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Relationships between frustration intolerance beliefs, cognitive emotion regulation strategies and burnout among geriatric nurses and care assistants

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ABSTRACT

The purpose of this study was to address cognitive emotional factors (frustration intolerance beliefs, cognitive emotion regulation strategies) related to burnout among professionals caring for older persons. A sample of 202 nurses and care assistants for older people completed online questionnaires about their cognitive emotion regulation strategies, frustration intolerance beliefs, and burnout. Use of maladaptive strategies, especially self-blame and catastrophizing, predicted greater emotional exhaustion and depersonalization. Adaptive strategy use, such as refocusing on planning and positive reappraisal, was found to be linked to both lower emotional exhaustion and higher personal accomplishment. Frustration intolerance beliefs appeared to be closely associated with the emotional exhaustion and depersonalization dimensions of burnout, with higher frustration intolerance beliefs indicating a high risk of depersonalization. The present findings have several practical implications for reducing nurses' burnout based on cognitive behavioral therapy approaches, such as rational emotive behavior or mindfulness therapies.

Introduction

Geriatric care is an inherent occupational stressor for healthcare professionals, potentially contributing to the development of occupational burnout syndrome.¹ According to Maslach and Leiter,² *burnout* is a “syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do ‘people work’ of some kind” (p. 3). The burnout syndrome is classically described on three interrelated dimensions.^{2,3} (1) *Emotional exhaustion* (EE) refers to feeling overextended, and physically and emotionally depleted at work (Maslach et al., 2001). Individuals experience a loss of energy, fatigue and weakness. (2) *Depersonalization* (DP; or cynicism) occurs when a worker shows emotional detachment or distance from patients and work colleagues. This can manifest itself in impersonal, detached and negative attitudes toward patients. Cynicism and lack of empathy can occur. (3) *Low personal accomplishment* (PA) describes a negative self-evaluation of professional competence, efficacy, and personal achievement at work. A combination of higher EE and DP with lower PA is considered to be symptomatic of burnout.³

As burnout mainly occurs in a helping relationship, it is primarily found in healthcare professionals. A recent review reported a burnout risk score of 25–75% among healthcare professionals in geriatric settings.⁴ Despite this broad range, an international consensus has been built around the figure of 25–30%. Burnout is particularly prevalent among nurses working in a geriatric setting⁵ and with residents with dementia.⁶ A European study showed that caregivers working in long-stay geriatric services or nursing homes were the most exhausted in their work, which is often physically difficult, especially in France. For example, in France, they are off work for twice as long as their colleagues in other European countries, and mean exit rates are 61% for nurses and 68% for nursing auxiliaries in nursing homes for dependent elderly people (EHPADs).⁷ In one study among French nurses and care assistants in geriatric settings,⁸ 50.1% of participants exhibited signs of burnout. Another recent survey showed that 8.5% of staff in French assisted living facilities belonging to one private company had burnout.⁹ Burnout has been shown to have an impact on both mental (e.g., anxiety, depression) and physical (e.g., headaches, digestive disorders, insomnia, cardiovascular diseases) health,¹⁰ and affects individuals' professional (e.g., job satisfaction, sick leave, turnover, absenteeism¹¹) and older person's well-being (e.g., mistreatment, lower perceived quality of care^{12,13}).

Factors that can lead to burnout among health professionals caring for the older persons may be either organizational, such as time

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pressure to perform monotonous tasks, lack of control, unrealistic expectations or unreasonable demands¹⁰ or individual, such as personality traits or coping strategies.¹⁴ In particular, studies have suggested that emotion and problem-focused coping strategies play a crucial role in predicting burnout level.¹⁵ Research indicates that active problem-focused strategies such as planful problem solving (i.e., deliberate problem-focused efforts to alter a situation, such as making and then following a plan of action), positive reappraisal, and seeking social support, are negatively associated with burnout symptoms (especially high DP and low PA¹⁶) among nurses.¹⁷ By the same token, burnout, especially EE and DP, may partly stem from the use of ineffective emotion-focused coping strategies such as avoidance and distraction¹⁷ among nurses and care assistants.¹⁴ Thus, emotional responses to a stressful job can also be controlled or regulated through the use of *cognitive emotion regulation strategies*,¹⁸ describing conscious cognitive strategies for monitoring and regulating responses to stressful life events.^{19,20} Nine such strategies have been identified: (1) *self-blame* (blaming oneself for what has happened); (2) *blaming others*; (3) *acceptance* (accepting that the event has happened and resigning oneself); (4) *refocus on planning* (thinking about the next steps and how to manage the negative event); (5) *positive refocusing* (focusing on positive experiences); (6) *rumination* (being preoccupied by thinking about the feelings and thoughts generated by the negative situation); (7) *positive reappraisal* (assigning a positive meaning to the negative situation); (8) *putting into perspective* (minimizing the importance of the negative event); and (9) *catastrophizing* (having recurrent thoughts about the severity of the event and how it is the worst experience that could happen to someone). Garnefski and Kraaij¹⁸ suggested making a distinction between adaptive (acceptance, refocus on planning, positive refocusing, positive reappraisal, and putting into perspective) and maladaptive strategies (self-blame, rumination, blaming others, and catastrophizing). Research indicates that maladaptive strategies are associated with the burnout of professional caregivers working with older people,^{21–23} especially EE symptoms.²⁴ Higher *acceptance* and *rumination* are associated with higher levels of EE among care assistants employed in long-term care.²¹ *Positive reappraisal* is negatively related to DP.²¹ *Refocus on planning* and *positive reappraisal* are related to PA.^{21,22} These promising findings underline the specific role of cognitive emotion regulation strategies in healthcare burnout,²⁵ but need to be replicated with larger samples, focusing on geriatric settings (i.e. hospitals, nursing home, and home care institutions). Moreover, several cognitive coping processes, such as *catastrophizing*, *blaming others*, and *rumination*, are associated with negative emotions,²⁶ and are often employed to deal with the daily frustration²⁷ and emotions reported by professional caregivers.²⁸ It may be particularly important to examine caregivers' frustration, as it has been characterized as the stage prior to burnout.^{3,29}

Frustration intolerance is another emotional cognitive process (evaluative cognition), based on a refusal to accept the difference between desire and reality, that has unhealthy emotional and behavioral consequences.³⁰ Frustration intolerance is essentially an "attempt to shoehorn reality to fit our desires, whilst tolerance is the acceptance of the undesirable in order to achieve longer-term goals"³¹ (p. 193). Frustration intolerance beliefs refer to irrational beliefs regarding the tolerance of discomfort and frustration, and the demand for comfortable and easy conditions.³² It refers to unreasonable, rigid and inconsistent with reality cognitions related to the demand for comfort, gratification and that reality should be how we want it to be.³³ It may play an important role in specific emotional dysfunctions and disorders, such as anxiety, depression, and anger.³⁴ Relatively little is known about frustration intolerance beliefs among professional caregivers.

