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The association between alexithymia, emotional intelligence and burnout among nursing assistants working in nursing home settings: A cross-sectional study

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Abstract

Aims: To determine the explanatory power of alexithymia and emotional intelligence over burnout and to examine their combined explanatory capacity over burnout in the context of older adult care.

Design: Cross-sectional. All participants voluntarily and anonymously completed a questionnaire survey. They were all blind to the aim of the study.

Methods: One hundred and fifty-nine nursing assistants recruited during 2014 took part in the study. They belong to 10 nursing homes in the north of Spain. Sociodemographic and work-related information was collected, and measures of burnout, alexithymia and emotional intelligence were administered. Data were examined by means of regression analyses.

Results: The analysis showed that alexithymia made a moderate contribution to the depersonalization and personal accomplishment dimensions of burnout, controlling for the influence of work characteristics. Emotional intelligence did not have incremental validity over alexithymia in explaining burnout.

Conclusion: Alexithymia, rather than emotional intelligence, is a stronger explanatory variable for burnout among nursing assistants working in nursing homes.

Impact: Alexithymia and emotional intelligence are related to burnout and help to explain why, in the same context, each worker is affected differently by chronic stress at work. However, their combined explanatory capacity in nursing assistants working with older people remains underexplored. In our sample, alexithymia explains burnout better than emotional intelligence, a finding that was both unexpected and theoretically relevant. Researchers should take this into account when studying personal resources to prevent and manage burnout among nursing assistants, as alexithymia, rather that emotional intelligence, could play an important role once workers are burned out. Training nursing assistants to identify and describe emotions should be considered as part of their training programmes and/or in nursing homes as an institutional strategy to prevent burnout and to improve the quality of older adult care.

KEYWORDS

alexithymia, burnout, cross-sectional study, emotional intelligence, incremental validity, nursing assistant, older adult care

1 | INTRODUCTION

Older adult care can be a rewarding and enjoyable experience, although it is commonly recognized to be a highly stressful job (Vlachos, 2012). Work in nursing homes (NHs) is subject to numerous risks (i.e., workload or conflicts with patients) that may contribute to burnout. Despite these risks, some professionals in these settings manage to avoid burnout, showing higher levels of emotional abilities than others (Demerouti, 2014).

Two important predictors of burnout in care settings are alexithymia (a lack of skills to identify and describe one's own emotions) and emotional intelligence (the ability to pay attention to, understand and regulate emotions) (Katsifaraki & Wood, 2014; Shead, Scott, & Rose, 2015). Although previous research has examined the association between alexithymia, emotional intelligence and burnout, we have found no studies examining these variables in nursing assistants (NAs) working in older adult care. Neither have we found research analysing their combined explanatory capacity over burnout.

1.1 | Background

1.1.1 | Burnout and alexithymia

Burnout has been conceptualized as a psychological syndrome characterized by emotional exhaustion, the tendency to adopt a cynical and distant attitude towards care recipients (depersonalization) and a reduced sense of personal accomplishment at work. Chronic interpersonal stressors at work, such as interpersonal conflicts, lack of reciprocity or role stress, among others, have an impact on burnout (Maslach, Schaufeli, & Leiter, 2001; Schaufeli, Leiter, & Maslach, 2009). The risk of suffering burnout is high among professionals who work with older adults in geriatric care facilities (for a review, see Sanchez, Mahmoudi, Moronne, Camonin, & Novella, 2015). From the perspective of the Job Demands-Resources (JD-R) model, burnout is produced by chronically high job demands in the workplace that are not compensated by job and personal resources. This lack of balance drains workers' energy, leading to their mental exhaustion and, via burnout, to negative consequences for their health and for the organization (for a review, see Schaufeli & Taris, 2014). Since personal resources were included in the JD-R model, they have been studied at the organizational level as antecedents of job demands and resources, or as mediators between job characteristics and workers' well-being (Schaufeli, 2017). From an individual perspective, personal resources help to explain why, in the same work context, some staff are more affected than others by burnout syndrome. In this sense, emotional skills appear to be related to the individual ability to avoid or deal with burnout (Demerouti, 2014).

Alexithymia has been characterized as a personality trait comprising multiple facets, namely difficulty identifying and describing feelings towards others, and distinguishing these feelings from body sensations, a limited capacity for fantasy and a utilitarian and externally oriented thinking style (Nemiah, Freyberger, & Sifneos, 1976; Taylor & Bagby, 2000). Nowadays, it is also conceptualized as a deficit in cognitive processing and emotion regulation, or as a lack of emotional skills (Luminet, Rimé, Bagby, & Taylor, 2004; Lumley, Neely, & Burger, 2007).

