., 2012 for a review). Indeed, and though most research on CSEs have focused on job satisfaction (e.g., Wu & Griffin, 2012), job performance (e.g., Judge & Bono, 2001), and life satisfaction (e.g., Gurbuz, Costigan, & Teke, 2018), they have also been found to display a significant relationship with mental health and, to a comparatively lesser extent, physical health (e.g., McKee-Ryan, Song, Wanberg, & Kinicki, 2005; Virga & Rusu, 2018). Individuals with more positive CSEs, it follows, are more likely to report less mental and physical complaints as they are less likely to perceive their jobs as stressful and to experience strain than those with more negative CSEs (Hsieh & Huang, 2017; Kammeyer-Mueller et al., 2009; Rey & Extremera, 2015). Thus, we hypothesize that:

Hypothesis 2 (H-2) Individuals with more positive CSEs will report better levels of physical and mental health.

In addition to the positive, direct effects of CSEs, in this paper, we argue that this person-related resource may also exert two additional, indirect effects on the relationship between psychological demands and individuals’ health. First, and drawing on the principles of the COR theory, CSEs may buffer the demands–health relationship as

individuals with more positive CSEs are most likely to tolerate the presence of job stressors (Harris et al., 2009; Debusscher, Hofmans, & De Fruyt, 2017) and, therefore, “stress reactions are likely to be more profound when individuals believe they do not have sufficient personal resources to cope with threats” (i.e., differential reactivity hypothesis; Kammeyer-Mueller et al., 2009, p. 179). Specifically, Harris et al., (2009)’s study showed that CSEs buffer the negative effects of social stressors on job satisfaction and turnover intention. Similarly, Van Doorn and Hülshager (2015) demonstrated that CSEs mitigate the effects of job demands on individuals’ stress reactions. More recently, Hentrich, Zimber, Sosnowsky-Waschek, Gregersen, and Petermann (2017) showed that high CSEs significantly weaken the effects of high job demands on depression among managers. Based on this evidence, this paper argues that individuals with more positive CSEs should endure relatively higher levels of stress before experiencing negative mental and physical symptoms (i.e., CSEs may prevent individuals from reaching the point of feeling overwhelmed by psychological demands) as they seem to have higher levels of coping resources. Consequently, it is likely that high CSEs buffer (i.e., make less negative) the relationship between psychological demands, and mental and physical health, whereas low CSEs should amplify (i.e., make more positive) this relationship.

There are several reasons why CSEs may moderate the relationship between psychological demands and health. First, individuals with more positive CSEs tend to have higher self-esteem, so their sense of self-worth may serve as a buffer against threats (Ganster & Schaubroeck, 1995). Second, these individuals are highly self-efficacious, which means they are confident in their abilities to deal with the challenging aspects of their jobs. Third, these individuals are more likely to regard negative events involving psychological demands as isolated, rather than recurrent, episodes (Luthans & Avolio, 2003). Fourth, since these individuals tend to be more optimistic, their self-confidence could also promote or strengthen their beliefs about their capabilities for mastering future obstacles and difficulties (Hobfoll, 2001; Riolli & Savicki, 2003). Fifth, since individuals with more positive CSEs tend to have an internal locus of control, they also tend to believe that their success is directly related to their own merits, and that job stressors can be overcome (and even eliminated) by their own actions (May, Schwoerer, Reed, & Potter, 1997). Finally, since these individuals display lower levels of neuroticism, they are also less likely to focus on the negative aspects of their work and to react more calmly to psychological demands (Parkes, 1990).

Drawing on the evidence presented above, we propose that:

Hypothesis 3 (H-3) CSEs will moderate the relationship between psychological demands and physical and mental health, so that the relationship between psychological demands and physical and mental health is more negative for those with low or negative CSEs and less negative for those with high or positive CSEs.