Different forms of frustration intolerance have been described.³² including discomfort intolerance, entitlement, emotional intolerance, and achievement frustration. *Discomfort intolerance* is the

belief that life should be easy, comfortable and free of hassle, effort or inconvenience. *Entitlement* is the belief that wishes should be met (immediate gratification), and other people should indulge and not frustrate these desires. *Emotional intolerance* is the belief that emotional distress is unbearable and must be quickly relieved or avoided. *Achievement frustration* is a perfectionist belief and reflects intolerance of obstacles to achieving high standards. The contents of frustration intolerance beliefs may play a central role in determining the type of emotional disturbance. For example, *emotional intolerance* is related to high anxiety, depression, and low assertiveness, while *entitlement* is significantly related to anger.³⁵ Until now, no study has investigated the relationships between burnout and frustration intolerance.

There is evidence in the literature that nurses and care assistants for older adults experience a higher burnout level that is linked in some ways to emotional disturbance. Considering the role of cognitive emotion regulation strategies in the development of burnout could lead to improvements in treatment and prevention. However, empirical data collected from healthcare professionals working in geriatric settings are still scant and fragmented. The present study therefore had two objectives. First, we set out to investigate the relationships between the use of specific cognitive emotion regulation strategies and burnout syndrome in a sample of French nurses and care staff working with older persons. Based on previous empirical findings,^{21,23} we hypothesized that maladaptive strategies such as rumination, catastrophizing, and blaming others are more consistently associated with a higher level of burnout, while adaptive strategies such as refocus on planning, positive refocusing, and putting into perspective are more consistently associated with a lower level of burnout. Second, we examined the extent to which frustration intolerance beliefs are related to burnout syndrome. We hypothesized that greater frustration intolerance is associated with higher levels of burnout. Concerning the relationships between specific domains of frustration intolerance (e.g., emotional intolerance, entitlement) and burnout, given the lack of previous research on this relationship, analyses were purely exploratory, with no specific more hypotheses.

Method

Design and participants

The present cross-sectional study was carried out in France. We administered an online self-report survey to nurses and care assistants (or equivalent) working in a geriatric setting (i.e., rehabilitation, palliative geriatric and long-term geriatric care units, geriatric psychiatry units, or nursing homes). Inclusion criteria were (1) caring for older persons, (2) age at least 18 years, and (3) French speaking. Participants were recruited through institutional listserv e-mails, community health forums, and support groups dedicated to geriatric caregivers, but not specifically to problems at work or burnout. These contained a description of the study and a weblink to the online survey. All participants completed the questionnaires in the same order, and none received any remuneration. Multiple responses were not authorized. A respondent could only answer once (activation of cookies to avoid repeated participation). Data were collected from 252 questionnaires, of which 41 (16.3%) were incomplete and nine (3.6%) were invalid, leaving 202 usable questionnaires. The overall response rate was 81.1%. The number of people who accessed but did not respond to the survey was 152 (40.2%). This study was performed in line with the principles of the Declaration of Helsinki, and recruitment and consent procedures were approved by an ethics committee. Participants read the information letter and provided their informed consent before accessing the survey.

Table 1
Characteristics of the 202 professional caregivers.

		N (%)	M (SD)[Range]
Sociodemographic characteristics			
Gender	Female	198 (98)	
	Male	4 (2)	
Age (years)			36.00 (10.47)[19-60]
Living environment	Urban	111 (55)	
	Peri urban	48 (23.8)	
	Rural	39 (19.3)	
Couple status	In a couple	147 (72.8)	
	Single	48 (27.2)	
Children	Yes	123 (60.9)	
	No	79 (39.1)	
Natural caregiver	Yes	24 (11.9)	
	No	178 (88.1)	
Socio-professional characteristics			
Profession	Nurse	58 (28.7)	
	Nursing assistant	114 (56.4)	
	Care auxiliaries	30 (14.9)	
Years of experience	In the profession		10.40 (8.04)[.5-39]
	With older persons		9.98 (8.65)[.5-36]
	In current work		7.36 (7.46)[.5-36]
Full time	Yes	60 (29.7)	
	No, at half time or more	93 (46.0)	
	No, less than half time	49 (24.3)	
Type of structure	Nursing homes for dependent older persons	150 (74.3)	
	Hospital / clinic	31 (15.4)	
	Home care institutions	17 (8.0)	
	Workplace		
Workplace	Urban	49 (24.3)	
	Peri urban	93 (46.4)	
	Rural	60 (29.3)	
Burnout	Emotional exhaustion		22.58 (11.41)[0–50]
	Depersonalization		6.91 (5.90)[0–27]
	Personal accomplishment		39.43 (5.69)[20–48]

Participants were 202 French nurses (28.7%, $n = 58$), care assistants (56.4%, $n = 114$) and care auxiliaries (14.9%, $n = 30$)¹ with a mean age of 36 years ($SD = 10.47$, range = 19-60, median = 35.50). The majority of participants were female (98%, $n = 198$). They worked either part time (i.e., more than 12.5 h per week; 46%, $n = 93$) or full time (29.7%, $n = 60$) in either an assisted living facility (98.1%, $n = 198$). The majority had a high school diploma or lower (57.4%, $n = 116$), were living with a partner (76.2%, $n = 147$), and had children (60.9%, $n = 123$). The length of work experience with older persons ranged from 6 months to 36 years ($M = 9.98$, $SD = 8.65$), and participants reported working an average of 7.36 years in their current job ($SD = 7.46$, range = 0.1-36, median = 5.00). Socio-demographic and socio-professional characteristics of the 202 nursing home caregivers are presented in Table 1.