Research in the general population has shown high levels of alexithymia among burned-out workers compared with healthy ones (Mattila et al., 2007; De Vente, Kamphuis, & Emmelkamp, 2006). Most studies have found a positive association between alexithymia and both emotional exhaustion and depersonalization among health professionals, suggesting that people who have difficulties identifying and verbalizing their feelings are more susceptible to emotional exhaustion and more likely to develop a cynical attitude towards care recipients (Bratis et al., 2009; Taycan, Taycan, & Celik, 2014; Tei et al., 2014). In addition, some authors have found that alexithymia is a good predictor of emotional exhaustion and depersonalization, although others have concluded that alexithymia is not predictive of emotional exhaustion (Katsifaraki & Tucker, 2013; Katsifaraki & Wood, 2014). Alexithymia has also been negatively related to personal accomplishment and it has specifically been reported to be a predictor for a reduced sense of personal accomplishment at work in nurses (Bratis et al., 2009; Katsifaraki & Tucker, 2013). It should be noted that these findings are not consistent across studies and some authors have failed to find an association between these variables (Katsifaraki & Wood, 2014; Taycan et al., 2014; Tei et al., 2014).

Taking into account the high number of emotionally demanding situations that NAs have to deal with and given that emotional demands are one of the stressors that explain burnout (for a review, see Bria, Baban, & Dumitrascu, 2012; Sundin, Hochwälder, Bildt, & Lisspers, 2007), we expected to find that those individuals who find it difficult to identify and describe their emotions would be more exhausted at work and would be more likely to show a cold and distant attitude towards the older adults in their care. We also expected to observe a negative association between alexithymia and personal accomplishment at work in the older adult care setting.

Hypothesis 1 *Alexithymia will be positively associated with emotional exhaustion and depersonalization and will be negatively related to personal accomplishment at work.*

1.1.2 | Burnout and emotional intelligence

Perceived emotional intelligence refers to people's general beliefs concerning the attention they pay to emotions, the extent to which their emotional states can be understood and their perceived ability to repair their own emotional states (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). Although emotional intelligence may help to explain individual differences in the development of burnout (Görgens-Ekermans & Brand, 2012), we have found no studies examining the relationship between emotional intelligence and burnout among NAs in the geriatric field. However, an inverse relationship between emotional intelligence and burnout is well established among staff who have direct contact with patients in residential care settings (Gerits, Derksen, & Verbruggen, 2004; Mikolajczak, Menil,

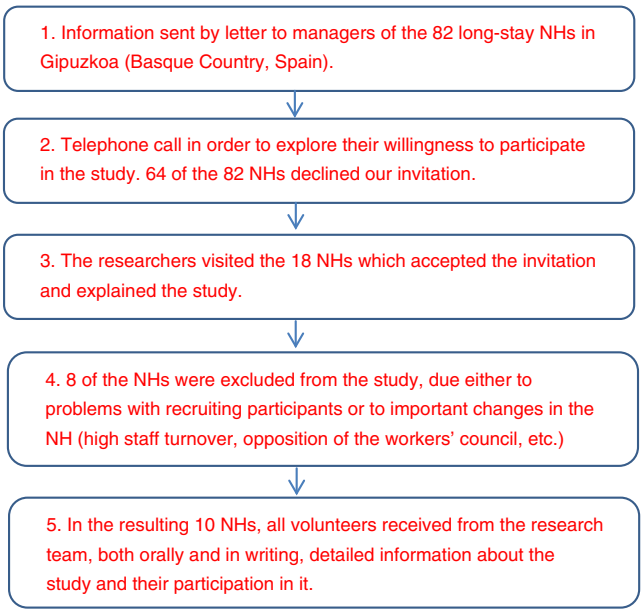

FIGURE 1 The recruitment process [Colour figure can be viewed at wileyonlinelibrary.com]

& Luminet, 2007), with emotional intelligence being shown to be a significant predictor of low burnout (Shead et al., 2015) and more specifically of lower emotional exhaustion and personal accomplishment, showing a moderator effect in the stress-burnout relationship (Görgens-Ekermans & Brand, 2012; Salami & Ajitoni, 2016; Szczygieł & Bazińska, 2013). These findings suggest that individuals high in emotional intelligence would, because of their ability to identify and understand their emotions and to make use of emotional repair strategies, be able to reduce the impact of work stressors, thus protecting them against burnout. Consequently, we hypothesize that:

