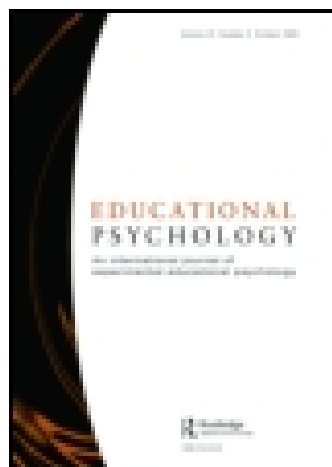


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### The moderating role of resilience in the relationship between academic burnout and the perception of psychological health in nursing students

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## The moderating role of resilience in the relationship between academic burnout and the perception of psychological health in nursing students

Mariano García-Izquierdo<sup>a</sup>, M<sup>a</sup> Isabel Ríos-Risquez<sup>b,c,\*</sup>, César Carrillo-García<sup>b,c</sup> and Emiliana de los Ángeles Sabuco-Tebar<sup>d</sup>

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The objective of this study was to analyse the role of resilience in the dimensions of academic burnout syndrome and psychological health in a sample of nursing students. A battery of questionnaires was administered to 218 nursing students, all of whom were in the second year of their degree at the University of Murcia (Spain). The applied protocol used the CD-RISC 10 scale for the measurement of resilience, the burnout scale MBI, and the GHQ-12 questionnaire to assess psychological health. The findings showed a significant relationship between resilience and burnout, emotional exhaustion and self-efficacy, as well as with psychological health. Moreover, three burnout dimensions were found to be significantly linked to psychological health in the way we had predicted. A stepwise regression analysis indicated the moderating role of resilience on psychological health in emotionally exhausting situations. We conclude that the psychological characteristic resilience moderated the effect of emotional exhaustion on the psychological health of the students. The practical implications of the results are discussed in order to introduce measures for the proper training of nursing students for professional practice; we also make several suggestions for future research in this field.

**Keywords:** academic burnout; psychological health; nursing students; positive psychology; resilience

### Introduction

Interest in resilience as a psychological construct has increased in the last few years. From the positive psychology frame, which has been compared with the study of different human strengths (Aspinwall & Staundinger, 2003; Magnusson & Mahoney, 2003), resilience has recently gained relevance under the premise of being a factor that is able to encourage healthy behaviours (Baek, Lee, Joo, Lee, & Choi, 2010).

Despite the growing literature on resilience in various scientific fields, it has had little impact so far in the field of educational psychology, although different authors

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have written in recent years about how knowledge of resilience and practices to increase it could be used to improve learning processes (Theron, 2011; Toland & Carrigan, 2011).

Resilience has been described as the human capacity to face, overcome and emerge strengthened or transformed from experiences of misfortune (Garmezy, 1991; Grotberg, 2003). The American Psychological Association defines resilience as ‘the process of adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress – such as family and relationship problems, serious health problems or workplace, and financial stressors’ (American Psychological Association [APA], 2011). Resilience is seen as positive adaptation (Fergus & Zimmerman, 2005) and, therefore, it should lead to a beneficial adjustment; that is to say, to the maintenance of a moderate level of health in disadvantageous circumstances (Masten, 2001; Windle, 2011).

When considering the stressful life situations of an individual, there are different events that occur during of the process of higher education with a view to their integration into working life that can be decisive in the activation of resilience. This kind of stress, which is produced in the educational sphere and concerns university students, is usually called academic burnout (García-Ros, Pérez-González, Pérez-Blasco, & Natividad, 2012).

