Coping, Cognitive Emotion Regulation, and Burnout in Long-Term Care Nursing Staff: A Preliminary Study

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Abstract

Direct care workers (e.g., certified nursing assistants [CNAs]) employed in long-term care (LTC) are particularly vulnerable to the experience of burnout, yet they have received relatively less research attention compared to Licensed Practical Nurses and Registered Nurses. Within the burnout literature, evidence suggests that the deployment of certain coping strategies influences levels of burnout. The current study examined the extent to which coping (e.g., problem-focused, emotion-focused, and dysfunctional coping) and cognitive emotion regulation strategies (e.g., positive reappraisal)

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predicted burnout after controlling for covariates (age, sleep duration). Fifty-six CNAs were surveyed at four skilled nursing facilities in the United States. Dysfunctional coping was significantly associated with emotional exhaustion and depersonalization. Among cognitive emotion regulation strategies, positive reappraisal was significantly associated with depersonalization. Shorter sleep duration was associated with significantly greater depersonalization. Findings suggest the need to develop interventions for CNAs aimed at reducing dysfunctional coping strategies and increasing sleep duration.

Introduction

Across the United States, there is a widespread shortage of direct care nursing staff, which is expected to worsen as the number of older adults in the population rises (Institute of Medicine, Committee on the Future Health Care Workforce for Older Americans, 2008; Stone & Harahan, 2010). Certified nursing assistants (CNAs) in the United States are predominantly female (>90%), typically with a high school education or less. Nearly half of the CNAs identify as a member of a racial or ethnic minority group (Squillace et al., 2009). CNAs receive low wages, regardless of years worked, and many use government assistance programs to supplement their income (Squillace et al., 2009). Long-term care (LTC) facilities already face high rates of turnover, particularly among direct care staff (Castle & Engberg, 2005), which directly affects quality of patient care (Castle, Engberg, & Men, 2007; McHugh, Kutney-Lee, Cimiotti, Sloane, & Aiken, 2011; Poghosyan, Clarke, Finlayson, & Aiken, 2010; Shinan-Altman & Cohen, 2009; Vahey, Aiken, Sloan, Clarke, & Vargas, 2004). Understanding factors associated with intent to leave and turnover among staff is critical to sustaining numbers of direct care staff and fostering high quality patient care (Bowers, Esmond, & Jacobson, 2003; Fitzpatrick, 2002; Mittal, Rosen, & Leana, 2009).

One important factor in predicting intent to leave and turnover is burnout (Rosen, Stiehl, Mitall, & Leana, 2011; Vahey et al., 2004; Wright & Cropanzano, 1998). According to Maslach and Jackson (1981), burnout is defined as "a syndrome of emotional exhaustion and cynicism that occurs among individuals who do 'people work' of some kind" (p. 99). The construct of burnout is operationalized as three components: emotional exhaustion, depersonalization, and low personal accomplishment. High emotional exhaustion refers to feeling emotionally depleted and physically overtaxed. High

depersonalization is characterized by feelings of callousness, including an impersonal response to care recipients. Low personal accomplishment refers to lack of professional efficacy, which can include decrements in feelings of competency and occupational achievement (Maslach & Jackson, 1981).

Burnout is associated with reduced work productivity, poorer job performance, absenteeism, and job turnover among social welfare workers (Wright & Cropanzano, 1998). Among hospital nurses, burnout is associated with greater intent to quit (Vahey et al., 2004). Greater burnout is also associated with lower patient satisfaction in hospital settings and nursing homes (McHugh et al., 2011; Poghosyan et al., 2010; Vahey et al., 2004). Moreover, emotional distress, a construct similar to burnout, is associated with greater intent to leave among direct care nursing home workers, which, in turn, is associated with turnover (Rosen et al., 2011).

Levels of burnout are generally high among nurses working in geriatric settings (Cocco, Gatti, de Mendonça Lima, & Camus, 2003; Hare, Pratt, & Andrews, 1988) and estimates among direct care staff have been found to be even greater compared with registered nurses (Hare et al., 1988). Direct care staff in LTC settings may be at particular risk of burnout given the number of challenges they face each day, including time pressure, heavy patient caseloads, dementia care, staff shortages, physical demands, long hours, shift work, and exposure to suffering in patients and family members (VonDras, Flittner, Malcore, & Pouliot, 2009).