Hypothesis 2 *Emotional intelligence would explain the symptoms of burnout in NAs, being negatively associated with emotional exhaustion and depersonalization and positively related to personal accomplishment.*

As stated above, the combined explanatory capacity of alexithymia and emotional intelligence over burnout has not previously been studied in NAs. However, a strong negative association between the two variables has been reported in several studies (Gaher, Hofman, Simons, & Hunsaker, 2013; Veirman, Fontaine, & Van Ryckeghem, 2016). Some authors argue that there is a conceptual overlap between these variables (Fukunishi et al., 2001; Onur, Alkın, Sheridan, & Wise, 2013), while others claim, based on factor analysis, that they are independent, even if they are negatively related (Mikolajczak et al., 2007; Parker, Taylor, & Bagby, 2001).

In the only study we found that analyzes the relationship between emotional intelligence and alexithymia in a sample of nursing students and professional nurses, a negative relationship was observed between dimensions of the two constructs, except between 'difficulty in identifying feelings' of alexithymia and 'attention to emotions' of emotional intelligence. According to the authors of this study, the lack of relationship could indicate that paying attention to emotions is not synonymous with being able to identify and name them. The latter ability is more closely related to emotional clarity than to attention to emotions, supporting the idea that alexithymia and emotional intelligence are independent constructs (Aradilla-Herrero, Tomás-Sábado, & Gómez-Benito, 2014). This conclusion is reinforced by studies that have examined the explanatory power of alexithymia and emotional intelligence and which have found that not only do these two constructs contribute to the explanation of different variables but also that they themselves are explained by different variables (Baughman, Schermer, Veselka, Harris, & Vernon, 2013; Grieve & Mahar, 2010; Webb & McMurran, 2008). In the only study found that analyzes the combined explanatory power of emotional intelligence and alexithymia over stress in undergraduates, it was found that emotional intelligence explains stress better than alexithymia (Mikolajczak, Luminet, & Menil, 2006).

2 | THE STUDY

2.1 | Aims

The aim of this study is twofold: First, to determine the explanatory power of alexithymia and emotional intelligence over burnout and second, to examine the combined explanatory capacity of alexithymia and emotional intelligence over burnout in an underexplored context, namely NHs for older adults.

2.2 | Design

A cross-sectional design was used.

2.3 | Participants

The recruitment process is shown in Figure 1. A convenience sample of 159 NAs was recruited from ten NHs for older adults. From each centre a mean of 16 participants (*SD* 2.4) were enrolled (range: 12–19).

The NHs were managed by different private and public providers and were of different sizes in terms of the number of beds (small, medium and large institutions). All of them had staffing ratios above the minimum level established by local government; the required ratio varies depending on the residents' characteristics and the time of day. At the time of the study the NHs had 86.93% occupancy. The eligibility criteria for participating in the study were: (a) working as an NA in an NH; (b) being in direct contact with older people at least 80% of the working day; and (c) having worked in the same NH for at least one year prior to the study.

2.4 | Data collection

The data reported here form part of a larger project, the SENDOTU study, conducted in Gipuzkoa (northern Spain) during 2014. The

purpose of the study was to examine the association between socioemotional variables and burnout among NAs working in NHs. The researcher responsible for data collection was always the same. None of the researchers in the study had any connection to the participating institutions. Data collection covered the following aspects:

2.4.1 | Sociodemographic data

Information about sex, age, shift work, educational level and work experience was gathered. To measure sex, we used a dichotomous variable where 0 = man and 1 = woman. Shift work was recorded using a categorical variable with three response options: 0 = no night shift, no work at weekends or on public holidays; 1 = night shift or work at weekends and on public holidays; and 2 = night shift and work at weekends and on public holidays. To measure educational level, we used an ordinal variable with four response options ranging from 0 = primary education to 3 = university/college studies. Finally, age and work experience were classified through a continuous variable measured in years and months, respectively. This information was gathered for control purposes as these variables have been shown to be associated with burnout.

