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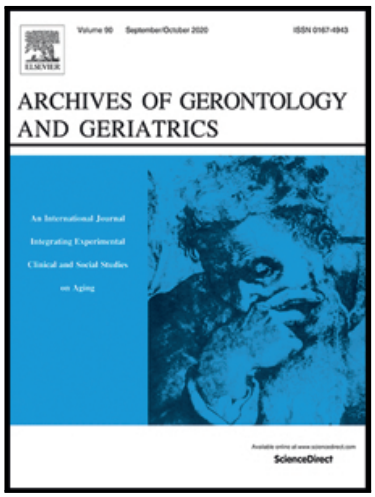

The Distinctive Role of Grounded Optimism and Resilience for predicting Burnout and Work Engagement: A study in Professional Caregivers of Older Adults

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Highlights.

1) The lack of perceived personal control was the main explanatory factor of burnout in professional caregivers of older adults.

2) Resilience and optimism, two closely related psychological constructs, showed a distinctive role for promoting work engagement in professional caregivers.

3) No moderations effects were found between the psychological resources (resilience and optimism) and the vulnerability factor (external control) for predicting work engagement and burnout, respectively.

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The Distinctive Role of Grounded Optimism and Resilience for predicting Burnout and Work Engagement: A study in Professional Caregivers of Older Adults.

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Abstract

Background: Resilience and optimism have been proposed as psychological resources which may help to cope better with work demands, preventing negative consequences of stress, whereas external locus of control (ELC) is considered an intra-psychic vulnerability factor associated with increased burnout. Noteworthy, the specific role of these overlapping constructs on the prevention of burnout and promotion of work engagement, respectively, remains unclear. **Objective:** The main aim of this study was to compare the differential significance of resilience and optimism, joined with ELC, on the prediction of burnout and work engagement. **Method:** A sample of 265 professional caregivers of dependent older adults was assessed using an extensive standardized protocol. Optimism and ELC were measured using the Palenzuela's Battery of Generalised Expectancies of Control, and the Connor-Davidson Scale was used to estimate resilience. Moreover, the Maslach Burnout Inventory and the Utrecht Work Engagement Scale were used to measure burnout and work engagement, respectively. Different hierarchical regression models were conducted with burnout and work engagement as dependent factors. **Results:** The results showed that more than half (51%) variance in resilience was accounted by grounded optimism scores. The ELC was the main explanatory factor of burnout, whereas optimism and resilience were the best predictors of work engagement. Finally, even after controlling the effect of resilience, the effect of optimism remained significant for predicting work engagement. **Conclusions:** These findings support distinctive role resilience and optimism, two closely related psychological constructs, for promoting work engagement and reducing burnout in professional caregivers of older adults.

Keywords: optimism, locus of control, resilience, burnout, work engagement, caregiving.

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1. Introduction

Formal caregivers of dependent older adults are usually exposed to prolonged stress which increases the rates of burnout (Welp et al., 2015). The term "burnout" was first used to describe exhausted workers as a result of excessive demands on their individual resources (Maslach & Leiter, 2017). Essentially, the definition of burnout refers to a syndrome made up of emotional exhaustion (EE), cynicism or depersonalization (DE), and lack of professional efficacy or personal accomplishment (PA) (Maslach & Jackson, 1981). Otherwise, the lack of PA has been associated with lower work engagement (Hussein, 2018; Menezes de Luzena et al., 2006), in turn, characterized by vigour (high level of energy and physical activation), dedication (feeling of pride and enthusiasm with one´s work) and absorption (being happily immersed in the work) (Schaufeli et al., 2002). In this context, there is an open debate about whether burnout and work engagement represent two extremes of a continuum or two independent dimensions (Leiter & Maslach, 2017).