Burnout is a stress response, the reduction of which hinges on reducing the mismatch between workers' ability and occupational demands (Bianchi, Schonfeld, & Laurent, 2015; Weber & Jaekel-Reinhard, 2000). In the current study, managing burnout at the individual level is conceptualized through Lazarus's (1966) coping theory. Lazarus used the concept of coping to explain how individuals manage stressful situations. Coping is defined as "thoughts and behaviors that people use to manage the internal and external demands of situations that are appraised as stressful" (Folkman & Moskowitz, 2004, p. 746). Folkman and Lazarus (1980) also distinguished between two major types of coping: problem-focused coping and emotion-focused coping. Problem-focused coping involves directly addressing the problem causing distress. Emotion-focused coping involves mitigating the negative emotional consequences of stressful events through changing one's appraisals and feelings (Folkman & Moskowitz, 2004). Dysfunctional coping, as examined within the context of stressful events, is characterized by behavioral (e.g., giving up attempts to cope, substance use, venting) or cognitive (e.g., distraction; self-blame, denial) strategies that function to avoid the stressful situation or negative emotional response (Cooper, Katona, Orrell, & Livingston, 2006).

Among geriatric nurses, behavioral coping (similar to problem-focused coping) and avoidance coping (similar to dysfunctional coping) accounted for unique variance in burnout, after controlling for employee demographics, work stressors and environmental factors, personality, and work social support (Duquette, Kérouac, Sandhu, Ducharme, & Saulnier, 1995). In hospital nurses, planful problem solving, positive reappraisal, and seeking social support were negatively associated with burnout (Ceslowitz, 1989). Similar results were found among female hospice workers: reduced planful problem solving was associated with greater levels of depersonalization (Payne, 2001). Greater cognitive and behavioral escape efforts and lower positive reappraisal were associated with lower levels of personal accomplishment (Payne, 2001). In a later study, active coping predicted greater levels of depersonalization and low personal accomplishment in nurses over 4 weeks, after controlling for employee demographics, personality, and work stressors (Garrosa, Rainho, Moreno-Jiménez, & Monteiro, 2010). Results of a meta-analysis of 36 correlational studies examining the association between coping strategies and burnout among a variety of professions found that, overall, emotion-focused coping was associated with greater levels of burnout, and problem-focused coping was associated with lower levels of burnout (Shin et al., 2014).

Coping is closely tied to emotion regulation; however, past research on burnout in particular has not examined specific cognitive emotion regulation strategies that may influence the experience of burnout. Emotion regulation is defined as "the process by which individuals influence which emotions they have, when they have them, and how they experience and express those emotions" (Gross, 1998, p. 275). Within the emotion regulation literature, researchers have focused specifically on *cognitive* emotion regulation strategies, which broadly refer to cognitive strategies for managing the intake of emotionally arousing information (Garnefski, Kraaij, & Spinhoven, 2001). Cognitive emotion regulation strategies, such as perspective taking, may be preferred among nursing staff who are limited in opportunities to engage in behavioral coping strategies, such escaping the situation or behavioral distraction (e.g., watching television, calling a friend), due to the constraints in the workplace.

Together, findings across studies suggest that problem-focused coping is associated with lower levels of burnout. Mixed results have been found for emotion-focused coping, with some studies demonstrating certain emotion-focused coping strategies (e.g., positive reappraisal) associated with lower levels of burnout, while others studies have found that greater emotion-focused coping was associated with greater levels of burnout (see Shin et al., 2014). Consistently, avoidance coping is negatively associated with burnout across studies (Ceslowitz, 1989; Duquette et al., 1995; Payne, 2001). While

these studies provide useful information for understanding burnout in nursing staff, researchers have largely neglected direct care staff (e.g., CNAs). Estimates suggest that, as a group, direct care staff experience higher rates of burnout and face different types of work stressors compared with RNs (Hare et al., 1988; VonDras et al., 2009). Researchers have also neglected to examine specific cognitive emotion regulation strategies when examining general coping and burnout. The current study provides a starting point for understanding how direct care staff attempt to manage negative emotional arousal (burnout) in LTC.