Instruments

Burnout

Burnout was measured with the French version of the Maslach Burnout Inventory (MBI).³⁷ This self-report measure consists of 22 items related to occupational burnout, divided into three subscales: *EE*, *DP*, and *PA*. Participants were asked to rate the frequency of each statement on a Likert-like scale ranging from 0 (*Never*) to 6 (*Every day*). Responses were summed for each subscale, with higher scores on the *EE* and *DP* subscales indicating higher burnout, but higher scores on the *PA* subscale indicating lower burnout. Scores on each of the three subscales were categorized as high, average, or low, in

¹ Nurses ensure care and coordinate the work of the nursing assistants. Nursing assistants are in charge of hygiene, comfort, and curative care, under the supervision of a nurse. Care auxiliaries include nursing auxiliaries, medical and psychological assistants.

accordance with the cut-offs for French health professionals detailed in the MBI study³⁷: high *EE* was defined as a score greater than or equal to 27; high *DP* a score greater than or equal to 10; and high *PA* a score lower than or equal to 33. In the present study, reliability coefficients ranged from .87 to .67.

Cognitive emotion regulation strategies

The French version of the Cognitive Emotion Regulation Questionnaire (CERQ)³⁸ was used to measure cognitive strategies for handling emotionally arousing information. This self-report questionnaire consists of 36 items probing nine cognitive emotion regulation strategies: *self-blame*, *acceptance*, *focus on thoughts/rumination*, *positive refocusing*, *refocus on planning*, *positive reappraisal*, *putting into perspective*, *catastrophizing*, and *blaming others*. Participants responded on a 5-point Likert-like scale ranging from 1 (*Almost never*) to 5 (*Almost always*). Scores on these subscales were summed to reflect two general coping styles: *adaptive coping* or *elaborative processes* (positive refocusing, refocus on planning, acceptance, positive focusing, and putting into perspective), and *maladaptive coping* or *automatic processes* (rumination, catastrophizing, self-blaming, and blaming others), with higher scores indicating greater use of the coping strategy. Internal reliability coefficients in the present study ranged from .84 to .71.

Frustration intolerance

The French version of the Frustration Discomfort Scale (FDS)³⁹ was used to probe participants' perceived capacity for withstanding frustration. This 23-item self-report questionnaire assesses four subdomains: *discomfort intolerance*, *entitlement (emotional intolerance)*, and *achievement frustration*. Respondents estimated the strength with which they held a particular belief when distressed or frustrated on a 5-point Likert-like scale ranging from 1 (*Absent*) to 5 (*Very strong*), with higher scores indicating greater frustration intolerance. Four mean subdomain scores and a mean overall score were computed. In the present study, internal consistency for the four FDS subscales was adequate ($\alpha = .91-.75$).

Data analysis

Both descriptive and correlational (Spearman's r) to examine the correlations among study variables. were performed to examine the correlations among study variables, using SPSS 23.0®. Kruskal–Wallis analyses of variance (ANOVAs) and Dunn Bonferroni post hoc comparisons were used to compare emotion regulation strategies and frustration intolerance subdomains scores between nurses' level of burnout (low, moderate, and high) for each dimension (*EE*, *DP* and *PA*). We also used ANOVAs, followed by Dunn-Bonferroni post hoc comparisons, to test whether *EE*, *PD*, and *PA* levels differed according to sociodemographic characteristics. A p value of $< .05$ was considered to be statistically significant.

Results

Prevalence of burnout symptoms and descriptive analysis of variables

Figure 1 shows the percentages of nurses and care assistants who experienced high, medium, or low burnout on each of the three subscales. A majority (80.7%, $n = 163$) of professional caregivers had a low burnout risk, 13.4% ($n = 27$) a moderate risk (i.e. high scores on two burnout dimensions) and 5.9% ($n = 12$) a high risk of burnout (i.e. high scores on all three burnout dimensions). Overall, 38.1% ($n = 77$) of nurses and care assistants had at least one symptom of burnout (high *EE* or *DP*, or low *PA*). Furthermore, the means and standard deviations of burnout of professional caregivers are shown in Table 1. No differences were found regarding working hours (fulltime or parttime), type of job, (nurse, assistant nurse, etc.), type of institution (e.g., EHPAD), or

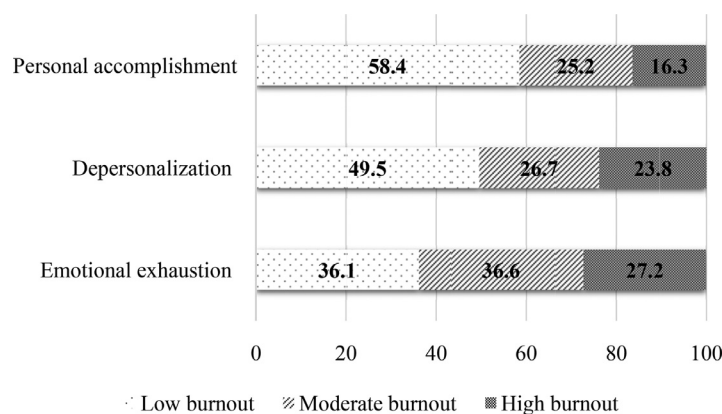


Fig. 1. Percentages of professional caregivers reporting emotional exhaustion, depersonalization and personal accomplishment, by risk of burnout (n = 202).

length of time in the profession. Nevertheless, it should be emphasized that there was a significant age difference between the three PA subgroups, $U(2, 200) = 6.34, p < .002$. The lower-risk PA subgroup had a higher mean age than the other two subgroups.

Relationships between burnout, cognitive emotion regulation strategies, and frustration intolerance subdomains

Relations between burnout and CERQ, FDS and socio-economic variables are depicted in Table 2. An examination of the association patterns among the burnout variables showed the expected correlations with adaptive ($r = -0.14_{-0.24}, p < .05$ to $.01$) and maladaptive ($r = -0.13_{-0.31}, p < .05$ to $.01$) cognitive emotion regulation strategies. EE was moderately positively associated with rumination, self-blame, and catastrophizing ($r = 0.12_{-0.30}, p < .05$ to $.01$), and negatively correlated with positive reappraisal ($r = -0.22, p < .01$). DP was significantly positively correlated with self-blame, acceptance, catastrophizing, and blaming others ($r = 0.12_{-0.29}, p < .05$ to $.001$), but negatively correlated with refocus on planning ($r = -0.12, p < .05$). PA was positively correlated with positive refocusing, refocus on planning and positive reappraisal ($r = 0.20_{-0.33}, p < .001$). Self-blame was negatively related to PA ($r = -0.22, p < .001$). These correlations are summarized in Table 2. Concerning frustration intolerance, EE, DP and the overall burnout score were all positively related to all the FDS

subdomains ($r = 0.19_{-0.32}, p < .05$ to $.001$). Finally, PA was negatively associated with discomfort intolerance ($r = -.16, p < .05$), and positively associated with achievement frustration ($r = 0.12, p < .05$).