In this sense, this paper proposes that individuals with higher CSEs will have a greater capacity to cope with psychological demands than those with lower CSEs. In this light, coping refers to individuals’ psychological and behavioral strategies to overcome, minimize and/or tolerate external and internal stressors (Lazarus & Folkman, 1984). It consists of a goal-directed behavior that involves a degree of personal choice in the selection of the desired end states for coping, selection of responses and the degree to which one engages effort toward the selected responses (Kammeyer-Mueller et al., 2009). Overall, the literature on stress has suggested three core coping strategies: (a) problem-solving coping, which involves making efforts to reduce the level of stressors by determining effective strategies, setting specific behavioral outcomes and displaying appropriate behavior to solving problems (e.g., making a plan to solve a difficult situation); (b) emotion-focused coping, which involves making efforts to reduce the level of strain without affecting the actual level of stressors (e.g., emotional venting); and (c) avoidance coping, which involves detaching oneself either psychologically or physically from the object, people or situation that trigger the stress process (e.g., substance abuse). While active coping aims to change the nature of the stressor itself, passive coping attempts to prevent individuals from directly addressing stressful events (Thiruchelvi & Supriya, 2012).

Although the effectiveness of coping strategies may depend on certain environmental (or contextual) aspects of the stressful encounter (Ben-Zur, 2017), most research on stress seems to support the idea that the choice of active coping strategies, such as problem solving, tends to reduce strain levels in the long term (Li, Guan, Chang, & Zhang, 2014; Wang, Kong, & Chair, 2011), whereas passive coping strategies, such as avoidance or emotion-focused coping, may lead to considerably higher levels of strain in the long term (Gibbons, Dempster, & Moutray, 2011). Based on the evidence reported in the previous lines, we propose that:

Hypothesis 4 (H-4) Problem-solving coping will be positively related to mental and physical health, whereas emotion-focused and avoidance coping will be negatively related to mental and physical health.

Finally, we argue that CSEs may also mitigate the demands-health relationship by affecting the effectiveness

of coping strategies (see Pejuskovic, Lecic-Tosevski, Priebe, & Toskovic, 2011). As argued by Ben-Zur (2017), traits such as self-esteem or locus of control “can assist in choosing and implementing problem-focused strategies, thus helping to manage or remove the stressor” (p. 3). Therefore, individuals who have high CSEs are more likely to benefit more from coping (i.e., high CSEs make coping more effective in reducing strain), which is known as the differential effectiveness hypothesis (Kammeyer-Mueller et al., 2009). In this light, based on the model of individual differences and stress reactions (see Bolger & Zuckerman, 1995), Kammeyer-Mueller et al. (2009) proposed that individuals with more positive CSEs are more able to use coping strategies effectively as they are more confident in their capacity (and ability) to cope with life problems and more effective at setting goals and remaining motivated to pursue them. In this regard, Zhang, Wu, Miao, Yan, and Peng (2014) have recently demonstrated that individuals with more positive self-regard tend to make greater efforts to accomplish work goals, which makes them more likely to succeed and be more effective when coping with the challenges at work. All in all, this evidence suggests that CSEs may moderate the relationship between problem-solving coping and health (i.e., CSEs may amplify the beneficial effects of problem solving). Thus, based on the rationale discussed above, we propose that:

Hypothesis 5 (H-5) CSEs will moderate the relationship between problem-solving coping and mental and physical health, so that the relationship between problem-solving coping and health is stronger (more positive) for those with high CSEs.

Method

Participants and Procedure

The data used in this study were collected as part of a larger project on psychosocial risks and well-being in highly demanding occupations in Argentina (see Pujol-Cols, 2018, 2019; Pujol-Cols & Foutel, 2019). The participants held managerial positions in medium-sized companies from different industries. At the time of the data collection, the participants were enrolled in a Master of Business Administration (MBA) program. Invitations were sent by e-mail through the coordinators of the MBA program, along with a description of the purposes of the study. Managers interested in participating in the study were asked to sign a consent form and fill in a secure and anonymous online survey. A total of 112 managers completed the survey. The age of respondents ranged from 22 to 63, with a mean of 36.13 and a standard deviation of

8.48. Sixty-two percent of the participants were male and 73.21% worked over 40 h a week.

Variables and Instruments

Core self-evaluations Pujol-Cols and Dabos (2019)'s Spanish version of the 12-item Core Self-Evaluations Scale (CSES; Judge, Erez, Bono, & Thoresen, 2003) was used to measure each respondent's CSEs (e.g., “I am confident I get the success I deserve in life”). Responses to each item were anchored in a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistency for the CSES in this study was $\alpha = 0.82$.