The current study examined the extent to which coping and cognitive emotion regulation predict burnout in CNAs in LTC. We hypothesized that greater problem- and emotion-focused coping would be associated with lower levels of burnout and greater dysfunctional coping (i.e., avoidance and escape from stressors and emotional reactions to stressors) would be associated with greater levels of burnout. In terms of cognitive emotion regulation, given the lack of past research on the association between cognitive emotional regulation and burnout, the following analyses were considered exploratory without a priori hypotheses. Variables previously found to be associated with burnout, including age (Garrosa, Moreno-Jimenez, Liang, & González, 2008; Poncet et al., 2007; Woodhead, Northrop, & Edelstein, 2016) and sleep duration (Söderström, Jeding, Ekstedt, Perski, & Åkerstedt, 2012), were included as covariates in all regression models.

Method

Participants

A convenience sample of CNA-level nursing staff was recruited from LTC facilities in the community who agreed to participate in the research study. On average, the sample consisted of White (89.3%), female (89.9%), and direct care staff working full-time (94.6%). The majority had a high school degree or some college. In terms of work experience, participants reported working an average of 7 years as a CNA; however, work experience ranged considerably from less than 1 year to a maximum of 25 years. The majority of participants worked the day shift (7 a.m.-3 p.m.). Sample characteristics can be found in Table 1.

Measures

Burnout. Burnout was measured with the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981). The MBI is a 22-item self-report measure

Table 1. Participant Characteristics (*n* = 56).

Age, *M* (*SD*), range	33.52 (11.35), 19-59
Gender: female, *n* (%)	50 (89.3)
Race/ethnicity, *n* (%)	
White	50 (89.3)
Black	2 (3.6)
Asian	1 (1.8)
Hispanic	1 (1.8)
Multiracial	1 (1.8)
Education, *n* (%)	
General Educational Development	3 (5.4)
High school	26 (46.4)
Some college	17 (30.4)
College degree	7 (12.5)
Other	2 (3.6)
Relationship status, *n* (%)	
Single	23 (41.1)
Married	17 (30.4)
Live-in partner	5 (8.9)
Divorced	8 (14.3)
Widowed	2 (3.6)
Typical shift worked, *n* (%)	
Day	26 (46.4)
Evening	12 (21.4)
Night	5 (8.9)
Combination (e.g., day and night)	12 (21.4)
Job status: full-time, *n* (%)	53 (94.6)
Years worked, *M* (*SD*), range	7.3 (7.1), 0.25-25
Average hours sleep/night on workdays, *M* (*SD*), range	6 (1.6), 3-12

comprised of three subscales: Emotional Exhaustion (nine items; $M = 28.4$, $SD = 10.7$, obtained range = 8-47; $\alpha = .88$; for example, "I feel emotionally drained from work"), Depersonalization (five items; $M = 8.0$, $SD = 5.8$, range = 0-22; $\alpha = .60$; for example, "I've become more callous toward people since I started this job"), and Personal Accomplishment (eight items; $M = 34.4$, $SD = 7.9$, range = 12-46; $\alpha = .66$; for example, "I have accomplished many worthwhile things in this job."). Participants were asked to rate how often the statements apply to them on a scale from 0 (*never*) to 6 (*every day*). The three-factor structure of the MBI has been supported in health care workers (Poghosyan et al., 2010). Construct validity has been demonstrated through

correlations between MBI subscales and related constructs in the expected direction and magnitude (e.g., job satisfaction, turnover; Hallberg & Sverke, 2004; Kalliath, O'Driscoll, Gillespie, & Bluedorn, 2000).

Coping. Coping was measured with the Brief COPE, a 28-item questionnaire measuring a diverse set of coping strategies (Carver, 1997). For the current study, we combined items according to three nonoverlapping subscales derived from data with anxious older adults (Coolidge, Segal, Hook, & Stewart, 2000) and caregivers of individuals with dementia (Cooper et al., 2006). They include Problem-Focused Strategies (six items; $M = 14.1$, $SD = 6.8$, range = 6-24; $\alpha = .84$; for example, "I've been thinking hard about steps to take"), Emotion-Focused Strategies (10 items; $M = 21.9$, $SD = 6.8$, range = 10-35; $\alpha = .77$; for example, "I've been learning to live with it"), and Dysfunctional Coping (12 items; $M = 21.8$, $SD = 6.8$, range 12-41; $\alpha = .81$; for example, "I've been using alcohol or other drugs to help me get through it"). Participants were asked to rate items on a scale from 1 (*I haven't been doing this at all*) to 4 (*I've been doing this a lot*). The Brief COPE has demonstrated adequate internal consistency, test–retest reliability, and construct validity among caretakers of older adults with dementia (Carver, 1997; Cooper, Katona, Orrell, & Livingston, 2008).