Comparison between emotional exhaustion level groups on emotion regulation variables

As observed in Table 3, the EE risk groups differed significantly on maladaptive coping, especially self-blame, rumination, and catastrophizing. The high-risk subgroup had the highest mean score. Participants in this subgroup also made less use of adaptive cognitive emotion regulation strategies, particularly refocus in planning and positive reappraisal. The high-risk and moderate-risk subgroups both had higher mean scores on discomfort intolerance and emotional intolerance than the lower-risk subgroup did.

Comparison between depersonalization level groups on emotion regulation variables

Concerning the DP subgroups, we found statistically significant differences on maladaptive coping, such as self-blame, catastrophizing, and blaming others. Participants in the high-risk subgroup made significantly a greater use of maladaptive strategies (Table 4). They also scored significantly higher on each frustration intolerance subdomain.

Table 2

Spearman correlation coefficients for cognitive emotion regulation strategies, frustration intolerance subdomains and burnout subscales, and covariates (age, professional experience).

Variables	Emotional exhaustion	Depersonalization	Personal accomplishment
Socioprofessional variables			
Age	-.06	-.16	.22***
Professional experience	.05	-.06	.09
Professional experience among older people	-.02	-.13*	.17*
Professional experience in actual job	.03	-.05	.08
Cognitive emotion regulation strategies			
Self-blame	.18**	.29***	-.22***
Acceptance	-.11	.12	-.01
Rumination	.12*	.10	-.03
Positive refocusing	-.03	.12*	.20**
Refocus on planning	-.07	-.12*	.25***
Positive reappraisal	-.22***	-.10	.33***
Putting into perspective	-.09	.16*	.11
Catastrophizing	.30***	.19**	-.10
Blaming others	.09	.16*	-.09
Adaptive coping	-.15*	.04	.24***
Maladaptive coping	.25***	.25***	-.13*
Frustration intolerance beliefs			
Discomfort intolerance	.27***	.32***	-.16*
Entitlement	.22**	.21**	-.04
Emotional intolerance	.27***	.25***	.03
Achievement frustration	.19**	.19**	.12
Total score	.23**	.21**	.04

Note. *p < .05; **p < .01; ***p < .001.

Table 3
Mean (standard deviation) scores according to emotional exhaustion level, and results of ANOVA and post hoc comparisons.

Variables		Emotional exhaustion			Comparison subgroups		
		Low (n = 73) M (SD)	Moderate (n = 74) M (SD)	High (n = 55) M (SD)	U	p-value	Post hoc comparisons
Cognitive emotion regulation strategies	Self-blame	7.90 (2.65)	8.91 (2.94)	8.80 (2.79)	5.74	.049	Moderate & High > Low
	Acceptance	12.81 (3.75)	12.28 (3.19)	11.60 (3.29)	3.77	.152	—
	Rumination	11.37 (3.79)	12.73 (3.49)	11.87 (3.26)	5.67	.050	Moderate > Low
	Positive refocusing	11.47 (4.17)	11.82 (3.75)	11.22 (3.06)	.66	.719	—
	Refocus on planning	15.77 (3.04)	16.23 (2.95)	15.05 (2.97)	5.90	.046	High < Low
	Positive reappraisal	15.59 (3.45)	14.99 (3.40)	13.76 (3.20)	9.32	.009	High < Low
	Putting into perspective	13.15 (4.04)	13.01 (3.12)	12.64 (2.84)	.81	.666	—
	Catastrophizing	6.30 (2.68)	7.82 (2.81)	7.93 (2.75)	20.30	<.001	Moderate & High > Low
	Blaming others	6.32 (1.94)	6.86 (2.12)	7.15 (3.01)	2.82	.244	—
	Adaptive coping	68.78 (13.54)	68.34 (11.93)	64.27 (10.49)	5.94	.047	Low & Moderate > High
Frustration intolerance beliefs	Maladaptive coping	31.89 (7.85)	36.32 (8.10)	35.75 (8.60)	14.01	<.001	Moderate & High > Low
	Discomfort intolerance	2.73 (.76)	3.07 (.83)	3.20 (.80)	9.54	.008	High > Moderate > Low
	Entitlement	2.75 (.81)	2.94 (.73)	3.06 (.76)	5.63	.060	—
	Emotional intolerance	2.99 (.77)	3.39 (.73)	3.36 (.81)	10.99	.004	High & Moderate > Low
	Achievement frustration	3.46 (.74)	3.74 (.71)	3.70 (.71)	5.44	.066	—
	Total score	2.86 (.88)	2.95 (1.17)	3.13 (1.04)	9.47	.010	High & Moderate > Low

Note. Maslach Burnout Inventory cut-offs: high emotional exhaustion ≥ 30 ; moderate emotional exhaustion =18-29; low emotional exhaustion ≤ 17 .

Comparison between personal accomplishment level groups on emotion regulation variables

Finally, ANOVAs indicated that the mean self-blame score of the high-risk PA subgroup was significantly higher than that of the low-risk subgroup. Similarly, the mean adaptive coping score (especially refocus on planning) of the high-risk subgroup was significantly lower than that of the low-risk subgroup. Furthermore, the moderate-risk PA subgroup had a lower positive reappraisal score and a higher discomfort intolerance score than the low-risk subgroup. All details are provided in Table 5. No other significant differences were found (see Tables 5).

Discussion

The present study explored the associations between cognitive emotion regulation strategies, frustration intolerance, and burnout among nurses and care assistants for older adults. First, our sample is consistent with the national data (France) on gerontological caregivers. In France, it is estimated that care assistants represent 67.2% of the paramedical/social staff in geriatric setting, nurses 18.5%, and

care auxiliaries 14.3%, with an average age between 37 and 39 years old, and an over-representation of women (about 94%). Average job tenure was 9.3 years for care assistants and 7.7 for nurses and care auxiliaries in 2007.³⁶ Burnout was present in our sample, with 19% of participants being categorized with a moderate-to-high risk of burnout. A substantial number of participants reported high levels of EE (27%) and DP (24%), and low levels of PA (16%). Consistent with previous research,¹⁴ older caregivers reported significantly higher PA than their younger counterparts. They probably had better stress management strategies. These results are also consistent with international⁵ and national^{8,9} findings on the prevalence of burnout in professional caregivers for the older persons.