Psychological demands Quantitative and emotional demands were assessed with three items each, taken from the psychological demand sub-scale contained in the Spanish Copsoq-Istas 21 (Moncada & Llorens, 2004). While quantitative demands involved items that reflected the volume and intensity of the workload (e.g., “my workload is irregular, which causes accumulated work and, as a consequence, work overload”), emotional demands involved items that reflected participants' feelings or emotions toward and derived from their work (e.g., “my job is emotionally exhausting”). Each item of this scale ranged from 0 (*never/to a very small extent*) to 4 (*always/to a very large extent*). The internal consistency for the quantitative and emotional demands scale was $\alpha = 0.71$ and $\alpha = 0.76$, respectively.

Coping strategies Following Kammeyer-Mueller et al. (2009), avoidance, emotion-focused and problem-solving coping strategies were measured with items taken from a revised version of the Ways of Coping Checklist (Lazarus & Folkman, 1984; see Edwards & Baglioni, 1993). The avoidance coping sub-scale consisted of twelve items ($\alpha = 0.71$) and asked respondents about the extent to which they sought for distractions or avoided thinking about problems (e.g., “When facing a problem or a difficult situation, I try to make myself feel better by eating, drinking, smoking, using drugs or medication, and so forth”). The emotion-focused coping sub-scale was *ad-hoc* and included seven items ($\alpha = 0.80$) regarding the extent to which participants discussed emotions with other people, vented emotions, or tried to reflect about their problems in different ways (e.g., “When facing a problem or a difficult situation, I get easily irritated”). The problem-solving coping sub-scale consisted of eleven items ($\alpha = 0.90$) and asked respondents about the ways in which they actively tried to solve problems associated with strain (e.g., “When facing a problem or a difficult situation I make an action plan and follow it”). For the three sub-scales, responses were anchored in a 5-point Likert scale ranging from 1 (*never*) to 4 (*very often*).

Mental health The mental health of respondents was assessed using an adaptation of the General Health Questionnaire (GHQ; Goldberg, 1978), which consisted of 11 items regarding, for instance, how nervous and exhausted they felt (e.g., “during the past 30 days, how often have you felt mentally exhausted?”, reverse scored), with a 6-point response scale ranging from 1 (*never*) to 6 (*always*). The internal consistency for this scale in this study was $\alpha = 0.93$.

Physical health Respondents’ physical health was measured with the 18-item Physical Symptom Inventory (PSI; Spector & Jex, 1998). Participants were asked to indicate whether they had had any of the eighteen symptoms included in this scale (e.g., dizziness and chest pain) within the previous 30 days. Responses for each item were anchored in a 3-point Likert scale ranging from 0 (*yes, and I visited a doctor*) to 2 (*not at all*). The presence of fewer symptoms was considered an indicator of better physical health. The internal consistency for this scale was $\alpha = 0.81$.

The items of each of the aforementioned scales were averaged to create an overall mean for each variable so that high values represent high levels of the constructs.

Control variables Following recommendations by Bernerth and Aguinis (2016), this study included three control variables, as there is evidence that these variables may covary with either the predictors or the dependent variables. *Age* was included as a control variable as previous studies have revealed that older employees tend to have more experience and are therefore more likely to feel in control of their jobs. Similarly, *years of experience in the current position* may influence participants’ perceptions of quantitative and emotional demands, which may mean that employees with more experience may be more able to master the difficult and challenging aspects of their jobs. Finally, *gender* may affect the dependent variables as previous studies have shown that women tend to experience more work-family conflict than men, which is a core dimension of job satisfaction and, therefore, well-being.

Data Analysis

Since all of the variables of this study were measured at the same time, which may cause common method bias, Harman’s one factor test was conducted as a preliminary step (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). A hierarchical regression analysis was then carried out to test the hypotheses of this study. Each independent variable was mean-centered and interaction terms were then calculated between CSEs and psychological demands (differential reactivity hypothesis, H-3) and between CSEs and problem-solving coping (differential effectiveness hypothesis, H-5). Following Aiken and West (1991), predictors were entered into the regression in three steps, as follows:

Control variables were entered in the first block, the direct effects of CSEs, psychological demands and coping strategies were entered in the second block, and the interactive effects of CSEs and psychological demands, and of CSEs and problem-solving coping were entered in the third block. To evaluate whether the significant interactions provided support to the study hypotheses, all of them were further tested through simple slope analyses by using the software designed by Preacher, Curran, and Bauer (2006).