In the academic context, there is some distinction between resilience concepts such as ‘buoyancy’, ‘academic resilience’, and ‘grit’ (see Martin, 2013; Perkins-Gough & Duckworth, 2013). In this work, we considered resilience as a characteristic, which contributes to the psychological capital of the person (Luthans, Vogelgesang, & Lester, 2006). It is, therefore, the capacity to manage setbacks, challenges and pressures effectively. In fact, the ongoing expansion of this capacity contributes to the maintenance and enhancement of good mental and physical health (Martin & Marsh, 2008). Burnout syndrome has been a research subject since the 1980s. Maslach, Schaufeli, and Leiter (2001) indicate that it is a response to chronic job stress, defined by the dimensions of emotional exhaustion, cynicism and professional inefficacy. In this definition, it is obvious that burnout has a three-dimensional character, which affects the individual (emotional exhaustion: the feeling of not having anything else to offer emotionally), the psychosocial (cynicism: a distant attitude to work, with peers and partners) and the professional fields (professional inefficacy: the feeling of not doing the tasks properly and being incompetent). Many authors follow this approach of conceptualising burnout as a response to chronic job stress, shaped by the three dimensions described, and with negative consequences for the health of the individual (Maslach & Leiter, 2008; Schaufeli & Greenglass, 2001; Shirom, 2003).

Despite the indication that burnout is something typical for the so-called caring professions (those whose aim is to provide services to people), many studies have revealed that this is a phenomenon that can also appear in professionals who are not in direct contact with clients or the targets of their services, or even in preoccupational groups (Deary, Watson, & Hogston, 2003; Farrerons & Calvo, 2008; Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002). Different studies have indeed found that students also experience exhaustion, cynicism and feelings of lack of efficacy directly caused by stress related to their academic activities; this, therefore, we call academic burnout. (Martínez, Marques-Pinto, Salanova, & Lopez da Silva, 2002; Salanova, Martinez, Bresó, Llorens, & Grau, 2005; Schaufeli, Martinez, et al., 2002; Schaufeli, Salanova, González-romá, & Bakker, 2002).

In terms of the stressors experienced most frequently by students that have been linked to burnout, we find exams, public speeches, and overload of academic tasks and the limited time for doing them, as well as lack of methodologies and competence for their training at a faculty level (Cobo et al., 2012; González Cabanach, Fernández Cervantes, González Doniz, & Freire Rodríguez, 2010; Oliván Blázquez, Boira Sarto, & López del Hoyo, 2011; Yamashita, Saito, & Takao, 2012). These sources of stress, maintained in a chronic fashion, can cause burnout and have an impact on the students' health. (Fernández, Rodríguez, Vázquez, Liébana, & Fernández, 2005). In fact, different studies have analysed the emergence of symptoms of psychological discomfort and the presence of stress in the student population (Lo, 2002; Yamashita et al., 2012). In general, these works reach the conclusion that encouraging self-esteem and self-confidence in students, as well as offers of support from teachers and peers, can help to reduce perceived stress levels, preventing the emergence of burnout and, therefore, its consequences on psychological health.

If we focus on academic burnout, in accordance with the job demands and resources model (*JD-R model*; Bakker, Demerouti, de Boer, & Schaufeli, 2003), which suggests that high job demands and a lack of resources lead to the perception of stress, we find that when a student perceives that academic requirements exceed their resources and abilities, they experience damaging consequences (such as chronic stress, or burnout) that have potentially damaging effects on their health (Micin & Bagladi, 2011). Thus, different studies have found that people with high levels of personal resources such as resilience have more capacity to avoid the unfavourable effects on psychological health (Bakker & Demerouti, 2007; Pierce & Gardner, 2004).

Although burnout syndrome has been studied in nursing professionals, there have been few studies researching its relationship with individual psychological variables such as resilience and even fewer that have focussed upon nursing students. This is the case despite the undoubtable importance of this topic: As future professionals, nursing students must be trained to be able to implement possible measures for the control of this work problem.

Regarding the connection between resilience and burnout, there have been studies conducted in multi-occupational populations (Edward, 2005; García-Izquierdo, Ramos, & García-Izquierdo, 2009; Menezes, Fernández, Hernández, Ramos, & Contador, 2006) that have shown a negative relationship between the two variables, reflecting the moderating potential that resilience has in terms of the emergence of elements of burnout. Therefore, it makes sense to insist on the relevance of encouraging this psychological capacity from the educational sphere in order to prevent the appearance of burnout and to promote maintenance of psychological health in this population of future professionals (Chen, 2011; McAllister & McKinnon, 2009).