It is known that the psychological well-being of healthcare professionals influences the quality of care they provide to older adults (Peterson et al., 2008; Sołtys & Tyburski, 2020; Welp et al., 2015). In fact, positive pychological resources may help to effectively cope with adverse situations, reducing the risk of burnout and enhancing work engagement. Basically, these resources refer to the individuals' sense to successfully control or adapt to the demands of their environment (Corso-de-Zúñiga et al., 2020; Hobfoll et al., 2003; Luthans & Youssef-Morgan, 2017). In this context, resilience, the ability to overcome or endure adverse situations (Garmezy et al., 1984; Masten et al., 1990), is a popular construct which has been positively associated with work engagement (Kašpárková et al., 2018; Mache et al., 2014) and negatively associated with burnout (Corso-de-Zúñiga et al., 2020; Menezes de Luzena et al., 2006). However, these effects

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may also be attributed to the relationship that resilience has with other positive constructs, such as self-efficacy (Martínez-Martí & Ruch, 2017) or optimism, which may be also implicated in coping with stressful or adverse situations (Haglund et al., 2007; Lamont et al., 2019). In fact, optimism has been repeatedly correlated with caregivers' psychological well-being and good health (López et al., 2015; Maguire et al., 2019; Scheier et al., 2001).

The term optimism has been used with different meanings (Kleiman et al., 2017). On the one hand, *dispositional optimism* refers to a positive outlook toward the future (Carver & Scheier, 2014; Scheier et al., 2001), essentially based on a generalised *expectation of success* (Rotter, 1954). Importantly, this approach might turn into unrealistic optimism (Weinstein, 1980) or naive optimism(Epstein & Meier, 1989). On the other hand, g*rounded optimism* refers to a set of Generalised Expectancies of Control (GEC), keeping one's feet on the ground (Contador et al., 2012; González-Tablas,. et al., 2001; Palenzuela, 1987; Palenzuela et al., 1997). According to this approach, *grounded optimism* is as a first-order construct which comprises the following GEC: a) *self-efficacy,* the expectation or belief in one's ability to perform effective actions; b) *contingency or internal locus of control,* the expectation that whatever happens will be the result of one's own actions (Rotter, 1966); c) *success or outcome expectations,* the estimated probability of achieving a desired goal or outcome (Rotter, 1954). In addition, the GEC model allows determining the perception of lack of personal control no matter what happens. Specifically, *external locus of control* (ELC) can be estimated using the following expectations (Palenzuela, 1989): d) *non-contingency or helplessness,* according to Miller & Seligman (1975), is the expectation of no relationship between one's actions and the occurrence of events; e) *luck*

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or chance, the expectation that the events of one's life are the result of random or chance factors (Levenson, 1973).

A number of studies have compared resilience and optimism as predictors of psychological well-being in different samples, including informal caregivers (Maguire et al., 2019) or war prisoners (Segovia et al., 2012). Hence, both personal resources involve the enhanced perception of control to face adversity, decreasing the probability of suffering burnout (Garrosa et al., 2011; Pan et al., 2017), whereas the prolonged perception of lack of control to cope with work demands may result in psychological stress and burnout (Akça & Yaman, 2010; Brosschot et al., 1994; Corso-de-Zúñiga et al., 2020). Thus, it has been suggested that burnout, usually associated with depression, may result from helplessness in an adverse working environment (Bianchi et al., 2021; Welp et al., 2015). However, in this research context, the specific role of resilience and optimism constructs in the promotion of engagement and preventing burnout remains understudied. Moreover, it should be also clarified how these positive psychological constructs may interact with vulnerability factors (i.e., helplessness) on predicting different outcomes (i.e, engagement) associated with quality of care (Bakker et al., 2014; Kašpárková et al., 2018).

The main aim of this study was to analyse the distinct role of grounded optimism and resilience, as predictors of work engagement and burnout, in a sample of professional caregivers of older adults. Moreover, we analysed whether these positive psychological constructs interact with vulnerability factors associated with ELC. To achieve this objectives, we first explored the overlap between grounded optimism and resilience; then, we tested the predictive value of these psychological constructs on burnout and work engagement, respectively. Finally, we further explored whether positive and negative (i.e, vulnerability) psychological factors interact in promoting burnout or work engagement.