Results

Common Method Bias

Following Podsakoff et al. (2003), since the data for CSEs, psychological demands, coping strategies, mental health, physical health and other control variables for this study were measured in the same survey, there is a potential for common method bias. This issue was addressed by conducting Harman’s one factor test, in which all the observed variables in the study were simultaneously entered into an exploratory factor analysis. Results revealed that the one single factor accounted only for 15.34% of the variance, suggesting that the common-method bias did not affect our data or our results.

Descriptive Analysis

Means, standard deviations, correlations and levels of reliability for each of the variables included in this study are reported in Table 1. As the table shows, moderate to high levels of quantitative and emotional demands were observed in this sample of managers. As expected, the levels of certain personal resources that are fundamental for coping with those job demands, such as CSEs, were also found to be moderate to high in the sample. Moreover, increasing quantitative and emotional demands were found to be related with lower levels of mental and physical health, while the opposite relationship was found in the case of CSEs.

Multivariate Analysis

A hierarchical regression analysis was conducted to test the hypotheses of this study (Aiken and West 1991). The predictors were entered in three steps as follows: control variables were entered in the first block (see the top portion of Tables 2, 3), the direct effect of CSEs, psychological demands and coping strategies were entered in the second block (see the middle portion of Tables 2, 3), and the interactive effects of CSEs and psychological demands and

Table 1 Means, standard deviations and correlations among variables

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. Age	36.13	8.48	–										
2. Male	0.63	0.49	0.08	–									
3. Experience in current position	4.78	4.74	0.60	0.09	–								
4. Quantitative demands	2.00	0.85	– 0.08	– 0.22	– 0.05	0.71							
5. Emotional demands	1.96	1.05	– 0.01	0.07	– 0.08	0.46	0.76						
6. CSEs	3.76	0.54	0.12	0.11	0.00	– 0.10	– 0.22	0.82					
7. Avoidance	1.56	0.32	– 0.05	– 0.16	0.02	– 0.06	0.04	– 0.45	0.71				
8. Emotion	1.37	0.38	– 0.15	– 0.06	– 0.05	0.14	0.14	– 0.39	0.39	0.80			
9. Problem-solving	2.85	0.58	0.18	0.06	0.11	– 0.02	0.08	0.26	– 0.13	– 0.29	0.90		
10. Mental health	3.94	0.92	0.16	0.14	0.14	– 0.35	– 0.53	0.46	– 0.14	– 0.32	0.16	0.93	
11. Physical health	1.76	0.22	0.07	0.25	0.06	– 0.42	– 0.41	0.22	– 0.27	– 0.31	0.05	0.62	0.81

M mean, *SD* standard deviation. Correlations above .16 are significant at the .10 level (two tailed). Correlations above .21 are significant at the .05 level (two tailed). Correlations above .24 are significant at the .01 level. Correlations above .29 are significant at the .001 level (two tailed). The internal consistency of each scale (Cronbach's Alpha coefficient) is reported on the principal diagonal in bold

Table 2 Mental health regressed on psychological demands, CSEs and coping strategies

Dependent variable: Mental health Independent variables	Step 1	Step 2	Step 3
Intercept	3.27*** (0.42)	3.55*** (0.34)	3.60*** (0.34)
<i>Control variables</i>			
Age	0.01 (0.01)	0.01 (0.01)	0.00 (0.01)
Male	0.24 (0.18)	0.24 (0.15)	0.32* (0.16)
Years of experience in the current position	0.01 (0.02)	0.01 (0.02)	0.02 (0.02)
<i>Main effects</i>			
Quantitative demands		– 0.06 (0.09)	– 0.06 (0.10)
Emotional demands		– 0.38*** (0.07)	– 0.40*** (0.08)
CSEs		0.54*** (0.15)	0.52** (0.15)
Avoidance coping		0.30 (0.25)	0.38 (0.26)
Emotion focused coping		– 0.31 (0.20)	– 0.38 ⁺ (0.21)
Problem solving coping		0.11 (0.12)	0.10 (0.12)
<i>Interactive effects</i>			
CSEs × Quantitative demands			– 0.08 (0.15)
CSEs × Emotional demands			0.24 (0.16)
CSEs × Problem solving coping			0.17 (0.20)
<i>R</i> ²	0.05	0.47***	0.49***
ΔR^2	0.42***		0.02

⁺*p* < .10, **p* < .05, ***p* < .01, ****p* < .001

of CSEs and problem-solving coping were entered in the third block (see the bottom portion of Tables 2 and 3).