In accordance with the rationale above, this work has two aims: on one hand, to analyse the relationship between resilience, the different dimensions of academic burnout, and psychological health, and, on the other, to examine the moderating role that resilience plays for academic burnout and psychological health. In particular, based on the discoveries of the empirical studies noted above, and taking into account that psychological health can be operationalised to represent a measure of psychological distress, the following hypotheses are proposed:

Hypothesis 1: perception of burnout will be linked with psychological health (positively for the dimensions of emotional exhaustion and cynicism, and negatively for academic efficacy).

Hypothesis 2: resilience will be linked with the dimensions of burnout (negatively to emotional exhaustion and cynicism, and positively to academic efficacy).

Hypothesis 3: resilience will be negatively linked with psychological health.

Hypothesis 4: resilience will moderate the connection between burnout dimensions and psychological health. Thus, the students with high marks on resilience will report perceiving that they are in better psychological health when they show high scores for emotional exhaustion and cynicism, and low scores for academic efficacy.

## Method

### Design

A study utilising questionnaires was applied.

### Participants

We used a convenience sample comprised of students on the second nursing degree course at the University of Murcia (Spain) who attended a clinical seminar in April 2013. There were no exclusion criteria. All the attendees, 218 students in total, took part voluntarily and anonymously, and they adequately answered the questionnaires (answer rate 100%).

The students who made up the sample had an average age of 22.74 (SD = 5.66), with an age range between 19 and 50 years old, and most of them were women (75.7%). Concerning marital status, 57.8% were single, 6.4% married and the remaining 34.4% were in a relationship. 69.3% indicated that they just studied nursing, and 29.4% worked and studied.

### Assessment tools

The scales used are briefly described below. All of them had adequate internal consistency (See Table 1 Cronbach's alpha).

Table 1. Descriptive statistics and Pearson correlation coefficients were the main variables of the study ( $N = 218$ ).

Variable	Mean	DT	1	2	3	4	5	6
1. Age	22.75	5.66	–					
2. Resilience	31.47	6.08	.08	(.86)				
3. Emotional exhaustion	2.43	1.09	.06	–.34**	(.85)			
4. Cynicism	1.65	1.17	.08	–.10	.35**	(.81)		
5. Efficacy	4.23	0.79	–.01	.48**	–.11	–.21*	(.73)	
6. Psychological Health <sup>a</sup>	10.82	4.91	.09	–.53**	.44**	.34**	–.31**	(.83)

Note: The internal consistency (Cronbach's alpha) of the different scales is shown in the diagonal line in brackets.

<sup>a</sup>Measured as level of psychological discomfort.

\* $p < .01$ ; \*\* $p < .001$ .

Resilience was assessed by means of the 10-item Connor-Davidson Resilience Scale (CD-RISC) developed by Connor and Davidson (2003) and adapted and translated into Spanish by Notario-Pacheco et al. (2011) for use in a group of university students; this scale measures the resistance capacity or the individual's ability to face stressful and adverse situations. Attendees were asked to answer to what extent they agreed with each of the sentences given to them (for example, item 1: 'I consider myself strong and resistant'). The answering system is a five-point Likert scale that ranges from 0 (totally disagree) to 4 (totally agree). The complete range of scores is therefore from 0 to 40, where higher marks indicate a greater level of resilience. Johnson, Taasooobshirazi, Kestler, and Cordova (2014) reported a Cronbach's alpha reliability coefficient of .84 for the 10-item CD-RISC, and we also obtained a Cronbach's alpha reliability coefficient of .86 for the same items when examining our sample.