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2. Method

2.1. Participants

A total sample of 265 formal caregivers of dependent older adults, suffering dementia or psychiatric disorders associated with cognitive impairment, was surveyed in centres from northwest and southwest regions of Spain (Extremadura and 'Castilla y León'). The sample was mostly made up of adult women (84.2%), with an average age of 40 years (*SD* = 9.70), and most participants lived with their partner (86.2%). Concerning education, a total of 27.8 % participants had university studies, while the rest (72.2%) completed primary or secondary level of studies. Formal caregivers had worked an average of 11.71 years (*SD* = 9.09). The study was approved by the Directory and Ethics Boards of the Geriatrics centers that were involves in the study. Written informed consents were obtained from all participants, according to the principles of the Declaration of Helsinki, who decided to participate in the study voluntarily.

2.2. Measures

Sociodemographic questionnaire: The following sociodemographic variables were collected: sex, age, educational level, and years of employment as a professional caregiver.

Maslach Burnout Inventory- General Survey (*MBI-GS;*Schaufeli et al., 1996; Spanish version by Salanova et al., 2000). The scale consists of 16 items that assess the three burnout factors: *Exhaustion, Cynicism* and *Effectiveness*. Each item is rated on a Likert scale ranging from 0 (*never*) to 6 (*every day*) (e.g., "I'm emotionally exhausted by my work"). Higher scores indicate a higher risk of burnout. Taken together, exhaustion and cynicism factors make up the measure of the *core of burnout*. The internal consistency of the scales (Cronbach's alpha) was of .89, .84 and .85 for Exhaustion, Cynicism and Effectiveness respectively.

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Utrecht Work Engagement Scale (Schaufeli et al., 2002; Spanish version by Salanova et al., 2000). The scale consists of three dimensions: *Vigour, Dedication* and *Absorption*. The 15 items are rated on a Likert scale ranging from 0 (never) to 6 (*every day*) (e.g. "I feel full of energy at work"). The higher the score, the greater the work engagement. The Cronbach's alpha for each of the three scales was .83, .82 and .78, respectively.

Connor-Davidson Resilience Scale (CD-RISC, Connor & Davidson, 2003). It consists of 25 items that are rated on a Likert scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). The scale assesses how the participant has felt in the past month (e.g. "Past successes help me face new challenges with confidence"). The maximum score is 100. The scale includes five factors: Personal Competence, Confidence in Intuition and Tolerance for Adversity, Positive Acceptance of Change, Control and Spirituality. Higher scores indicate greater resilience. The observed internal consistency was $\alpha = .89$.

Grounded Optimism and ELC: Battery of Generalised Expectancies of Control Scales (BEEGC-20). This instrument was designed based on the theory of personal control (Palenzuela, 1987, 1988; Palenzuela et al., 1997; Palenzuela, 1989). Grounded optimism is defined by three GEC (Contingency, Self-efficacy and Success subscales), whereas ELC is assessed with two subscales: Helplessness and Luck. It is rated on a 9-point Likert-type response format, ranging from 1 (*totally disagree*) to 9 (*totally agree*). The final score is obtained by adding all the items of each subscale. The internal consistency Cronbach's α of the subscales ranges from .75 to .87.

2.3. Design and procedure

A descriptive, multicenter, cross-sectional study was conducted. After the authorization of each direction board, the investigation was announced by the chief or

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responsable of each staff section. Those professional caregivers, who agreed voluntarily to participate, signed a written informant consent before completing the self-report questionare. A researcher (IC, BF), resposable to supervise the application process, was available to solve any doubt in the completation of the standardized questionare.

2.4. Data analyses

The statistical analyses were carried out using the IBM Statistical Package for the Social Sciences (SPSS) software, version 26.0 for Mac. Normality and homoscedasticity were tested using the Shapiro-Wilk and Levene´s statistics, respectively. The descriptive analyses of the sample included the means and the standard deviations, whereas the relationship between variables was explored using Pearson's correlation analysis. Moreover, several hierarchical regression models were conducted based on the specific aims of the study. Thus, to analyse the contribution of grounded optimism to resilience (outcome variable), a hierarchical regression was carried out. Self-efficacy and contingency were introduced in the first step, whereas expectancy of success, which is considered a results of the former expectancies (Palenzuela, 1989) was entered in the second step. Secondly, to know the specific weight of positive (optimism md resilience) and negative psychological constructs (ELC) on burnout and work engagement, we carried out two additional hierarchical multiple regressions. For both models, sociodemographic variables, significantly associated with the outcome, were introduced in the first step; ELC was entered in the second step, whereas grounded optimism and resilience were entered independently in the third and together in fourth step, respectively. This strategy pretends to compare independent (step 3) and interactive effects (step 4) of the positive constructs (resilience and optimism) on different outcomes. Detection of multicollinearity was

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performed using the Variance Inflation Factor (VIF), with VIF > 5 as the cut-off point for the diagnosis of collinearity.