2.4.2 | Burnout

Burnout was assessed using the Spanish version (Seisdedos, 1997) of the Maslach Burnout Inventory—Human Services Survey (MBI-HSS; Maslach & Jackson, 1981). This instrument has three subscales corresponding to the three components of burnout: (a) Emotional Exhaustion (EE) explores through nine items the sense of being mentally and emotionally exhausted, this being the core component of burnout (an example item would be: 'I feel like I'm at the end of my rope'); (b) Depersonalization (DP) refers to cold and distant treatment of care recipients (e.g., 'I treat some recipients as if they were impersonal objects') and is measured through five items; and (c) Personal Accomplishment (PA), consisting of eight items, refers to a sense of satisfaction and efficacy at work (e.g., 'I feel I'm positively influencing other people's lives through my work'). The 22 items of the inventory are completed using a 6-point Likert-type scale anchored by 0 = never and 6 = every day, with each subscale score computed through summation. The subscale total scores were 54 for EE, 30 for DP and 48 for PA. High scores on emotional exhaustion and depersonalization and a low score on personal accomplishment are indicative of the burnout syndrome.

2.4.3 | Alexithymia

Alexithymia was measured through the 20-item Spanish version (Martínez-Sánchez, 1996) of the Toronto Alexithymia Scale (TAS-20) (Bagby, Parker, & Taylor, 1994). This is a self-administered scale that measures three factors: Difficulty Identifying Feelings (DIF, 5 items: e.g., 'When asked which emotion I'm feeling, I frequently don't know the answer'), Difficulty in Describing Feelings (DDF, seven items: e.g., 'I'm unsure of which words to use when describing my feelings') and Concrete and Externally Oriented Thinking (EOT, eight items: e.g., 'I prefer to analyse problems rather than describe or explain them'). All 20 items are responded to using a 5-point Likert-type scale anchored by 1 = completely disagree and 5 = completely agree. The score for each subscale factor is obtained by summing responses to that subscale (score ranges: 5–25 for DIF, 7–35 for DDF and 8–40 for EOT), while the total alexithymia score is the sum of responses to all 20 items (score range 20–100). The TAS-20 uses cut-off scores: ≤51 = no alexithymia, 52 to 60 = possible alexithymia and ≥61 = alexithymia. In the present study and with the goal of simplifying the interpretation of this factor in the regression analysis, we treated alexithymia as a single construct. Other studies have also suggested using alexithymia as a single factor to consider all its factors and to increase its explanatory capacity in dimensions of health (Costa, Steffgen, & Samson, 2017).

2.4.4 | Emotional intelligence

Emotional intelligence was measured using the short Spanish version of the Trait Meta-Mood Scale (Fernandez-Berrocal, Extremera, & Ramos, 2004), developed by Salovey et al. (1995), which measures three dimensions of the meta-mood experience through 24 items (eight items for each dimension and a score range of 8–40) that are responded to using a 5-point Likert-type scale anchored by 1 = strongly disagree and 5 = strongly agree. The Attention to Feelings subscale measures attention to mood and emotions (Attention: e.g., 'I pay much attention to my feelings'), the Clarity of Feelings subscale evaluates the person's ability to understand and discriminate among feelings (Clarity: e.g., 'I am usually very clear about my feelings') and the Mood Repair subscale tests the respondent's ability to regulate mood states (Repair: e.g., 'If I find myself getting mad, I try to calm myself down'). High scores on emotional clarity and repair and medium scores on paying attention to feelings are indicative of emotionally intelligent people.

2.5 | Ethical considerations

Participation in the study was voluntary and all participants signed an informed consent form. Anonymity and confidentiality were guaranteed throughout the study, which was approved by a healthcare ethics committee (reference number 0920of9592008, regional decree 46/2007).

2.6 | Data analysis

Data analysis was performed using SPSS for Windows v24 (IBM Corp.). First, descriptive data, reliability coefficients (α) and Pearson correlations for the study variables were calculated. To examine the association and the explanatory capacity of alexithymia with respect to the different dimensions of burnout (Hypothesis 1), three hierarchical regression analyses were conducted. For each of these analyses, work-related characteristics (shift work, educational level

TABLE 1 Descriptive data, reliability coefficients (α), sample sizes, ranges and Pearson correlations for the study variables