Burnout was measured by the MBI-SS scale (Maslach Burnout Inventory Student Survey) adapted and translated into Spanish by Schaufeli, Martinez, et al. (2002) with adequate reliability (Cronbach's alpha: emotional exhaustion .74, cynicism .79 and academic efficacy .76). Composed of 16 items, it assesses the degree to which the student is 'burnt' by their studies. It is composed of three dimensions: exhaustion (5 items, for example, 'I am emotionally exhausted because I'm doing this degree'), cynicism (5 items, for example, 'I have become more cynical regarding the usefulness of my studies') and beliefs of academic efficacy (6 items, for example, 'I believe that I contribute effectively during the lessons'). The burnout student profile is defined by high marks in exhaustion and cynicism, and low marks in their belief in their own academic efficacy. The answer scale ranges from 0 (never) to 6 (everyday/always).

To measure psychological health, we used the Spanish adaptation by Sánchez-López and Dresch (2008) of the General Health Questionnaire (GHQ-12) developed by Goldberg and Williams (1988), which has 12 items related to health problems suffered during the preceding weeks (for example, item 5: 'Have you felt constantly overwhelmed and strained?'). The assessment was made by means of a four-point Likert scale ranging from 0 (not at all) to 3 (much more than usual), meaning the complete range of the scale is between 0 and 36, with high marks indicating psychological discomfort, or a decline in psychological health. The GHQ-12 has been shown to have adequate reliability and validity in the Spanish population (Cronbach's alpha .78; Sánchez-López & Dresch, 2008).

### ***Procedure***

After asking for permission from the head of the university where the study was carried out, the questionnaires were distributed before a compulsory practical-clinical seminar. All the students participated voluntarily after verbal informed consent. They were advised that the confidentiality and anonymity of the data collection was guaranteed. Furthermore, the study was explained for them and any questions that they had before completing the questionnaire were resolved. The questionnaires were handed over to the participants in a blank envelope and, after collection by members of the research team, they were codified in order to keep the data anonymous and confidential.



Data analysis

The data were statistically analysed using the software SPSS 19.0. First, the descriptive and reliability statistics were calculated, followed by correlations and contrasts of means. After this, hierarchical regression analysis was conducted following the guidelines of Baron and Kenny (1986) for the analysis of moderation. Finally, the Sobel test was applied to examine the significance of the indirect facts and to test the potential role of resilience as a moderator.

Results

The mean, the standard deviation and correlations between the different variables, as well as the results of the internal consistency analysis of the different scales are shown in Table 1 (Cronbach's alpha). All the correlations were significant and they follow the expected theoretical pattern. The only exception was the dimension cynicism, which did not show association with resilience. The age variable was also found to have no significant bearing on the fundamental variables of the study.

In order to test the fourth hypothesis, we used hierarchical regression analysis. According to Baron and Kenny (1986), moderation can be considered when the following criteria are fulfilled: (a) the predictors (emotional exhaustion, cynicism and academic efficacy) must be significantly related to the dependant variable (health) and with the moderating variable (resilience). This can be observed in Table 1, where the correlations are all significant, except for the combination of resilience and cynicism; thus, we excluded this dimension of the regression analysis; (b) the moderating variable (resilience) must be significantly related to the dependent variable (health), which, as shown in Table 1, presents a negative and statistically significant correlation ( $r_{xy} = -.53$ ); (c) the effect of the predictor on the dependent variable disappears or decreases when the moderator participates in the prediction model, as can be seen in Table 2; in step 3 of the regression analysis we obtained a variation of  $\beta = .42$ ;  $p < .001$  to  $\beta = .30$ ;  $p < .001$  in the dimension of emotional exhaustion and of  $\beta = -.27$ ;  $p < .001$  to  $\beta = -.10$ ;  $p < .001$  in terms of efficacy. The Sobel test showed that the moderating effect of resilience was significant regarding the increase of  $R^2$  ( $p < .01$ ).

Table 2. Results of the analysis of the stepwise hierarchical regression and Sobel test.

Independent variable	Health		
	$\beta$	$R^2$	$\Delta R^2$
Step 1			
Exhaustion	.45	.20	.20**
Step 2			
Emotional exhaustion	.42		
Efficacy	-.27	.27	.07**
Step 3			
Emotional exhaustion	.30		
Efficacy	-.10		
Resilience	-.39	.37	.10**

\*\* $p < .001$ .