Cognitive emotion regulation. Emotion regulation was measured with the Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski & Kraaij, 2007). The CERQ is a 36-item measure of nine cognitive emotion regulation strategies, including self-blame ($M = 9.3$, $SD = 3.5$, range = 4-18; $\alpha = .71$), acceptance ($M = 11.0$, $SD = 3.6$, range = 4-20; $\alpha = .71$), focus on thoughts/rumination ($M = 10.9$, $SD = 3.4$, range = 4-20; $\alpha = .76$), positive refocusing ($M = 11.2$, $SD = 3.6$, range = 4-20; $\alpha = .73$), refocus on planning ($M = 13.4$, $SD = 3.7$, range = 4-20; $\alpha = .83$), positive reappraisal ($M = 13.6$, $SD = 4.0$, range = 4-20; $\alpha = .83$), putting into perspective ($M = 13.2$, $SD = 4.2$, range = 4-20; $\alpha = .80$), catastrophizing ($M = 9.3$, $SD = 3.3$, range = 4-18; $\alpha = .62$), and blaming others ($M = 7.7$, $SD = 2.36$, range = 4-13; $\alpha = .41$). Each subscale contains four items. The CERQ was selected because it was specifically designed to measure cognitive strategies for handling emotionally arousing information. The inclusion of cognitive emotion regulation strategies provides a more detailed analysis of coping processes that are both conceptually overlapping with the Brief COPE, yet also provide unique constructs of interest, not included in the Brief COPE, such as rumination and catastrophizing. We believed this measure would be relevant to direct care staff who confront varied stressors, and are often precluded from using behavioral strategies (e.g., avoidance, escape) for managing emotions. Participants' responded on a 5-point Likert-type scale ranging

from 1 (*almost never*) to 5 (*almost always*). The nine-factor structure has demonstrated good fit in the general population (Garnefski & Kraaij, 2007). In addition, scores derived from the CERQ have demonstrated adequate internal consistency and test–retest reliability (Garnefski & Kraaij, 2007). Evidence of construct validity has been demonstrated through correlations between CERQ scores and depression and anxiety symptoms consistent with the proposed relation between cognitive emotion regulation strategies and emotional distress (Garnefski & Kraaij, 2007).

Demographics. Participants answered questions regarding their age, gender, race/ethnicity, education level, shift worked, length of time in current position, and number of hours slept on work nights.

Procedures

LTC facilities in the community were identified online and contacted regarding their interest in allowing research in their facility. Written permission from facilities was obtained to conduct research at each site. Research staff scheduled a time to meet with nursing staff during shift changes and provided a verbal description of the study. Those interested in participating were handed paper-and-pencil surveys and received US$5. Participants were instructed to complete the questionnaires within 1 week and place them in a locked box located in a central location. After 1 week, study staff returned and retrieved the locked box. All surveys were anonymous. The study was conducted under IRB approval.

Analysis Plan

The percentage of missing data varied by study variable, ranging from 3.5% to 12.5% missing observations across variables. Pattern of missing data was consistent with missing at random. Missing data were handled with multiple imputations, through the creation of five imputed data sets, to reduce the likelihood of biased parameter estimates (Rubin, 1996). Data reflect combined estimates across imputed data sets. Normality of the data was examined by calculating skew and kurtosis for each variable. Values greater than 3.29 are indicative of nonnormality (Tabachnick & Fidell, 2007, p. 73). Sleep duration was the only variable corrected with a square root transformation, which successfully corrected for nonnormality.

    Separate multiple hierarchical regression models were conducted for each burnout subscale (Emotional Exhaustion, Depersonalization, and Personal Accomplishment). Coping strategies (problem-focused, emotion-focused, and

Table 2. Correlations Among Coping Strategies, Burnout, Age, and Sleep Duration.