H-1, H-2, and H-4 proposed a direct effect of CSEs, psychological demands (both quantitative and emotional) and coping strategies on mental and physical health. As Tables 2 and 3 show, CSEs predicted mental health but not physical health, indicating that those individuals with more positive CSEs tend to experience better mental health.

Although emotional demands were found to be significant predictors of both mental and physical health, quantitative demands only predicted physical health, once the remaining factors were simultaneously entered in the regressions. Thus, results indicated that individuals who feel exposed to higher emotional demands in their jobs tend to report lower levels of mental and physical health. Regarding the main effects of coping strategies, only emotion-focused coping

Table 3 Physical health regressed on psychological demands, CSEs and coping strategies

Dependent variable: Physical health Independent variables	Step 1	Step 2	Step 3
Intercept	1.64*** (0.10)	1.70*** (0.09)	1.72*** (0.09)
<i>Control variables</i>			
Age	0.00 (0.00)	0.00 (0.00)	− 0.00 (0.00)
Male	0.11* (0.04)	0.08* (0.04)	0.11** (0.04)
Years of experience in the current position	0.00 (0.01)	0.00 (0.00)	0.00 (0.00)
<i>Main effects</i>			
Quantitative demands		− 0.06* (0.02)	− 0.06* (0.02)
Emotional demands		− 0.06** (0.02)	− 0.07** (0.02)
CSEs		− 0.01 (0.04)	− 0.02 (0.04)
Avoidance coping		− 0.13* (0.06)	− 0.11 (0.06)
Emotion focused coping		− 0.09 ⁺ (0.05)	− 0.12* (0.05)
Problem solving coping		− 0.00 (0.03)	− 0.01 (0.03)
<i>Interactive effects</i>			
CSEs × Quantitative demands			− 0.04 (0.04)
CSEs × Emotional demands			0.08* (0.04)
CSEs × Problem solving coping			0.09 ⁺ (0.05)
R^2	0.06 ⁺	0.36***	0.41***
ΔR^2	0.30***		0.05*

⁺ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

was found to be a significant predictor of both mental and physical health, showing that those individuals who employ emotion-focused coping strategies more frequently tend to experience lower levels of mental and physical health.

H-3 proposed that those individuals with more positive CSEs would react more positively to psychological demands than those with lower CSEs. In other words, it was hypothesized that the negative effects of both quantitative and emotional demands on mental and physical health would be moderated by the CSEs (differential reactivity hypothesis). The results of the hierarchical regression analysis revealed that CSEs moderated the effects of emotional demands on physical health. No moderating effects were found, however, regarding the impact of psychological demands on mental health. To evaluate whether the significant interaction provided support to H-3, a simple slope test was conducted by using the software designed by Preacher et al. (2006). Results of the simple slope test revealed that only the low CSEs bond was significant, $t(99) = -3.55$, $p < 0.001$, whereas the high CSEs bond was not, $t(99) = -0.80$, $p = 0.43$, see Fig. 1. These findings indicate that the negative effects of emotional demands on physical health are greater for those individuals with less positive CSEs.

Finally, H-5 proposed that the effectiveness of problem solving would be different for those individuals with more positive self-regard. In other words, it was hypothesized

that the positive effects of problem solving would be higher for those participants with higher CSEs (differential effectiveness hypothesis). As shown in the bottom portion of Tables 2 and 3, the effects of problem solving on physical health were indeed found to be moderated by CSEs, which suggests that this strategy may be more effective when individuals have a more positive self-concept. To evaluate whether the significant interaction provided support to H-5, simple slope tests were conducted by using the software designed by Preacher et al. (2006). Results revealed that only the high CSEs bond was significant, $t(99) = 2.5$, $p = 0.01$, whereas the low CSEs bond was not, $t(99) = 0.78$, $p = 0.44$, see Fig. 2. These findings suggest that problem-solving strategies may be more effective when individuals have higher CSEs.