In summary, the data show that resilience moderates the relationship between emotional exhaustion and health. In order to analyse this relationship properly, a graphic representation was made (see figure 1). The values of the variables are determined by the mean  $\pm 1$  standard deviation. The higher values of a variable correspond to scores that are one standard deviation below the mean. Therefore, resilience can be seen to moderate the effect of perception of emotional exhaustion at its different levels.

## Discussion

The goal of this study was to analyse the relationships that exist between resilience, burnout syndrome and perceived psychological health in a sample of nursing students in their second academic year. We also wanted to analyse the moderating role of resilience on the relationship between burnout and psychological health.

The data show the existence of a significant negative relationship between resilience and the emotional exhaustion dimension of burnout, as well as a significant negative relationship between resilience and the presence of psychological discomfort (which correlates with worsened psychological health) in the students. Furthermore, resilience was also directly related to the academic efficacy element of burnout. In terms of the dimensions of burnout syndrome and psychological discomfort, all were significantly correlated and followed the expected theoretical pattern.

Thus, the students who indicated having a higher level of resilience also obtained higher scores in academic efficacy and lower scores in emotional exhaustion. These findings are consistent with the findings of previous studies on occupational samples (Edward, 2005; García-Izquierdo et al., 2009; Menezes et al., 2006).

Regarding the relationship between burnout syndrome and psychological health, relationships were observed between the three dimensions and psychological health. Previous research on university students has found a relationship

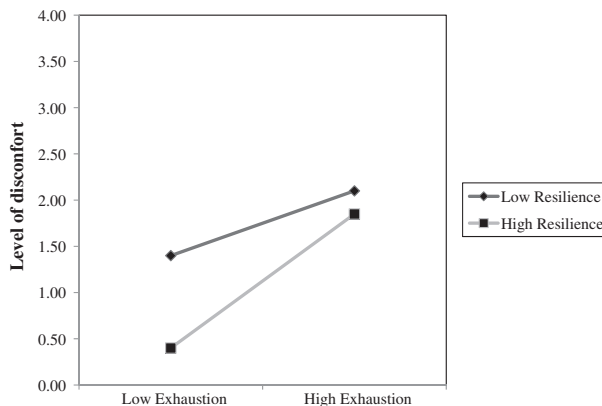


Figure 1. Interaction between resilience and the perception of emotional exhaustion in psychological health prediction<sup>a</sup>.

<sup>a</sup>Level of discomfort.

Note: A higher score in the axis of discomfort means worse subjective psychological health. Students with high resilience have a lower level of discomfort, both in terms of low emotional exhaustion and high emotional exhaustion. Resilience reduces the effect of emotional exhaustion on the level of discomfort shown by the students.

between emotional exhaustion, the development of psychosomatic symptoms and psychological discomfort (González, Landero, & Tapia, 2007; Liébana et al., 2011). Emotional exhaustion can negatively influence expectation of success and result in a lack of professional maturity, which can result in weak resolve for completing studies, a tendency towards giving up and a lack of training to face the world of employment (González & Landero, 2007; Rudman & Gustavsson, 2012; Salanova et al., 2005).

In terms of the relationship between resilience and psychological health, our findings suggest a relationship between both variables, i.e. students with a higher resilience report higher perceived psychological health. These data are in line with the findings of other authors (Luthans et al., 2006; Luthar & Becker, 2002; Tusaie & Dyer, 2004).

The last hypothesis of this work explored the modulating role of resilience between the dimensions of burnout and psychological health. The results seem to confirm that resilience modulates the effects of stress (in this case, emotional exhaustion) on psychological health. These findings are consistent with the transactional models, suggesting that stress experiences are the result of the combination of stressors and their interactions with personal resources. We should bear in mind that these students have skills that they may activate as a means to resist stressing events (Hunter, Mora-Merchan, & Ortega, 2004). Thus, students with a level of high resilience have a better psychological health status than students with lower resilience. Other studies looking at the role of resilience in different contexts have highlighted its importance as a *softener* of the perception of stress, as an enabling factor for better adaptation, and as a reducer of the negative effect on aspects of health (Catalano, Chan, Wilson, Chiu, & Muller, 2011; White, Driver, & Warren, 2010).