	M	*SD*	α	*n*	range	1	2	3	4	5	6	7	8	9	10	11
1. Sex	0.94	0.24	–	159	0–1	–										
2. Age	41.89	9.86	–	159	22–65	−0.09	–									
3. Shift work	0.83	0.76	–	159	0–2	0.12	0.08	–								
4. Educational level	1.53	1.09	–	159	0–3	−0.11	−0.28**	−0.04	–							
5. Work experience	62.25	45.71	–	159	12–468	0.16*	0.17*	−0.01	−0.03	–						
6. Emotional Exhaustion	21	11.06	0.85	159	1–50	−0.04	−0.09	0.03	0.02	0.11	–					
7. Depersonalization	5.37	4.64	0.68	159	0–20	0.10	−0.03	0.16*	−0.09	0.02	0.52**	–				
8. Personal Accomplishment	39.68	7.53	0.78	159	9–48	−0.06	−0.10	−0.06	0.12	−0.11	0.13	−0.30**	–			
9. Alexithymia	48.05	13.21	0.85	159	23–86	−0.03	0.05	0.15	−0.29**	0.08	0.13**	0.29**	−0.36**	–		
10. Attention	24.44	6.36	0.83	159	9–40	−0.07	−0.09	0.04	0.10	−0.07	0.07	−0.04	0.15*	−0.01	–	
11. Clarity	26.51	6.79	0.89	159	12–40	0.04	−0.10	−0.07	0.20**	−0.01	−0.13	−0.12	0.36**	−0.49**	0.41**	–
12. Repair	28.64	6.32	0.85	159	11–40	−0.09	0.07	−0.09	0.17*	−0.07	−0.14*	−0.11	0.28**	−0.36**	0.14*	0.52**

Note: Missing values were replaced by the mean in the point. Missing values were less than 1% of the data.

*$p < .05$;

**$p < .01$.

and work experience) were entered as covariables in step one. Alexithymia was then entered in the second step. In the third step we entered the three dimensions of emotional intelligence (attention, clarity and repair) (Hypothesis 2).

2.7 | Validity, reliability and rigour

The Spanish MBI-HSS shows adequate reliability coefficients in all the subscales (α_{EE} = 0.90, α_{DP} = 0.79, α_{PA} = 0.71). In the present study, the emotional exhaustion and personal accomplishment dimensions yielded high Cronbach's alphas (α_{EE} = 0.85, α_{PA} = 0.78), whereas the reliability coefficient for depersonalization was low (α_{DP} = 0.41). Of the five items defining depersonalization, four of them contributed coherently to this dimension, while the other made a low contribution. Poor internal consistency for this subscale has previously been reported, with Cronbach's alpha values ranging from 0.42 to 0.64. (Gil-Monte, 2005; Piko, 2006; Richardsen, Burke, & Leiter, 2007). To increase internal consistency, we decided to omit the item with the lowest contribution, maintaining the conceptual meaning of the subscale. The omitted item in its original version was reverse-worded and, in contrast to the other four items that tap specific aspects of depersonalization (i.e., persons like objects, less sensitivity with users, become emotionally hard as a rock), it asked about general concerns in relation to users. Once this item was been omitted, the alpha coefficient was increased to 0.68, close to the required threshold of 0.7.

The psychometric properties of the whole Spanish TAS-20 and of its first two factors are high ($\alpha_{ALEXITHYMIA}$ = 0.81, α_{DIF} = 0.78 and α_{DDF} = 0.75); the reliability of the third component is somewhat lower, with a moderate value (α_{EOT} = 0.66) (Moral de la Rubia & Retamales, 2000). In the present study, we treated alexithymia as a single construct, since the TAS-20, as a whole, shows good psychometric properties ($\alpha_{ALEXITHYMIA}$ = 0.85).

The TMMS-24 yielded good reliability values in the present study (α = 0.85, α = 0.88 and α = 0.86 for Attention, Clarity and Repair, respectively), similar to the coefficients reported for the validated Spanish version. The TMMS-24 has also shown good values of construct and discriminant validity (Delhom, Gutierrez, Lucas-Molina, & Meléndez, 2017).

3 | RESULTS

3.1 | Sample characteristics and correlations

The zero-order correlations among the study variables, along with descriptive data and alpha coefficients are presented in Table 1. Most participants were women (93.7%), with a mean age of 42 years (range 22 to 65, *SD* 9.86). In terms of education, 37.1% had an intermediate level of vocational training, while 28.9% had completed an advanced level. Regarding shift work, 45% of the sample worked night shifts or at weekends and on public holidays. Overall, the NAs had been working in the same nursing home for an average of five years (in months: mean = 62.25, *SD* 45.71). All measures obtained

satisfactory internal consistency above 0.70, except for the depersonalization subscale (0.68).