First, across the diverse types of cognitive emotion regulation strategies, maladaptive strategies predicted higher levels of EE and DP, consistent with recent findings.^{21–24} More specifically, greater use of self-blame significantly contributed to all three dimensions of burnout (EE, DP and PA). Harmful strategies, such *self-blame* (blaming oneself for what has happened), may be seen as variations in disengagement and objectification in care,⁴⁰ and have been related to burnout in other medical settings.⁷ Focus of self-perceived errors or insufficient (higher self-blame) can be related to *catastrophizing*

Table 4
Mean (standard deviation) scores according to depersonalization level, and results of ANOVA and post hoc comparisons.

Variables		Depersonalization			Comparison subgroups		
		Low (n = 100) M (SD)	Moderate (n = 54) M (SD)	High (n = 48) M (SD)	U	p-value	Post hoc comparisons
Cognitive emotion regulation strategies	Self-blame	7.89 (2.57)	8.91 (2.85)	9.38 (2.93)	12.46	.002	High > Low
	Acceptance	11.78 (3.39)	12.87 (3.21)	12.69 (3.73)	4.56	.102	—
	Rumination	11.64 (3.71)	12.63 (3.15)	12.06 (3.69)	2.92	.232	—
	Positive refocusing	11.24 (3.71)	11.39 (4.02)	12.29 (3.39)	3.02	.221	—
	Refocus on planning	15.93 (2.99)	16.09 (2.93)	14.96 (3.06)	3.94	.139	—
	Positive reappraisal	15.28 (3.55)	14.30 (3.33)	14.67 (3.21)	3.37	.185	—
	Putting into perspective	12.65 (3.52)	12.78 (3.32)	13.81 (3.18)	4.25	.119	—
	Catastrophizing	6.87 (2.79)	7.63 (2.90)	7.30 (2.83)	6.39	.041	Moderate > Low
	Blaming others	6.45 (2.10)	6.65 (2.48)	7.46 (2.61)	5.87	.50	High > Low
	Adaptive coping	66.88 (11.80)	67.43 (12.31)	68.42 (13.35)	.22	.877	—
Frustration Intolerance beliefs	Maladaptive coping	32.85 (8.14)	35.81 (7.67)	36.73 (8.94)	10.20	.006	High > Low
	Discomfort intolerance	2.72 (.84)	3.16 (.71)	3.29 (.73)	15.30	<.001	Moderate & High > Low
	Entitlement	2.79 (.84)	2.82 (.65)	3.20 (.71)	7.90	.019	High > Low
	Emotional intolerance	3.07 (.76)	3.28 (.76)	3.50 (.79)	8.01	.018	High > Low
	Achievement frustration	3.50 (.76)	3.65 (.73)	3.83 (.61)	5.77	.50	High > Low
	Total score	2.86 (.88)	2.95 (1.17)	3.12 (1.04)	10.48	.018	High > Low

Note. Maslach Burnout Inventory cut-offs: high depersonalization ≥ 12 ; moderate depersonalization = 6-11; low depersonalization ≤ 5 .

Table 5
Mean (standard deviation) scores according to personal accomplishment level, and results of ANOVA and post hoc comparisons.

Variables	Personal accomplishment			Comparison subgroups			
	Low (n = 118) M (SD)	Moderate (n = 51) M (SD)	High (n = 33) M (SD)	U	p-value	Post hoc comparisons	
Cognitive emotion regulation strategies	Self-blame	8.19 (2.81)	8.88 (2.75)	9.12 (2.73)	6.30	.043	High > Low
	Acceptance	12.45 (3.62)	12.10 (3.07)	12.00 (3.39)	.45	.797	—
	Rumination	12.03 (3.85)	12.33 (3.13)	11.42 (3.18)	1.82	.403	—
	Positive refocusing	12.10 (3.95)	10.98 (3.37)	10.33 (3.05)	5.76	.056	—
	Refocus on planning	16.34 (2.96)	15.69 (2.52)	13.70 (3.07)	18.63	<.001	High < Moderate < Low
	Positive reappraisal	15.81 (3.35)	13.84 (3.33)	13.12 (2.68)	22.27	<.001	High & Moderate < Low
	Putting into perspective	13.29 (3.64)	12.76 (3.31)	12.09 (2.47)	3.72	.156	—
	Catastrophizing	7.20 (3.08)	7.20 (2.47)	7.82 (2.40)	3.23	.199	—
	Blaming others	6.65 (2.37)	6.67 (2.14)	7.18 (2.62)	1.09	.579	—
	Adaptive coping	69.98 (12.61)	65.37 (10.69)	61.24 (10.72)	13.31	.001	High < Low
	Maladaptive coping	34.07 (8.77)	35.08 (7.67)	35.55 (7.94)	1.31	.519	—
Frustration Intolerance beliefs	Discomfort intolerance	2.85 (.80)	3.22 (.85)	3.06 (.81)	7.63	.022	Moderate > Low
	Entitlement	2.89 (.81)	2.96 (.83)	2.82 (.56)	.27	.875	—
	Emotional intolerance	3.25 (.78)	3.27 (.76)	3.23 (.85)	.85	.654	—
	Achievement frustration	3.67 (.77)	3.59 (.68)	3.48 (.64)	2.09	.351	—
	Total score	2.86 (.88)	2.95 (1.17)	3.13 (1.04)	.56	.548	—

Note. Maslach Burnout Inventory cut-offs: high personal accomplishment ≤ 33 ; moderate personal accomplishment = 39-34; low personal accomplishment ≥ 40 .

(repetitive thoughts about a negative event) and *rumination* (emphasis on the negative aspect of an experience) patterns, as potential markers of an EE risk. This hypothesis is supported by the literature indicating that female physicians have a stronger tendency to focus attention on their own negative thoughts and feelings.⁴¹ Rumination or catastrophizing increase anxiety and alert responses, as they hinder more rational and profitable interpretations of problems.²²

Higher level of catastrophizing and other-blame were also found to be associated with elevated DP scores. These findings also suggest that nurses using avoidance strategies such as blaming others are more prone to DP.¹⁷ Blaming others may be seen as a psychological defense to temper or manage disturbing emotions through reappraisal, in that it reconstructs the cognitions from which threatening emotions arise. An association between blaming another person and poor adjustment has previously been identified,⁴² and is seen as an important determinant of negative attitudes toward patients (higher DP), such as anger.⁴³ More attention should be paid to reducing healthcare professionals' use of maladaptive strategies, especially since a meta-analysis suggested that their use is more damaging than the nonuse of adaptive strategies.¹⁹