The obtained results can be explained with help from some of the proposals made by Windle (2011), who suggests three possible actions of resilience: as compensation, as a challenge and as protection. If it functions as a compensatory mechanism, it would reduce discomfort in every level of perception of emotional exhaustion. As a challenge, it would describe a curvilinear relationship between perception of stress and its negative impact. Then, exposure to low and high levels of emotional exhaustion would be related to harmful consequences, but mild levels would be related to beneficial results. Finally, if it had a protective effect, it would only come into play in high-risk situations, provoking an adaptive response in the person. The obtained results support the idea that resilience has a protective effect, since levels of psychological health are different according to the respondents' perceived emotional exhaustion and resilience; i.e. there is a less detrimental effect on psychological health in students with high levels of exhaustion if they have higher scores in resilience (see Figure 1).

By means of the performed regression analysis, we observed a moderating role of resilience for the relationship between emotional exhaustion and psychological health. These results show consistency with the findings of previous studies. In this sense, the dimension of emotional exhaustion has been the most relevant when looking at the development of health problems in both student populations (González et al., 2007; Liébana et al., 2011), and in other occupational populations (Maslach & Leiter, 2008; Shirom, 2003).

In conclusion, we could say that the students in our sample who show a higher level of resilience experience less emotional exhaustion and less frequent symptoms

of discomfort, i.e. they report better perceived health. Resilience, an individual skill used to face unfavourable situations, could be conceived as a modifiable personal feature which can be learnt and developed, as has been suggested by some authors (Masten, 2001; Youssef & Luthans, 2005). Therefore, the obtained results indicate, in practice, the need to foster learning of this psychological capacity with the aim of preventing the development of burnout syndrome, and to maintain or improve the psychological health of students. Regarding this, it should be essential for the educational programmes training future nursing professionals to help students by means of training activities that focus on development of this capacity (Knight et al., 2012; Rudman & Gustavsson, 2012; Thomas, Jack, & Jinks, 2012).

The implications of our research are that there may be benefits for students having high resilience. There are several ways in which teachers and educational support staff can build good foundations for resilience. These include developing students' self-confidence by individualising tasks where possible, enhancing self-regulation through planning and persistence, and encouraging feedback that does not emphasise comparison with peers. The appeal of approaches such as this is that they can be incorporated into activities that make up the normal curriculum by normal tutors and support staff, without the need for intervention by specialists, although the latter approach could certainly also be applied (Putwain & Daly, 2013).

The current study presents some limitations, which should be highlighted in order to properly understand the results. First, the collected data came exclusively from self-reported evidence, which can bias the answers of the participants, as well as artificially increase the chance of finding correlations between variables. Secondly, the design of the study limits the possibility of establishing causal relationships between the analysed variables. In this sense, several papers have indicated the need for further longitudinal studies to help to define and analyse the development of burnout syndrome and health of students during their university studies (Edwards, Burnard, Bennett, & Hebden, 2010; Rudman & Gustavsson, 2012). Moreover, further research should make use of more complex statistical designs and analyses so that they can better clarify the role of resilience as a psychological capacity in the development and propagation of burnout syndrome and the development of psychological symptoms in university students.

Finally, this study and other like it highlight the significance of the role of resilience in relation to problems presented by academic burnout syndrome in nursing students, showing indications for the implementation of prevention measures. Establishment of resilience should be incorporated into the curriculum, in order to promote psychological health in this population (Chen, 2011; McAllister & McKinnon, 2009). As there have only been a small number of studies in this field, it would be interesting for future research to try to find out the effects of a programme of training and development of resilience on health and prevention of burnout syndrome in university-level nursing students. Therefore, intervention designs should be developed with the goal of targeting the students' deficits in terms of coping mechanisms and emotional regulation of stress, for example, focusing upon detection and modification of the stressing aspects of the current system and higher education institutions in general.

## Conflict of interest

The authors declare no conflicts of interest.

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