Discussion

General Discussion

This study examined the direct and interactive effects of CSEs, psychological demands and coping strategies on the mental and physical health of a sample of Argentinian managers. First, the results of this study revealed that CSEs have a direct, positive and statistically significant effect on managers' mental health but not on their physical health, which suggests that those individuals with more positive

Fig. 1 Moderating effects of CSEs on the relationship between emotional demands and physical health

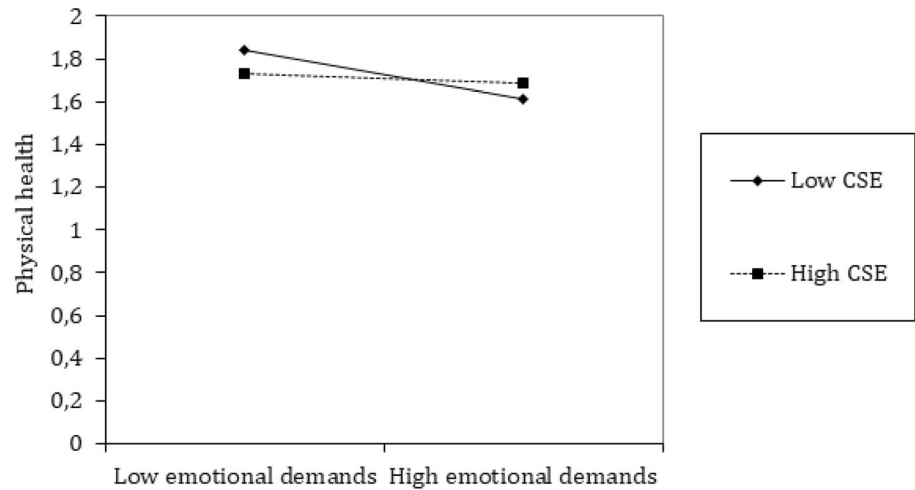
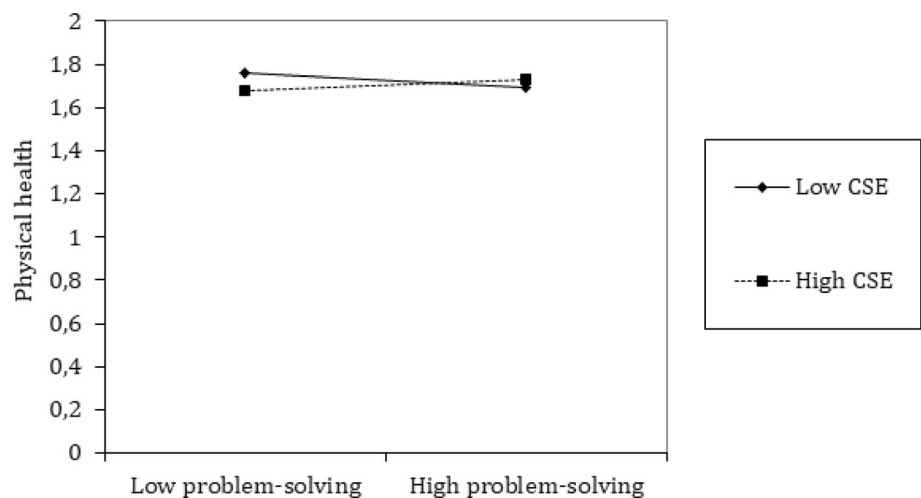


Fig. 2 Moderating effects of CSEs on the relationship between problem-solving and physical health



CSEs tend to experience better mental health. This finding is consistent with numerous studies that show that individuals who view themselves as worthy, capable and in control of situations are less likely to experience strain and more prone to experiencing positive states (Kammeyer-Mueller et al., 2009; Kristof-Brown, Zimmerman, & Johnson, 2005; Rey and Extremera, 2015). Moreover, this study advances our understanding of the nomological network of the CSEs construct by demonstrating that CSEs are significant predictors of physical health, which contributes to the existing literature that until now had mostly related CSEs to job satisfaction.

Second, as expected, psychological demands were found to be significant predictors of mental and physical health, which suggests that individuals who feel exposed to higher psychological demands in their jobs tend to report lower levels of mental and physical health. These results are consistent with previous studies conducted from a COR perspective (e.g., Harris et al., 2009), which claim that the presence of high job stressors, such as excessive

psychological demands, may force individuals to invest valuable resources (such as time, and cognitive and emotional energy), thus compromising their ability to cope with future stressful events. This, in turn, is likely to lead to the experience of strain and therefore to lower levels of mental and physical health.