Adaptive strategies were associated with lower EE and higher PA. No significant results were found for the DP dimension. As hypothesized, two strategies seemed protective in terms of high EE and low PA: refocus on planning and positive reappraisal. These same two strategies were also associated with higher PA in two previous studies of burnout among nursing staff working with older persons.^{21,22} However, the current study found no association between use of positive reappraisal and lower DP, in contrast to Bamonti et al.²¹ Using these proactive strategies allows for the positive reinterpretation of stressful situations and acceptance of stressors, thereby increasing the sense of PA and decreasing EE.⁴⁴ Planning and identifying the positive aspects of a stressful situation (an optimistic appraisal pattern⁴⁵) maintain positive evaluations and positive expectations about self and work, thus reducing EE and supporting PA. Frequent use of refocus on planning and positive reappraisal strategies is reported to be strongly associated with fewer psychopathological symptoms than the use of other adaptive strategies.^{20,27}

Second, the current study investigated the role of frustration intolerance in burnout symptomatology. More specifically, higher EE and DP levels were related to difficulty regulating frustration. Discomfort intolerance and emotional intolerance were higher in the high-risk EE subgroup than in the other subgroups. DP was also the domain closest to each frustration intolerance dimension. These

exploratory findings suggest that low frustration tolerance helps to explain burnout syndrome. This is in line with previous research underlining that frustration intolerance beliefs may contribute to a larger construct of negative affectivity encompassing stress, anxiety, and depression.⁴⁶ In particular, the higher levels of discomfort intolerance and emotional intolerance within the high-risk EE subgroup were consistent with the idea that specific areas of frustration intolerance are related to psychological problems.⁴⁶ Frustration intolerance beliefs may make professional caregivers unwilling to tolerate negative emotional events or daily work stress, such that they become vulnerable to burnout. In particular, relationships have been found between emotional intolerance and anxiety, and between discomfort intolerance and depressed mood.³⁵ These disorders can partially overlap EE symptoms (e.g., fatigue, inability to concentrate). Finally, closer relationships between DP and frustration intolerance were identified in our study. Negative affective states (e.g., anger, cynicism, frustration) arising from DP can be triggered or maintained by dysfunctional frustration beliefs. Professional caregivers with high achievement frustration were also more likely to have higher PA. Achievement-related irrational beliefs intersect with the desirable level of achievement related outcomes or perfectionism.⁴⁷ Striving for perfection has been found to be negatively related to burnout (including low PA) and active coping (e.g., positive refocusing) among school teachers.⁴⁸

The present study had several limitations that need to be taken in account. First, as the data came from self-reports collected via the Internet, there may have been a response bias. Online questionnaires generate less social desirability, but have a higher nonresponse rate than face-to-face surveys (Heerwegh & Loosveldt, 2008). Future research should consider other measurement methods, such as interviews or observations, and replicate these findings with a more representative sample. Second, the fact that all participants were recruited online limits the generalizability of results. Third, the cross-sectional design of the present study meant that we could not confirm causal relationships between variables. A longitudinal study with a larger, more diverse sample of older nurses is needed to fully test both the intercorrelations and causal ordering of the constructs in this study. Moreover, it would be useful to investigate the relative importance of self-worth beliefs in burnout and frustration intolerance. It is important to extend this research by including other potential factors of likely importance, such as mood (e.g., depression and anxiety), critical stressful life events, and perceived social support.

Relevance to clinical practice

Adaptive emotion regulation strategies, such as positive reappraisal, seem to be a promising avenue in burnout prevention. Nevertheless, more attention should be paid to reducing healthcare professionals' use of maladaptive strategies. Particular attention should be paid to reducing self-blame, as this may be effective in helping to reduce the experience of worthlessness and higher levels of burnout seen in female nurses. Burnout prevention programs should consider screening the caregiver, even informally, for the use of self-blame. Interventions incorporating perspective-taking components that reduce self-blame and facilitate self-forgiveness could promote better adjustment and thereby avert burnout. This could be done during regular feedback sessions during staff meetings (e.g., briefing and debriefing sessions). The use of a team-based approach in care provides additional support and resources for caregivers, thus helping them feel less exhausted, and less responsible for unmet work goals. Education could focus on helping caregivers form realistic expectations of clinical/nursing practice, by (1) encouraging them to share their experiences, thoughts, and feelings, and (2) enhancing their feelings of competence or achievement when working with older residents. Geriatric caregivers could also benefit from brief stress-reducing interventions, such as mindfulness, that enable them to redirect their attention to the present moment, rather than focus on catastrophizing about past or ongoing negative experiences.⁴⁹ Previous studies have underlined that mindfulness-based stress reduction programs (e.g., based on positive reappraisal) are an effective strategy for reducing burnout among nurses and other healthcare providers, especially the emotional exhaustion dimension.^{50,51} This approach would also be useful to limit rumination among geriatric caregivers and encourage them to be less critical in their thinking.⁵² Interventions focusing on dysfunctional frustration intolerance beliefs, such as rational emotive behavior therapy might be useful for reducing burnout among caregivers working with older adults. This type of intervention, targeting a change in caregivers' irrational beliefs (e.g., group therapy to counter irrational beliefs and stay healthy and happy), might improve their resilience and reduce their burnout symptoms. Previous studies have suggested that REBT could be a beneficial approach for combating burnout.⁵³

Conclusion

This study highlights the risk of burnout among professional caregivers, as well as the importance of understanding the various cognitive emotion regulation styles that predict burnout in geriatric settings. Cognitive emotion regulation strategies may be a pivotal factor for determining how individuals cope with stress in the workplace, and more particularly how they regulate and impede negative emotions, such as frustration. Planning and identifying the positive aspects of a stressful situation maintains positive evaluations and positive expectations about self and work, thus reducing the risk of burnout syndromes. However, more comprehensive research is needed to explain the directionality of causation between the emotion regulation variables and burnout among geriatric caregivers.