The intercorrelations between burnout subscales and alexithymia showed that higher levels of alexithymia are associated with higher scores on emotional exhaustion and depersonalization and lower levels of personal accomplishment. The intercorrelations between emotional intelligence subscales and the burnout dimensions indicate that greater attention to feelings and emotional clarity are associated with higher scores on personal accomplishment. In addition, a greater self-perceived ability to repair mood is associated with less emotional exhaustion and a greater sense of personal accomplishment at work. Finally, the intercorrelations between emotional intelligence dimensions and alexithymia showed that higher levels of perceived clarity to feelings and mood repair is associated with less alexithymia.

3.2 | Hypothesis testing

The results of the three hierarchical regression analyses conducted to examine the relationship between alexithymia and burnout dimensions are summarized in Table 2. It can be seen there that neither alexithymia nor the dimensions of emotional intelligence contributed to the explanation of emotional exhaustion. However, the results show that alexithymia accounted for a significant proportion of the variance in the depersonalization dimension. Both the change in the *F* value associated with the change in R^2 and the beta value were statistically significant for alexithymia. Conversely, none of the emotional intelligence dimensions added incremental validity to depersonalization.

Finally and as can be seen in Table 2, alexithymia also made a significant contribution to the variance in personal accomplishment. Once again, the change in the *F* value associated with the change in R^2 and the beta value were both statistically significant for alexithymia; furthermore, in terms of the specific contribution of alexithymia to the change in R^2, it was in this model that the greatest change (9.7%) was observed. None of the emotional intelligence dimensions added incremental validity over alexithymia to the explanation of personal accomplishment. According to the results, hypothesis one is fully supported, whereas hypothesis two is rejected.

4 | DISCUSSION

The aim of this study was to examine the influence of alexithymia on burnout among Spanish NAs working in NHs and to explore whether the dimensions of emotional intelligence added incremental validity to the explanation of this syndrome. The results confirmed the relative contribution of alexithymia to two dimensions of burnout, namely depersonalization and personal accomplishment, when controlling for the influence of work characteristics in this sample. Emotional intelligence did not add incremental validity in accounting for the variance in burnout, suggesting that alexithymia, rather than emotional intelligence, has greater explanatory power for this syndrome.

Our results contrast somewhat with the hypothesis regarding the association between alexithymia and burnout, since in this sample the emotional exhaustion dimension was not explained by alexithymia. Research with health professionals has generally reported a relationship between these two variables, with alexithymia being strongly associated with emotional exhaustion in some studies. However and in line with our findings, the effect of alexithymia is diluted when regression analysis is performed to determine the explanatory power of alexithymia over emotional exhaustion (Bratis et al., 2009; Katsifaraki & Tucker, 2013; Taycan et al., 2014). In those studies, depression, workload and coping strategies seem to explain emotional exhaustion better than alexithymia does. One explanation for these findings may lie in the nature of alexithymia itself. Affected individuals might, due to their externally oriented thinking style, identify themselves as physically exhausted rather than emotionally overextended. Another possibility is that due to their lack of emotional awareness alexithymic individuals may fail to recognize the emotional demands coming from older people, family members and other professionals, whereas such demands would lead others to emotional exhaustion. In other words, alexithymic individuals probably do not focus on feelings or emotional issues, even though they may feel worn out at the end of the working day and show symptoms of emotional exhaustion.

The correlation between emotional exhaustion and personal accomplishment was not significant and the corresponding low effect size should also be taken into consideration. There are considerable obstacles to integrating and interpreting in a coherent way the personal accomplishment dimension with the other two dimensions of the MBI (Gil-Monte, 2005). Several studies have suggested that it is not clear whether feelings of diminished personal accomplishment should be considered as an antecedent or as an outcome of burnout. Other authors have also pointed out that personal accomplishment is not clearly related to emotional exhaustion and depersonalization (Bakker, Demerouti, & Verbeke, 2004; Maslach et al., 2001). These arguments, together with the correlations observed in our study, lead us to conclude that the validity of the scale is not threatened.