Regarding the main effects of coping strategies, only emotion-focused coping was found to be a significant predictor of both physical and mental health. Specifically, the results of this study indicated that a frequent use of emotion-focused coping strategies may have detrimental effects on individuals' health. This finding is consistent with previous research proposing that emotion-focused coping tends to be associated with maladaptive outcomes and psychological distress (see Gibbons et al., 2011).

Since psychological demands are a core (and often inevitable) aspect of the job, this study also examined the extent to which the CSEs moderated the negative effects of quantitative and emotional demands on individuals' mental and physical health. More specifically, this study proposed

that those individuals with more positive CSEs would react to both types of psychological demands more positively than those with lower CSEs (i.e., differential reactivity hypothesis; Kammeyer-Mueller et al., 2009). The results revealed that CSEs indeed moderated the effects of emotional demands on physical health, although no moderating effects were found regarding the impact of quantitative demands. It appears that employees with more positive CSEs tend to have the personal resources (such as self-efficacy) that allow them to face the most emotionally challenging aspects of their jobs more effectively. This evidence is consistent with Kammeyer-Mueller et al., (2009)'s findings, which showed that more positive personality traits, such as emotional stability, seem to moderate the impact of job stressors on strain. These results are also in line with the findings in Harris et al. (2009), which indicated that CSEs seem to buffer the detrimental consequences of social stressors on job satisfaction, altruism and turnover intentions. In this regard, this study made an additional contribution to the literature by extending the nomological network of the CSEs construct and shedding light on the mechanisms through which individuals with more positive CSEs tend to experience better levels of health. It should be noted, however, that no moderating effects of CSEs were found regarding the impact of psychological demands on mental health. These results could be explained by the fact that the sample of our study may have been too small to detect these interactive effects (see Frese, 1999). Therefore, future studies should further examine the differential reactivity and the differential effectiveness hypotheses in larger samples with more statistical power.

Finally, this study also proposed that the effectiveness of problem-solving coping would be higher for those individuals with more positive self-regard (i.e., differential effectiveness hypothesis; Kammeyer-Mueller et al., 2009). The results demonstrated that the effects of problem solving on physical health were indeed moderated by CSEs, which suggests that this coping strategy is more effective when individuals have a more positive self-concept regarding their worthiness, competence and ability to control work situations. Although the interactive effects of CSEs on the effectiveness of coping strategies have been largely understudied, there are reasons to believe that individuals with more positive CSEs are more effective when using problem-solving strategies. Kammeyer-Mueller et al. (2009) provided a theoretical rationale for this hypothesis by arguing that employees with higher CSEs tend to be more confident in their capacity to cope with life problems and more effective at setting goals and remaining motivated to pursue their goals. In this regard, Zhang et al. (2014) recently demonstrated that individuals with more positive CSEs tend to be more committed and therefore

make greater efforts in accomplishing work goals. All in all, this evidence suggests that it is plausible that employees with higher CSEs are more likely to succeed and be more effective when taking an active approach (i.e., problem-solving coping) to the challenging aspects of the job. This study then provides empirical support to Kammeyer-Mueller et al. (2009)'s differential effectiveness hypothesis and sheds further light on the role of CSEs in the coping process.

Practical Implications

The findings of this study have a number of practical implications that should be considered. In this regard, the results indicated that (a) individuals with more positive CSEs may have the positive personal resources (e.g., self-efficacy) that allow them to face the emotional demands involved in their job in a more positive and effective way, and that (b) problem-solving coping strategies are more effective when employees have more positive CSEs, as they seem to be more confident, intrinsically motivated, dedicated, persistent and effective at pursuing work goals. Thus, this study demonstrated that the negative effects of emotional demands on health seem to be buffered (i.e., reduced) by CSEs, or in other words, that these effects are lower when individuals have higher CSEs. In this regard, it is important to emphasize and reflect upon the dangers involved in overloading these managers with work under the assumption that because they have more positive CSEs, and therefore the personal resources to successfully face job demands, they are more resilient to the stress of working long hours, among others. As discussed in Pujol-Cols and Lazzaro-Salazar (2018), this raises vital questions related to the ethical implications involved in relying on employees' positive personal resources for doing their job and in turning a blind eye on the strains caused by the work demands of, as in this case, managerial roles.