Finally, moderation analyses using the Macro Process (Hayes, 2017) were carried out to assess the interaction between positive psychological resources (grounded optimism and resilience) and vulnerability factors (ELC) in predicting burnout or work engagement. Firstly, the moderator effects of grounded optimism or resilience on the relationship between ELC and burnout was assessed. In addition, the moderator effect of ELC in the association between both positive psychological resources and work engagement was tested.

3. Results

3.1. Relationship between (grounded) optimism and resilience

Figure 1 shows the relationship between the EGC, which underlies grounded optimism, and resilience (outcome). The hierarchical regression (Table 1) showed that self-efficacy and contingency explain 44% of the variance of resilience. Self-efficacy was a better predictor than contingency (Step 1). In a second step, the expectation of success was significantly associated with resilience ($\Delta R2$=.06, p<.001), although self-efficacy and contingency continued to be significant predictors. In brief, more than half (51%) of the resilience variance was accounted for by grounded optimism.

3.2. Association between positive psychological resources (grounded optimism, resilience) vulnerability factor (ELC) and outcomes (burnout and work engagement)

Table 2 shows that grounded optimism (self-efficacy contingency and success expectancies) and resilience are highly correlated (r = .70, p < .05). Both constructs were positively related to work engagement ($r_{(optimism)}$ = .45, p < .01; $r_{(resilience)}$ =.49, p < .01

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respectively), and negatively ($r_{(optimism)}$= -.19, $p < .01$; $r_{(resilience)}$ = -.24, $p < .01$ respectively) with the core of burnout. ELC showed a positive relationship with the core of burnout ($r = .36$, $p < .01$) and a negative one with work engagement ($r = -.15$, $p < .05$). With regard to the sociodemographic variables (age, sex and years of profession), only the caregiver's years of profession were positively associated with ELC ($r = .14$, $p < .05$) and burnout ($r = .14$, $p < .05$).

3.3. Prediction of burnout and work engagement

A hierarchical regression analysis was applied considering the core of burnout as an outcome variable (Table 3). The years working (as caregiver) was a significant predictor (β = .16, p < .05) of the core of burnout (first step), but only explained 2% and ceased to be a predictor in the successive steps of the regression analyses. Subsequently, ELC (Step 2) was a significant predictor of the core of burnout (β = .35, $p < .001$), explaining 15% of its variance. After adding (step 3), in parallel models, grounded optimism (Step 3^{GO}) or resilience (Step 3^{RE}), both psychological factors were negative predictors of burnout and the percentage of explained variance of the model increased to 18%. Finally (Step 4), resilience (β = -.13, $p = .10$) and optimism (β = -.08, $p = .31$) were not significant predictors of burnout in this final step, whereas ELC remained significant (β =.32, $p < .001$).

A parallel strategy, based on hierarchical regression analysis, was performed to predict work engagement (Table 3). The work duration (step 1) was not significant in the prediction of work engagement, but ELC (Step 2) entered as negative predictor (β = -.16, $p < .05$). Moreover, grounded optimism (Step 3^{GO}; β = .44, $p < .001$) and resilience (Step 3^{RE}; β = .44, $p < .001$), taken separately, significantly predicted work engagement, increasing the explained variance (21% and 24% respectively), while ELC ceased to be

significant in this step. Finally, resilience (Step 4) remained as predictor of work engagement (β = .32, p <.001), increasing the explained variance from 21% (Step 3 ^{GO}) to 27% (Step 4^{GO+RE}). Noteworthy, optimism continued to be significant even when resilience was present (β =.20, p < .01).