In line with our first hypothesis, the results show that alexithymia is significantly associated with depersonalization in NAs. The power of alexithymia to explain this dimension of burnout has been reported in other studies after controlling for coping strategies, depression and social support (Katsifaraki & Tucker, 2013; Katsifaraki & Wood, 2014; Popa-Velea, Diaconescu, Mihăilescu, Jidveian Popescu, & Macarie, 2017). Depersonalization may appear as a result of inadequate coping strategies among nurses (Garrosa, Rainho, Moreno-Jiménez, & Monteiro, 2010), or as a consequence of the tendency of alexithymic individuals to focus on external events but not on their emotional impact (Katsifaraki & Tucker, 2013). Another explanation is related to levels of emotional intelligence, since difficulties managing emotions would undermine a person's ability to cope effectively with job stressors and would constitute a risk factor for burnout

TABLE 2 Hierarchical regression analysis: regressing alexithymia and emotional intelligence on i) emotional exhaustion, ii) depersonalization and iii) personal accomplishment

Criterion variable	R^2	R^2 change	F change	B	SE (B)	β	*p*
i) Emotional Exhaustion	0.06						
STEP 1		0.017	2.619				
Shift work				−0.07	0.17	−0.03	.66
Educational level				0.11	0.81	0.01	.89
Work experience				0.02	0.01	0.13	.11
STEP 2		0.016	2.469				
Alexithymia				0.11	0.07	0.14	.11
STEP 3		0.02	1.053				
Attention				0.17	0.15	0.10	.27
Clarity				−0.11	0.17	−0.07	.52
Repair				−0.18	0.16	−0.11	.26
ii) Depersonalization	0.08						
STEP 1		0.002	0.348				
Shift work				−0.01	0.02	−0.05	.51
Educational level				−0.08	0.12	−0.05	.49
Work experience				0.001	0.002	0.03	.65
STEP 2		0.078	11.83**				
Alexithymia				0.03	0.01	0.29b**	<.001
STEP 3		0.003	0.142				
Attention				−0.015	0.024	−0.05	.54
Clarity				0.012	0.027	0.05	.65
Repair				<0.001	0.025	−0.02	.98
iii) Personal Accomplishment	0.19						
STEP 1		0.029	4.46*				
Shift work				0.1	0.12	−0.13	.93
Educational level				1.12	0.54	0.16*	.041
Work experience				−0.02	0.009	−0.17*	.036
STEP 2		0.097	16.77**				
Alexithymia				−0.18	0.44	−0.33**	<.001
STEP 3		0.044	2.598				
Attention				0.12	0.10	0.11	.21
Clarity				0.05	0.11	0.05	.61
Repair				0.17	0.10	0.14	.094

Note: p values are from the final equation,
*$p<0.05$;
**$p<0.01$

(Katsifaraki & Wood, 2014). The results of our hierarchical regression analysis showing the lack of incremental validity of emotional intelligence over alexithymia in explaining burnout do not, however, support this argument, at least among NAs working in NHs.

Regarding personal accomplishment, our results support the first hypothesis, which predicted a negative association between alexithymia and this dimension of burnout. Although some studies have not observed such an association (Katsifaraki & Wood, 2014), others authors have, like us, found support for this hypothesis (Bratis et al., 2009; Katsifaraki & Tucker, 2013; Popa-Velea et al., 2017), showing that the more alexithymic the individual, the less the sense of personal accomplishment at work.

In the study carried out by Katsifaraki and Tucker (2013) with nursing students, the association between alexithymia and personal accomplishment was explained by an externally oriented thinking style. According to the authors, this result could be explained by the insecurity and low self-esteem of alexithymic individuals. The lack of self-esteem would lead these individuals to constantly need external

evaluation and feedback instead of taking into account their own opinion. The fact that alexithymia is associated with poor self-esteem (Mousavi & Alavinezhad, 2016) and that it is also a significant explanatory variable of interpersonal problems (Zarei & Besharat, 2010), suggests that alexithymic NAs may suffer negative external evaluations from colleagues, older people and their families and therefore see themselves as unaccomplished at work.

More research is needed to better understand the association between alexithymia and personal achievement, since other authors have suggested that the association between alexithymia and burnout seems to be driven primarily by the 'difficulty identifying feelings' dimension (Mattila et al., 2007). This is consistent with the idea that alexithymic individuals, due to their difficulties in identifying not only their own emotions but also those of others, may be unable to receive and benefit from social support, leaving them more susceptible to interpersonal difficulties at work (Karukivi et al., 2011; Kojima, Senda, Nagaya, Tokudome, & Furukawa, 2003).