Variable	1	2	3	4	5	6	7
1. Age	—						
2. Sleep duration	−.02	—					
3. Problem-focused coping	−.15	.16	—				
4. Emotion-focused coping	.05	.14	.71**	—			
5. Dysfunctional coping	−.26	−.03	.52**	.38**	—		
6. Emotional exhaustion	−.18	−.20	.28*	.22	.36**	—	
7. Depersonalization	−.07	−.36*	.08	−.05	.35**	.48**	—
8. Personal accomplishment	.05	.12	−.07	.08	−.23	−.28	−0.24

$*p < .05. **p < .01.$

dysfunctional) were examined as predictors of each burnout subscale, controlling for age and sleep duration. In Step 1, age and sleep duration were regressed onto the dependent variable (Emotional Exhaustion, Depersonalization, and Personal Accomplishment. In Step 2, individual coping strategies were entered (problem-focused coping, emotion-focused coping, and dysfunctional coping).

Second, emotion regulation strategies were examined with separate multiple hierarchical regression models identical to the previous models (above). Due to small sample size, only cognitive emotion regulation strategies that were significantly associated with burnout were included in regression models. In Step 1, age and sleep duration were entered (as stated above). In Step 2, cognitive emotion regulation strategies were entered. An alpha level of .05 was set for all statistical tests. Analyses were conducted in Statistical Package for the Social Science (SPSS; version 21; IBM Corp., 2012) and SAS software (version 9.3; SAS Institute Inc., 2011).

Results

The demographic composition of the sample was similar to a nationally representative sample of CNAs, with the exception of race/ethnicity (i.e., the current sample was mostly White; Squillace et al., 2009). Pearson correlation coefficients were calculated to examine linear association between study variables.

Correlations Between Coping Strategies, Burnout, Age, and Sleep Duration (Table 2)

Age was not significantly associated with burnout. Fewer hours slept was associated with greater depersonalization. Participants who endorsed greater

dysfunctional coping reported greater levels of emotion exhaustion and depersonalization, but there was not a significant association between dysfunctional coping and personal accomplishment. Participants who reported greater problem-focused coping endorsed higher levels of emotional exhaustion. All three burnout subscales were significantly and positively intercorrelated.

Correlations Between Cognitive Emotion Regulation Strategies, Burnout, Age, and Sleep Duration (Table 3)

Participants who endorsed greater acceptance, greater rumination, and a greater tendency to blame others also reported higher levels of emotional exhaustion. Those who reported greater positive reappraisal also reported lower levels of depersonalization. Refocus on planning and positive reappraisal were significantly and positively correlated with personal accomplishment.

Prediction of Emotion Exhaustion (Tables 4 and 5)

In the first regression model, coping strategies were regressed onto emotion exhaustion controlling for age and sleep duration. Coping strategies accounted for significant variance in emotional exhaustion ($\Delta R^2 = .32$, $F_{5,55} = 6.44$, $p < .001$; Table 4). Specifically, dysfunctional coping was significantly associated with greater emotional exhaustion ($\beta = .61$, $p < .001$). No other variables were significantly related to emotional exhaustion.

   The extent to which cognitive emotion regulation predicted emotional exhaustion was examined controlling for age and sleep duration (Table 5). Based on significant associations found in Table 3, three cognitive emotion regulation strategies were selected as predictors: focus on thoughts/rumination, acceptance, and blaming others. The overall model was significant with cognitive emotion regulation strategies significantly associated with emotional exhaustion ($\Delta R^2 = .16$, $F_{5,55} = 3.07$, $p < .05$; Table 5). No individual cognitive emotion regulation strategy independently predicted emotional exhaustion.

Prediction of Depersonalization (Tables 6 and 7)

The extent to which coping strategies predicted depersonalization was examined. After controlling for age and sleep duration, coping strategies significantly predicted depersonalization ($\Delta R^2 = .14$, $F_{5,55} = 3.8$, $p < .05$; Table 6). In particular, dysfunctional coping ($\beta = .39$, $p < .01$) and sleep duration ($\beta = -.27$, $p = .01$) were significantly associated with depersonalization in the model.