3.4- Interaction between positive psychological resources and vulnerability factors

Successive simple moderations analyses revealed that neither grounded optimism ($B_{(ELC \times GO)}$ = -.001, p = .767) nor resilience ($B_{(ELC \times RE)}$ = -.001, p = .64) were moderators of the relationship between ELC and burnout. Regarding whether the relationship between positive psychological resources and work engagement is moderated by the perception of external control, ELC did not interact either with grounded optimism ($B_{(GO \times ELC)}$ = .007, p = .17) or resilience ($B_{(RE \times ELC)}$ = .004, p = .38).

4. Discussion

In this study, we found a significant overlap (51%) between resilience and grounded optimism, which supports the general association between both concepts (Connor & Davidson, 2003; Haglund et al., 2007). Essentially, this fact remarks that optimism and resilience are psychological constructs based on the perception of personal control, but they are no equivalent. More specifically, self-efficacy was the main predictive factor of resilience, followed by the expectation of success and contingency. These results suggest that caregivers with high self-efficacy, who expect to obtain the desired result (success expectancy) due to their behavior (contingency), will have greater resilience to face the challenges of work. These findings are consistent with previous literature (Hobfoll et al., 2003; Martínez-Martí & Ruch, 2017), which highlights the importance of self-efficacy as main component of resilience. In addition, our results show originally the specific

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contribution of different control expectations (self-efficacy, contingency and success) to resilience.

Above and beyond, it is remarkable that positive psychological resources, linked to the personal perception of control (resilience and optimism), were associated with work engagement, whereas ELC was linked to caregivers' burnout. Consistently, previous studies highlighted the importance of optimism (Garrosa et al., 2011; Luthans & Youssef-Morgan, 2017), self-efficacy (Mache et al., 2014; Xanthopoulou et al., 2013) or resilience (Kašpárková et al., 2018; Menezes de Luzena et al., 2006) in the promotion of work engagement. In fact, the Job Demand-Resources Theory emphasizes the important role of personal resources (i.e, positive assessment linked to resilience and perception control in the environment) in work engagement (Bakker et al., 2014). However, optimism and resilience may have a differential role considering that resilience added a significant percentage of variance in explaining work engagement (step 4 of regression model) in comparison with the predictive power associated with ELC and optimism (step 3 of regression model). Thus, resilience would probably go beyond the personal control perceived when individuals cope with the adverse situations, implying a general "pro-action" (e.g., seeking different solutions/alternative) when facing challenges and difficulties (Helmreich et al., 2017).

With regard to burnout, the ELC was the main explanatory factor. This fact is consistent with previous observations which show that ELC was the main factor for burnout (Corso-de-Zúñiga et al., 2020). Esentially, formal caregivers who perceive low control, and limited possibilities of modifying the environment (*helplessness*), may end up suffering burnout (Miller & Seligman, 1975). Accordingly, other scientific evidences underline the relationship between ELC and the greater probability of suffering stress

(Akça & Yaman, 2010; Brosschot et al., 1994). In this study, it should be noted that the measurement of ELC was based on the expectation of non-contingency or helplessness ("no matter what one does, no change or result is achieved in an environment that does not respond") and chance ("the events of one's life are the result of random factors" (Palenzuela et al., 1997), which differ from other theoretical approaches based on the idea that the non-contingent rewards are perceived as a result of luck, chance or powerful others (Levenson, 1973; Rotter, 1966).

Finally, another important issue to ellucite is the relationship/independence between positive psychological factors (optimism and resilience) and vulnerability factors (ELC) on predicting burnout/work engagement. Our results show that both grounded optimism and resilience, and the ELC, did not show any interaction for outcomes prediction. Thus, when a person perceives that, whatever they do, they cannot control the consequences, they may experience burnout in certain situations, even if they are optimistic and resilient. Likewise, an optimistic or resilient person will tend to show work engagement due to the experience of external locus of control is more restrained or limited in these individuals. Thus, protective and vulnerability factors associated with stress and burnout may coexist depending on the specific assessment carried out by individuals in specific situations. This work is consistent with the previous literature referring that burnout and engagement are negatively related but not strictly opponents(Leiter & Maslach, 2017; Taris et al., 2017). In fact, both psychological states were predicted by different psychological resources such as resilience/optimism and ELC respectively.