Finally and in line with the well-documented findings in a wide variety of settings (Davis & Humphrey, 2012; Gallagher & Vella-Brodrick, 2008; Lanciano & Curci, 2014), we expected to find that emotional intelligence would better explain burnout over and above alexithymia. Our results did not, however, support this hypothesis. One possible explanation for this finding is that burnout occurs when an individual's resources for dealing with stressors have diminished to such an extent that he or she becomes emotionally exhausted, at which point self-perceived emotional abilities can no longer act as a buffer. This interpretation would be consistent with the finding that emotional intelligence is a good explanatory variable of stress at work, before the burnout stage is reached (Mikolajczak et al., 2006). However, once burnout appears the explanatory capacity of emotional intelligence diminishes and it becomes residual once alexithymia has been taken into account.

These results may have important practical implications. Recent studies have suggested that training in emotional intelligence could help to minimize the development of burnout among nurses (Görgens-Ekermans & Brand, 2012; Katsifaraki & Tucker, 2013) and some authors have argued that training in emotional intelligence should form part of the nursing curriculum (Landa & López-Zafra, 2010; Van Dusseldorp, Van Meijel, & Derksen, 2011). However, our findings suggest that more attention should be paid to the relationship between alexithymia and burnout, since the ability to identify and describe emotions appears, in NAs, to be associated more strongly (than EI) with depersonalization and personal accomplishment, which are a key factors when it comes to the quality of older adult care.

4.1 | Limitations

Several limitations must be taken into account when interpreting our results. First, the cross-sectional design prevents us from inferring causal mechanisms. Thus, whereas we conceptualized alexithymia as a risk factor for the development of burnout, other studies have considered alexithymia to be a dysfunction in emotional processing that develops to facilitate better coping with workplace stressors (De Vente et al., 2006). More research is required to shed light on the distinction between primary and secondary alexithymia. Second, our use of the total score on the measure of alexithymia hampers a more detailed understanding of how and which of its dimensions are linked to the different dimensions of burnout. Third, the depersonalization subscale showed low internal consistency and hence the results derived from it should be interpreted with caution. Finally, the use of self-report measures for all the variables studied may mean that our results are subject to social desirability and response biases, which are common with these kinds of measures.

5 | CONCLUSION

Despite these limitations, the explanation given by this study regarding the association between alexithymia and burnout could contribute to a better understanding of their interrelationship. Our results regarding the lack of incremental validity of emotional intelligence over alexithymia in explaining burnout also have important practical implications, since they suggest the need to invest in programmes to improve the ability to identify and describe emotions rather than focusing on emotional intelligence in the broader sense. This is particularly relevant when one considers not only the higher incidence of burnout among professionals whose work involves constant demands and intense interaction with people with physical and emotional needs (Carod-Artal & Vázquez-Cabrera, 2013), but also the rapid growth in the healthcare workforce that will be required as a result of an ageing population (Eurofound, 2013). Our results suggest that it would be appropriate to address the ability to identify and describe feelings as part of NAs training programmes and/or in NHs as an institutional strategy to prevent burnout among NAs. It is worth noting that there is evidence for the efficacy of group therapy in reducing alexithymia and training programmes designed to increase awareness of bodily sensations and related emotions appear to be effective (Lumley et al., 2007). For example, some recent studies support the effectiveness of mindfulness programmes in reducing both alexithymia and burnout (Luken & Sammons, 2016; Norman, Marzano, Coulson, & Oskis, 2019; Turkal, Richardson, Cline, & Guimond, 2018).

A more detailed analysis of the relationship between burnout in NAs and the different dimensions of alexithymia is required to better understand the explanatory capacity they each have. In addition, longitudinal studies could help to clarify (a) whether emotional intelligence explains job stress better than alexithymia, with the latter becoming an explanatory variable once a worker is burned out and (b) whether alexithymia is indeed a better explanatory variable of burnout among NAs than emotional intelligence. The findings from both these lines of research would help to guide clinical practice and the training of NAs.

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CONFLICT OF INTEREST

None.

AUTHOR CONTRIBUTIONS

EA, AA, NG: Made substantial contributions to conception and design, and acquisition of data, and analysis and interpretation of data; EA, AA, NG: Involved in drafting the manuscript and revising it critically for important intellectual content; EA, AA, NG: Gave final approval of the version to be published. Each author participated sufficiently in the work to take public responsibility for appropriate portions of the content; EA, AA, NG: Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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