Indeed, the findings in this study suggest that an increase in the psychological demands imposed on managers may have detrimental consequences on their mental and physical health. Since task stressors are often inevitable, it is fundamental then that organizations provide their managers with the appropriate job resources (e.g., social support and rewards) that help them to cope with these job demands to reduce the negative effects on their well-being (consider the propositions of the demand-resource theory in Bakker & Demerouti, 2014; see executive counseling as a core aspect of the therapy culture of human resource development in Graf, 2009, 2012). Though practices such as executive coaching may be standard and common in some countries and organizations, our recommendation for its adoption is especially relevant to organizations in most Latin American countries, and in particular for Argentina,

where such an approach to human resource development is rare.

Last but not least, the results of this study revealed that problem-solving coping strategies are more effective when employees have more positive CSEs, as they seem to be more confident, intrinsically motivated, dedicated, persistent and effective at pursuing work goals. These findings are relevant for personnel selection and placement, particularly for those jobs that pose high cognitive and emotional demands on individuals such as managerial positions. As a consequence, one could then argue that such intrinsically demanding positions (i.e., those that require high levels of cognitive and emotional energy) should be filled out by individuals with higher CSEs. But would that mean that individuals with lower CSEs are not capable of fulfilling such demanding positions? We believe not, and in this scenario formal education plays a fundamental role in addressing the issue. Indeed, scholars in the field of management research have shown that formal education has a mediating role in the development of high CSEs (Judge & Hurst, 2008), which supports the assumption that potential managers can be trained to develop and strengthen their CSEs to help them face the cognitive and emotional demands of the job. In this regard, universities play a vital role in providing appropriate training in undergraduate programs to prepare students (i.e., potential managers) for the hardships of managerial positions by identifying and enhancing their positive qualities and helping students build the personal resources to be able to cope with the job demands. In this way, then, a combination of formal training in positive personal qualities in undergraduate programs and human resource measures in the organizations may play a vital role in helping (potential) managers to become successful professionals.

Limitations and Future Research Directions

In addition to the theoretical and empirical contributions that this study makes, some reflections need to be made in order to provide new avenues for future research. First, the data for this study were collected in a small sample of highly skilled professionals occupying highly demanding positions, which may raise concerns about the generalizability of the findings. Future studies should test the relationships proposed in this article in larger and more heterogeneous samples of employees, as this is particularly relevant for tracing significant interactive effects.

Second, since CSEs, psychological demands, coping strategies, and mental and physical health were measured at the same time, some could argue that the results of this study may have been affected by the common-method bias (Podsakoff et al., 2003). However, results from the Harman's one-factor test revealed that the common-method

bias did not affect the data or the results. In this light, we suggest that future studies should further develop this matter by either employing longitudinal designs or measuring the constructs at different points in time.

Last but not least, we strongly believe that a mixed and transdisciplinary approach to the study of the stressor–health relationship provides a rich opportunity for advancing our understanding of the mechanisms involved and their relationships in a more holistic and, thus, comprehensive way (see considerations in Rosenfield, 1992 and Mabry, Olster, Morgan, & Abrams, 2008). From this point of view then, future studies should complement data collection techniques to include both self-reported scales and, for instance, clinical diagnoses that support (or not) the perceptions of individuals.

Conclusions

This study examined the direct and interactive effects of CSEs, psychological demands and coping strategies on mental and physical health in a sample of Argentinian managers. This study contributed to the stress literature by shedding light on the mechanisms through which individuals cope with task stressors and experience more positive mental and physical states, thus extending the nomological network of the CSEs construct in relation to psychological demands, coping mechanisms and health. It also extended the empirical validity of the CSEs construct by providing evidence on the role of CSEs in the stress-coping process. In so doing, this study also shed light on the role of CSEs in the effectiveness of problem-solving coping (i.e., differential effectiveness hypothesis), revealing that this strategy is more effective when individuals have higher CSEs. Finally, this study showed that CSEs have a moderating effect on the stressor–strain relationship, specifically showing that the detrimental consequences of emotional demands on individuals' physical health are buffered by CSEs (i.e., they become less negative as CSEs are higher).

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Compliance with Ethical Standards

Conflict of interest The authors declare no potential conflicts of interest with respect to the research, authorship, and publication of this article.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964

Helsinki Declaration and its later amendments or comparable ethical standards. The datasets generated and/or analyzed during the current study are available upon request.

Informed Consent Informed consent was obtained from all participants included in the study.

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