Some limitations should be taken into account. First, this study was restricted to geriatric centers in two communities of Spain, which may limit the generalisation of the results. However, this is a multicentre study with a sample large enough to assure the

validity of the findings. Second, the instruments were self-reported, but all achieved good psychometric properties in the Spanish population. Third, we were focused on valid factors corroborated in previous empirical works (i.e., work engagement, burnout, resilience), but we did not controlled others, such as social support, which can moderate the impact of stress on health and work performance. Noteworthy, the original approach to assess 'grounded' optimism has been recently proposed and need further research. Fourth, the influence of the income in our findings was not assessed, but this factor was highly homogeneus between participants who developed auxiliary nursing cares. Finally, all professional caregivers were caring dependent older adults, suffering dementia or other mental conditions, but cognitive or functional performance of this individuals was not collected.

This study shows relevant findings on psychological factors associated with burnout and work engagement in formal caregivers of older adults. Thus, we currently know that EGC underlie first order psychological resources, such as grounded optimism and resilience. Moreover, although both constructs showed a significant overlap, they showed a distinctive role on work engagement. Conversely, it was demonstrated that ELC is a relevant psychological for burnout. Above and beyond, this study may help to design intervention programs aimed to reduce burnout and increase work engagement in formal caregivers of older adults. Promoting the perception of control in the work environment (autonomy in decision-making, availability of material/personal resources, constructive feedback, professional career, etc.) may be crucial to increase work engagement and improve the quality of cares in dependent older adults. Otherwise, interventions aimed at reducing burnout should act not only through the perception of resources (grounded optimism), but also by reducing the frustration or not condemning the worker to constant

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failure (helplessness). In brief, these strategies will probably help to improve work satisfaction and engagement of workers, reducing costs due to illnesses associated with stress and job abandonments.

Authors' contribution

Ana Nieto-Carracedo. Statistical analysis; Data curation; Investigation; Writing- Original Draft.

Israel Contador. Conceptualization; Investigation; Writing, Review& Editing; Supervision.

David L. Palenzuela. Conceptualization; Statistical analysis; Investigation; Writing-Original Draft. Supervision.

Pablo Ruisoto. Investigation; Writing - Review & Editing.

Francisco Ramos. Conceptualization; Methodology; Resources.

Bernardino Fernández-Calvo. Conceptualization; Methodology; Investigation; Data curation; Resources.

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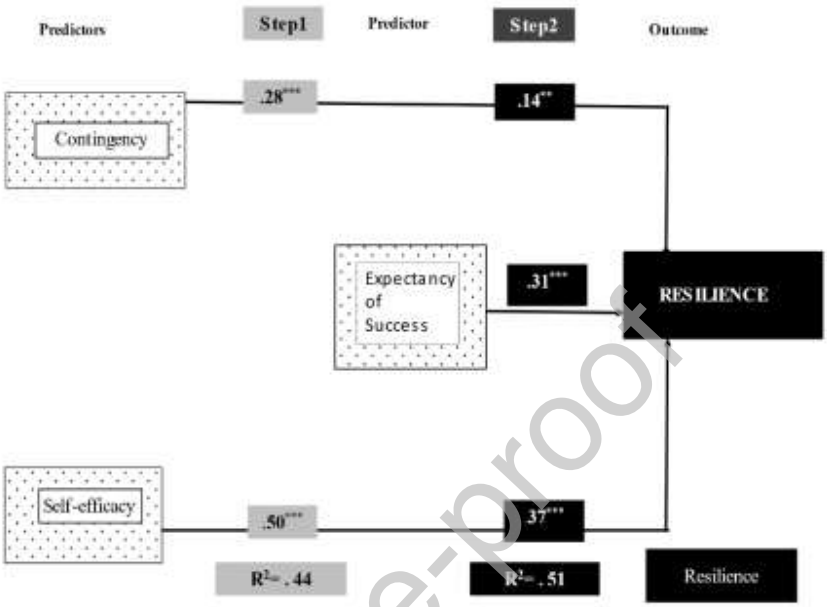
Figure 1

Predictive Model of Resilience: Specific Effects of Generalized Expectancies of Control



Note. The figure shows the standardized β values, whereas R^2 values on each step are shown at the bottom of the figure. White with dark dots boxes show the independent effect of the expectancies of control on resilience at different steps of the model.