Table 3. Pearson Correlation Coefficients for Cognitive Emotion Regulation Strategies, Burnout Subscales, and Covariates.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	—												
2. Sleep duration	-.04	—											
3. Self-blame	-.18	.14	—										
4. Acceptance	-.15	.04	.54**	—									
5. Focus on thoughts/rumination	-.06	.13	.56**	.58**	—								
6. Positive refocusing	-.15	.01	.11	.34*	.18	—							
7. Refocus on planning	-.13	.11	.19	.29*	.47**	.74**	—						
8. Positive reappraisal	-.13	.11	.10	.38**	.48**	.060**	.82**	—					
9. Putting into perspective	-.19	.01	.38**	.56**	.58**	.46**	.76**	.78**	—				
10. Catastrophizing	-.15	.06	.37**	.28	.26	.19	.13	.18	.44**	—			
11. Blaming others	-.11	.14	.14	.31*	.03	.12	.53**	.29*	.23	.40**	—		
12. Emotional exhaustion	-.18	-.20	.27	.31*	.32*	.07	-.04	-.09	.17	.19	.28*	—	
13. Depersonalization	-.07	-.36*	.04	.11	-.09	.03	-.23	-.31*	-.12	.25	.01	.48**	—
14. Personal Accomplishment	.05	.12	.07	.07	.01	.22	.47**	.34*	.24	.05	.03	-.28	-.24

$*p < .05.$ $**p < .01.$

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Table 4. Coping Strategies Predicting Emotional Exhaustion.

Predictors	R^2	B	SE	t	p
Step 1	.07				
Age		−0.18	0.14	−1.33	.18
Sleep duration		−7.0	0.14	−1.39	.17
Step 2	.39				
Problem-focused coping		−0.12	0.41	−0.29	.78
Emotion-focused coping		0.11	0.27	0.42	.68
Dysfunctional coping		**0.98**	**0.23**	**4.24**	**<.001**

Note. Bold font indicates significant finding.

Table 5. Cognitive Emotion Regulation Strategies Predicting Emotional Exhaustion.

Predictors	R^2	B	SE	t	p
Step 1	.07	−0.18	0.14	−1.33	.18
Age		−7.0	0.14	−1.39	.17
Sleep duration	.23				
Step 2					
Rumination		0.67	0.60	1.13	.26
Acceptance		0.38	0.57	0.67	.50
Blaming others		0.91	0.60	1.38	.17

Table 6. Coping Strategies Predicting Depersonalization.

Predictors	R^2	B	SE	t	p
Step 1	.14				
Age		−0.04	0.07	−0.59	.56
Sleep duration		**−6.45**	**2.41**	**−2.67**	**<.01**
Step 2	.28				
Problem-focused coping		0.11	0.22	0.50	.62
Emotion-focused coping		−0.18	0.16	−1.17	.24
Dysfunctional coping		**0.32**	**0.13**	**2.50**	**.01**

Note. Bold font indicates significant finding.

Next, cognitive emotion regulation strategies were regressed onto depersonalization, after controlling for age and sleep duration. Positive reappraisal was the only emotion regulation strategy associated with depersonalization,

Table 7. Cognitive Emotion Regulation Strategies Predicting Depersonalization.

Predictors	R^2	B	SE	t	p
Step 1	.02				
Age		0.06	0.01	0.64	.52
Sleep duration		2.05	3.61	0.56	.58
Step 2	.15				
Positive reappraisal		0.67	0.60	1.13	.26

thus the only strategy entered in the regression model. After controlling for age and sleep duration, positive reappraisal was significantly associated with depersonalization ($\Delta R^2 = .08$, $F_{3,55} = 4.8$, $p < .05$; Table 7). Positive reappraisal ($\beta = -.27$, $p = .03$) and sleep duration ($\beta = -.29$, $p = .01$) were significantly related to depersonalization.

Prediction of Personal Accomplishment

After controlling for age and sleep duration, coping strategies did not significantly predict personal accomplishment ($\Delta R^2 = .09$, $F_{5,55} = 1.2$, $p > .05$), indicating that cognitive emotion regulation strategies did not account for unique variance in levels of personal accomplishment.

Finally, cognitive emotion regulation strategies were regressed onto personal accomplishment, after controlling for age and sleep duration. Based on significant correlation coefficients in Table 3, refocus on planning and positive reappraisal were entered as predictors. The overall model was not significant ($\Delta R^2 = .13$, $F_{4,55} = 2.2$, $p > .05$).