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References

- Mantzorou M, Koukia E. Professional burnout of geriatric nurses caring for elderly people with dementia. *Perioperat Nurs*. 2018;7(1):6–26. <https://doi.org/10.5281/ZENODO.1401170>.
- Maslach C, Leiter MP. Understanding the burnout experience: recent research and its implications for psychiatry. *World Psychiatry*. 2016;15(2):103–111. <https://doi.org/10.1002/wps.20311>.
- Maslach C. What have we learned about burnout and health? *Psychol Health*. 2001;16(5):607–611. <https://doi.org/10.1080/08870440108405530>.
- Sanchez S, Mahmoudi R, Moronne I, Camonin D, Novella JL. Burnout in the field of geriatric medicine: review of the literature. *Eur Geriatr Med*. 2015;6(2):175–183. <https://doi.org/10.1016/j.eurger.2014.04.014>.
- Cocco E. How Much is geriatric caregivers burnout caring-specific? Questions from a questionnaire survey. *Clin Pract Epidemiol Ment Health*. 2010;6(1):66–71. <https://doi.org/10.2174/1745017901006010066>.
- Costello H, Cooper C, Marston L, Livingston G. Burnout in UK care home staff and its effect on staff turnover: MARQUE English national care home longitudinal survey. *Age Ageing*. 2020;49(1):74–81. <https://doi.org/10.1093/ageing/afz118>.
- McCain RS, McKinley N, Dempster M, Campbell WJ, Kirk SJ. A study of the relationship between resilience, burnout and coping strategies in doctors. *Postgrad Med J*. 2018;94(1107):43–47. <https://doi.org/10.1136/postgradmedj-2016-134683>.
- Estryn-Behard M, Chaumon E, Garcia F, et al. La souffrance au travail en gériatrie. *Comprendre et agir. La Revue Francophone de Gériatrie et de Gériologie*. 2013:6–26.
- Zawieja P, Benattar L. Burnout des soignants en gériatrie : Prévalence et déterminants dans 185 établissements français. *NPG Neurol – Psychiatr – Gériatr*. 2019;19(113):286–293. <https://doi.org/10.1016/j.npg.2019.06.003>.
- Harrad R, Sulla F. Factors associated with and impact of burnout in nursing and residential home care workers for the elderly. *Acta Bio Med Aetnei Parmensis*. 2018;89(7-S):60–69. <https://doi.org/10.23750/abm.v89i7-S.7830>.
- Leiter MP, Maslach C. Nurse turnover: The mediating role of burnout. *J Nurs Manag*. 2009;17(3):331–339. <https://doi.org/10.1111/j.1365-2834.2009.01004.x>.
- Neuberg M, Zeleznik D, Mestrovic T, Ribic R, Kozina G. Is the burnout syndrome associated with elder mistreatment in nursing homes: results of a cross-sectional study among nurses. *Arch Ind Hyg Toxicol*. 2017;68(3):190–197. <https://doi.org/10.1515/aiht-2017-68-2982>.
- Schmidt SG, Dichter MN, Bartholomeyczik S, Hasselhorn HM. The satisfaction with the quality of dementia care and the health, burnout and work ability of nurses: a longitudinal analysis of 50 German nursing homes. *Geriatr Nurs*. 2014;35(1):42–46. <https://doi.org/10.1016/j.gerinurse.2013.09.006>.
- Narumoto J, Nakamura K, Kitabayashi Y, Shibata K, Nakamae T, Fukui K. Relationships among burnout, coping style and personality: study of Japanese professional caregivers for elderly. *Psychiatry Clin Neurosci*. 2008;62(2):174–176. <https://doi.org/10.1111/j.1440-1819.2008.01751.x>.
- Montero-Marin J, Prado-Abril J, Piva Demarzo MM, Gascon S, García-Campayo J. Coping with stress and types of burnout: explanatory power of different coping strategies. *PLoS One*. 2014;9(2):e89090. <https://doi.org/10.1371/journal.pone.0089090>.
- Garrosa E, Rainho C, Moreno-Jiménez B, Monteiro MJ. The relationship between job stressors, hardy personality, coping resources and burnout in a sample of nurses: a correlational study at two time points. *Int J Nurs Stud*. 2010;47(2):205–215. <https://doi.org/10.1016/j.ijnurstu.2009.05.014>.
- Duquette A, Kérouac S, Sandhu BK, Ducharme F, Saulnier P. Psychosocial determinants of burnout in geriatric nursing. *Int J Nurs Stud*. 1995;32(5):443–456. [https://doi.org/10.1016/0020-7489\(95\)00006-j](https://doi.org/10.1016/0020-7489(95)00006-j).
- Garnefski N, Kraaij V. The cognitive emotion regulation questionnaire. *Eur J Psychol Assess*. 2007;23(3):141–149. <https://doi.org/10.1027/1015-5759.23.3.141>.
- Aldao A, Nolen-Hoeksema S, Schweizer S. Emotion-regulation strategies across psychopathology: a meta-analytic review. *Clin Psychol Rev*. 2010;30(2):217–237. <https://doi.org/10.1016/j.cpr.2009.11.004>.
- Garnefski N, Koopman H, Kraaij V, ten Cate R. Cognitive emotion regulation strategies and psychological adjustment in adolescents with a chronic disease. *J Adolesc*. 2009;32(2):449–454. <https://doi.org/10.1016/j.adolescence.2008.01.003>.
- Bamonti P, Conti E, Cavanagh C, et al. Coping, cognitive emotion regulation, and burnout in long-term care nursing staff: a preliminary study. *J Appl Gerontol*. 2019;38(1):92–111. <https://doi.org/10.1177/0733464817716970>.
- Castellano E, Muñoz-Navarro R, Toledo MS, Sponton C, Medrano LA. Cognitive processes of emotional regulation, burnout and work engagement. *Psicothema*. 2019;31.1:73–80. <https://doi.org/10.7334/psicothema2018.228>.
- Bamonti PM, Smith A, Smith HM. Cognitive emotion regulation strategies predict burnout in geriatric nursing staff. *Clin Gerontol*. 2020:1–9. <https://doi.org/10.1080/07317115.2020.1829230>. Published online October 22.
- Bassal C, Czellar J, Kaiser S, ES Dan-Glauser. Relationship between emotions, emotion regulation, and well-being of professional caregivers of people with dementia. *Res Aging*. 2016;38(4):477–503. <https://doi.org/10.1177/0164027515591629>.
- Jackson-Koku G, Grime P. Emotion regulation and burnout in doctors: a systematic review. *Occup Med*. 2019;69(1):9–21. <https://doi.org/10.1093/occmed/kqz004>.
- Martin RC, Dahlen ER. Cognitive emotion regulation in the prediction of depression, anxiety, stress, and anger. *Personal Individ Differ*. 2005;39(7):1249–1260. <https://doi.org/10.1016/j.paid.2005.06.004>.
- Garnefski N, Kraaij V, Spinhoven P. Negative life events, cognitive emotion regulation and emotional problems. *Personal Individ Differ*. 2001;30(8):1311–1327. [https://doi.org/10.1016/S0191-8869\(00\)00113-6](https://doi.org/10.1016/S0191-8869(00)00113-6).
- Rae HM. Managing feelings: caregiving as emotion work. *Res Aging*. 1998;20(1):137–160. <https://doi.org/10.1177/0164027598201007>.