Black boxes depict a full model based on three generalized expectancies for predicting resilience as main outcome.

$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

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Table 1

Hierarchical regression: relationship between expectancies of control and resilience

	B	t	*p*	*95% IC*		R^2	ΔR^2	*IVF*
				LL	UL			
Step 1						.44	.44***	
Contingency	.28	5.62	<.001	.47	.98			1.19
Self-efficacy	.50	10.09	<.001	1.04	1.56			1.19
Step 2						.51	.06***	
Contingency	.14	2.67	<.001	.02	.66			1.50
Self-efficacy	.31	5.44	<.001	.52	1.10			1.75
Success	.37	5.84	<.001	.63	1.28			2.25

Note. IC= interval confidence; LL= lower limit; UL= upper limit; IVF= inflationary variance factor.

$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

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Table 2

Descriptive statistics and main correlations between psychological factors and outcomes variables

	Mean (SD)	1	2	3	4	5
1. Grounded optimism	84.7 (13.27)					
2. Resilience	70 (13.56)	.70**				
3. External Control	34.26 (12.32)	-.11	-.13*			
4. Burnout	22.76 (11.77)	-.19**	-.24**	.36**		
5. Engagement	68.46 (17.64)	.45**	.49**	-.15*	-.40**	

Note. Grounded optimism: combination of scores obtained in self-efficacy, contingency, and success expectancies; External Control is the sum of scores based on helplessness and chance expectancies.

* $p < 0.05$. ** $p < 0.01$ (bilateral).

Table 3.

Hierarchical Regression Models for predicting Burnout and Engagement

Model 1: Burnout							
	B	*p*	*95%* IC		R^2	ΔR^2	IVF
			LL	UL			
Step 1					.02	.02*	
Years	.16	<105	.01	.04			1.00
Step 2					.15	.13**	
Years	.10	.08	-.01	.28			1.02
LCE	.35	<.001	.22	.44			1.02
Step 3[GO]					.18	.03**	
Years	.11	.06	-.003	.29			1.03
ELC	.33	<.001	.20	.42			1.04
GO	-.18	<.01	-.25	-.05			1.01

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Step 3[RE]					.18	.03**	
Years	.12	.03	.008	.30			1.03
ELC	.32	<.001	.19	.41			1.05
RE	-.19	<.01	-.26	-.06			1.03
Step 4 [GO+RE]					.19	.009	
Years	.12	.04	.006	.30			1.03
ELC	.32	<.001	.19	.41			1.05
GO	-.08	.31	-.21	.07			2.10
RE	-.13	.10	-.25	.02			2.13
Model 2: Engagement							
Step 1					.00	.00	1.00
Years	.04	.52	-.160	.315			
Step 2					.02	.02**	
Years	.06	.28	-.109	.366			1.02
ELC	-.16	.01	-.400	-.055			1.02
Step 3[GO]					.21	.19***	
Years	.04	.45	-.132	.296			1.03
ELC	-.10	.06	-.302	.011			1.04
GO	.44	<.001	.430	.720			1.01
Step 3[RE]					.24	.22***	
Years	.02	.68	-.167	.254			1.03
ELC	-.08	.14	-.269	.040			1.05
RE	.44	<.001	.467	.747			1.03
Step 4[GO+RE]					.27	.05***	
Years	.02	.64	-.160	.256			1.03
ELC	-.08	.15	-.264	.041			1.05
GO	.20	<.01	.070	.473			2.09
RE	.32	<.001	.218	.614			2.12

Note. IC= Interval confidence; LL= lower limit; UL= upper limit; GO = grounded optimism; RE= resilience; ELC= external locus of control; Years= years of work as caregiver; IVF= inflationary variance factor.

*$p < 0.05$. **$p < 0.01$ (bilateral).

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