Discussion

The current study examined the extent to which coping and cognitive emotion regulation strategies predicted burnout among direct care staff in LTC. Across the three types of coping strategies, dysfunctional coping predicted greater emotional exhaustion and depersonalization, consistent with past findings (Duquette et al., 1995; Payne, 2001). Dysfunctional coping represents several behavioral and cognitive strategies aimed at avoidance of the current stressor (e.g., behavioral disengagement) or emotional consequences (e.g., denial) of the stressful event (Carver, 1997). Use of dysfunctional coping strategies among direct care staff may influence burnout in several ways. First, given that the function of dysfunctional coping is largely one of avoidance (Cooper et al., 2006), dysfunctional coping may impede problem-focused strategies

aimed at developing a solution to the current problem. In the current study, problem-focused coping was positively associated with dysfunctional coping, which is consistent with past findings in dementia caregivers in which dysfunctional coping predicted greater problem-focused coping (Cooper et al., 2008). This pattern of findings would indicate that any use of dysfunctional coping, regardless of whether other forms of coping are utilized simultaneously, confers greater levels of burnout. A second possibility regarding the effect of dysfunctional coping on burnout is that dysfunctional coping increases levels of distress through a cumulative, positive effect on burnout, such that greater use of dysfunctional coping leads to more burnout, which leads to greater use of dysfunctional coping strategies and so on. This cycle may eventually lead to serious consequences for residents, such as abuse and neglect and also contribute to staff turnover.

In contrast to previous research and hypotheses, problem-focused and emotion-focused coping did not significantly predict burnout (Shin et al., 2014). As noted above, one reason for the nonsignificant effect of problem-focused coping and emotion-focused coping may be that any use of dysfunctional coping negates the benefits associated with problem and emotion-focused coping. In family caregivers of dementia, for example, dysfunctional coping, but not problem-focused coping or emotion-focused coping, predicted caregiver anxiety (Cooper et al., 2006).

Consistent with past research, fewer hours slept on average predicted higher levels of depersonalization (Söderström et al., 2012). Despite the acute fatigue that occurs with the experience of burnout, research has found that nurses categorized as severely burned-out (MBI score > 9) more frequently reported insomnia (Poncet et al., 2007) and fewer hours slept on average compared with their non–burned-out counterparts (Armon, Shirom, Shapira, & Melamed, 2008; Sonnenschein, Sorbi, van Doornen, Schaufeli, & Maas, 2007). In addition, insomnia has been found to predict new onset episodes of burnout over time (Armon et al., 2008). Other research has found that, among individuals classified as burned-out, non-restorative sleep is more frequent, despite similar hours slept compared with non–burned-out individuals (Sonnenschein et al., 2007). Such findings point to an underlying disruption in sleep quality, consistent with greater levels of fragmented sleep and longer sleep onset latency among burned-out individuals (Sonnenschein et al., 2007; Vela-Bueno et al., 2008). Moreover, the effect of sleep is independent of depressive symptoms, further implicating the unique influence of sleep on burnout (Sonnenschein et al., 2007). Taken together, results suggest that sleep, whether too little sleep and/or poor sleep quality, may qualify as a salient and unique factor in the experience of burnout.

The current study also examined the extent to which cognitive emotion regulation predicted variance in burnout among direct care staff. Of several cognitive emotion regulation strategies entered in regression models, only positive reappraisal was significantly and positively associated with depersonalization. Positive reappraisal is a two-part process that first involves awareness of one's current emotional response and then shifting one's perspective from negative aspects of the stressor to positive aspects and outcomes (Folkman & Moskowitz, 2000). In direct care staff, positive reappraisal may be particularly useful given that many of the stressors around caregiving are rarely completely amenable to active coping. For instance, behavior problems among individuals with dementia are common, and often include threats, accusations, and offensive language directed at the staff members attempting to provide care. While behavior problems can be managed, they are very seldom eliminated completely. Direct care staff that are able to utilize positive reappraisal following these types of stressors likely fare better because of the unpredictable and chronic nature of the stressor (Folkman & Moskowitz, 2004).