29. Bridgeman PJ, Bridgeman MB, Barone J. Burnout syndrome among healthcare professionals. *Am J Health Syst Pharm*. 2018;75(3):147–152. <https://doi.org/10.2146/ajhp170460>.
30. David D, Lynn S, Ellis A. *Rational and irrational beliefs*. Oxford University Press; 2009. <https://doi.org/10.1093/acprof:oso/9780195182231.001.0001>.
31. Harrington N. Frustration intolerance as a multidimensional concept. *J Rat-Emo Cognit-Behav Ther*. 2007;25(3):191–211. <https://doi.org/10.1007/s10942-006-0051-0>.
32. Harrington N. It's too difficult! Frustration intolerance beliefs and procrastination. *Personal Individ Differ*. 2005;39(5):873–883. <https://doi.org/10.1016/j.paid.2004.12.018>.
33. Jibeen T. Frustration intolerance beliefs as predictors of emotional problems in University undergraduates. *J Rat-Emo Cognit-Behav Ther*. 2013;31(1):16–26. <https://doi.org/10.1007/s10942-012-0154-8>.
34. Filippello P, Harrington N, Buzzai C, Sorrenti L, Costa S. The relationship between frustration intolerance, unhealthy emotions, and assertive behaviour in Italian students. *J Rat-Emo Cognit-Behav Ther*. 2014;32(4):257–278. <https://doi.org/10.1007/s10942-014-0193-4>.
35. Stanković S, Vukosavljević-Gvozden T. The relationship of a measure of frustration intolerance with emotional dysfunction in a student sample. *J Rat-Emo Cognit-Behav Ther*. 2011;29(1):17–34. <https://doi.org/10.1007/s10942-011-0128-2>.
36. Bazin M, Muller M. Le personnel et les difficultés de recrutement dans les Ehpad. *Etudes Résultats – DRESS*. 2018;(1067):1–6.
37. Dion G, Tessier R. Validation de la traduction de l'inventaire d'épuisement professionnel de Maslach et Jackson. *Can J Behav Sci*. 1994;26(2):210–227. <https://doi.org/10.1037/0008-400X.26.2.210>.
38. Jermann F, Van der Linden M, d'Acremont M, Zermatten A. Cognitive Emotion Regulation Questionnaire (CERQ). *Eur J Psychol Assess*. 2006;22(2):126–131. <https://doi.org/10.1027/1015-5759.22.2.126>.
39. Chamayou J-L, Tsenova V, Gonthier C, Blatier C, Yahyaoui A. Validation française de l'échelle de frustration et d'inconfort (Frustration Discomfort Scale). *L'Encéphale*. 2016;42(4):325–332. <https://doi.org/10.1016/j.encep.2015.08.005>.
40. Doolittle BR, Windish DM, Seelig CB. Burnout, coping, and spirituality among internal medicine resident physicians. *J Graduate Med Educ*. 2013;5(2):257–261. <https://doi.org/10.4300/JGME-D-12-00136.1>.
41. Spataro BM, Tilstra SA, Rubio DM, McNeil MA. The toxicity of self-blame: sex differences in burnout and coping in internal medicine trainees. *J Women's Health*. 2016;25(11):1147–1152. <https://doi.org/10.1089/jwh.2015.5604>.
42. Tennen H, Afleck G. Blaming others for threatening events. *Psychol Bull*. 1990;108(2):209–232. <https://doi.org/10.1037/0033-2909.108.2.209>.
43. Quigley BM, Tedeschi JT. Mediating effects of blame attributions on feelings of anger. *Pers Soc Psychol Bull*. 1996;22(12):1280–1288. <https://doi.org/10.1177/01461672962212008>.
44. Rowe MM. Skills training in the long-term management of stress and occupational burnout. *Curr Psychol*. 2000;19(3):215–228. <https://doi.org/10.1007/s12144-000-1016-6>.
45. Lowe R, Bennett P. Exploring coping reactions to work-stress: application of an appraisal theory. *J Occup Organ Psychol*. 2003;76(3):393–400. <https://doi.org/10.1348/096317903769647247>.
46. Harrington N. Frustration intolerance beliefs: their relationship with depression, anxiety, and anger, in a clinical population. *Cognit Ther Res*. 2006;30(6):699–709. <https://doi.org/10.1007/s10608-006-9061-6>.
47. Hall PA, Holmqvist M, Sherry SB. Risky adolescent sexual behavior: a psychological perspective for primary care clinicians. *Top Adv Pract Nurs*. 2004(4).
48. Stoeber J, Rennert D. Perfectionism in school teachers: relations with stress appraisals, coping styles, and burnout. *Anxiety Stress Coping*. 2008;21(1):37–53. <https://doi.org/10.1080/10615800701742461>.
49. Turner JA, Anderson ML, Balderson BH, Cook AJ, Sherman KJ, Cherkin DC. Mindfulness-based stress reduction and cognitive behavioral therapy for chronic low back pain: similar effects on mindfulness, catastrophizing, self-efficacy, and acceptance in a randomized controlled trial. *Pain*. 2016;157(11):2434–2444. <https://doi.org/10.1097/j.pain.0000000000000635>.
50. Cohen-Katz J, Wiley SD, Capuano T, Baker DM, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout, Part II: a quantitative and qualitative study. *Holist Nurs Pract*. 2005;19(1):26–35. <https://doi.org/10.1097/00004650-200501000-00008>.
51. Mackenzie CS, Poulin PA, Seidman-Carlson R. A brief mindfulness-based stress reduction intervention for nurses and nurse aides. *Appl Nurs Res*. 2006;19(2):105–109. <https://doi.org/10.1016/j.apnr.2005.08.002>.
52. Andreotti E, Congard A, Le Vigouroux S, et al. Rumination and mindlessness processes: trajectories of change in a 42-day mindfulness-based intervention. *J Cognit Psychother*. 2018;32(2):127–139. <https://doi.org/10.1891/0889-8391.32.2.127>.
53. Onuigbo LN, Onyishi CN, Eseadi C. Clinical benefits of rational-emotive stress management therapy for job burnout and dysfunctional distress of special education teachers. *WJCC*. 2020;8(12):2438–2447. <https://doi.org/10.12998/wjcc.v8.i12.2438>.