Finally, there were no significant variables in models predicting personal accomplishment. Review of the literature examining the construct validity of the MBI has found that personal accomplishment performs differently compared with emotional exhaustion and depersonalization (Kalliath et al., 2000; Yadama & Drake, 1995). From a theoretical perspective, when considering the construct of burnout, lacking personal accomplishment may not necessarily entail burnout. While those who are burned-out may be more likely to report deriving less personal accomplishment from their work, there are situations in which personal accomplishment may remain high, despite high levels of burnout (e.g., helping professions). In addition, it is possible to envision situations in which individuals experience low levels of personal accomplishment, but do not experience emotional exhaustion and depersonalization.

Clinical Implications

Our results offer possible targets for interventions to reduce burnout among direct care LTC staff. Previous intervention research has focused on two types of interventions—person-centered and organization-centered interventions. Person-centered interventions typically involve cognitive-behavioral approaches aimed at enhancing workers' coping skills, while organization-centered interventions focus on addressing issues such as task restructuring, job demands, and enhancing collaborative decision making between supervisors and supervisees (Awa, Plaumann, & Walter, 2010). In their critical review of the literature of interventions to reduce burnout across a range of

professions, Awa and colleagues (2010) found that interventions with a combination of person-centered and organization-centered interventions produced better outcomes than either approach alone. While additional research is needed, the current results suggest that addressing dysfunctional coping and cognitive emotion regulation strategies is important when conducting interventions for direct care staff. In addition, results also support targeting nurse aides' sleep duration. One potential intervention that may address stress among geriatric direct care staff is mindfulness-based stress reduction (MBSR; Zeller & Lamb, 2011). MBSR interventions aim to increase mindfulness to internal and external experiences through nonjudgmental, present-focused observation (Grossman, Niemann, Schmidt, & Walach, 2004). MBSR interventions can foster improved cognitive emotion regulation and coping skills in response to work stressors. Attention to self-care outside of work, such as sleep duration and quality, may fit well into MBSR interventions that focus on the mind-body connection. Preliminary evidence found that a brief, 4-week MBSR intervention reduced levels of burnout in both nurses and nurse aides (Mackenzie, Poulin, & Seidman-Carlson, 2006).

Limitations and Future Directions

The sample size was relatively small, which likely limited power to detect significant results. In addition, the current study was cross-sectional in nature, which does not allow for examining directionality between variables. Prospective research with larger samples is needed to untangle directionality of current findings. In addition, the sample, while similar in some ways to the demographic characteristics of CNAs in the United States with respect to gender and education level, lacked racial and ethnic diversity. Previous research has found that Black CNAs report greater job strain compared with White CNAs (Hurtado, Sabbath, Ertel, Buxton, & Berkman, 2012). Racial discrimination based on a worker's race, ethnicity, and/or immigration status is currently an ongoing and important area of investigation (Wheeler, Foster, & Hepburn, 2014).

   The differentiation of mood and symptoms of burnout could be explored in future research through the inclusion of measures of depression and anxiety (Bianchi et al., 2015). In addition, specific workplace and personal stressors could be evaluated in relation to coping and emotion regulation strategies. Examination of specific stressors and whether coping and cognitive emotion regulation stressors buffer the association between stressors and burnout is needed to fully understand how coping functions to increase or decrease levels of burnout. In addition, an exploration of burnout across several facilities and work shifts could provide additional information on the effects of contextual

variables. The inclusion of emotion regulation strategies known to be distinct from coping, such as strategies to reduce physiological arousal, increase positive emotions, and emotional suppression (Folkman & Moskowitz, 2000), will be useful to include in the future to better distinguish coping strategies from emotion regulation and the individual effect of each on burnout. Individuals may be biased to present as more favorably when reporting on the experience of depersonalization either due to fear of being judged by others or due to cognitive dissonance (i.e., person working in a helping profession but feeling callous toward patients). The use of behavioral observation in future studies where depersonalization behaviors are coded may provide a more accurate measure of this aspect of burnout. Finally, it would be interesting to test whether levels and pattern of coping and emotion regulation strategies differ in new employees compared with established workers.

Conclusion

In the current study, greater dysfunctional coping and decreased sleep duration predicted components of burnout. The cognitive emotion regulation strategy of positive reappraisal was found to significantly predict lower levels of depersonalization. Contrary to hypotheses, emotion-focused and problem-focused coping were not associated with burnout. These findings provide fertile ground for future research examining factors contributing to burnout in LTC, as well as potential targets for individual interventions to reduce burnout among direct care staff in LTC.

Declaration of Conflicting Interests

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