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Self-compassion training for certified nurse assistants in nursing homes

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Abstract

Background/Objectives: Certified nursing assistants (CNAs) who work in nursing homes (NHs) face significant work and personal stress. Self-compassion training has been shown to decrease stress postintervention in previous studies among healthcare providers and those in helping professions. This study examines the feasibility, acceptability, and preliminary outcomes of self-compassion training to address CNA stress and well-being.

Design: Pre–post intervention.

Setting: Three mid-size, nonprofit NHs in North Carolina.

Participants: Thirty CNAs, with a mean age of 49, 96% of whom were female, and 83% black/African American.

Intervention: In one NH, participants received an 8-week, 2.5-h/session (20 h total) group intervention. At the time of recruitment for NHs 2 and 3, a briefer format (6-week, 1-h/session; 6 h total) became available and was preferred by CNAs, thus both NHs 2 and 3 participants received a 6-h group intervention. All interventions occurred in meeting rooms within participating NHs during shift changes.

Measurements: Intervention attendance, retention, and acceptability; self-compassion, stress, burnout, depression, and attitudes toward residents with dementia, and job satisfaction pre-, post-, 3-month post-, and 6-month post-intervention were assessed.

Results: Attendance and program satisfaction were high, and attrition was low for both training formats. Self-compassion was significantly improved at all time periods ($p < 0.001$), and stress and depression improved significantly through 3 months ($p < 0.05$), but not 6 months. No statistically significant change in job satisfaction was noted.

Conclusion: Self-compassion interventions are feasible and acceptable for CNAs working in NHs and show promise for managing stress and improving well-being and compassion toward residents. The briefer 6-h format may maximize participation, while still providing benefits.

KEYWORDS
burnout, mindfulness, self-compassion, nursing homes, certified nurse assistants

INTRODUCTION

Across the United States, over 500,000 certified nursing assistants (CNAs)[1] provide daily direct care to 1.35 million nursing home (NH) residents.[2] Due to growth of the U.S. aging population, CNAs represent a profession that is both growing in demand[3] and of critical importance for care quality. However, the field is plagued by annual turnover rates estimated at over 60%[4] in large measure due to the stressful nature of the work, the minimal training requirements, and the poor remuneration.[5] Approximately 44% of NH CNAs, who are 92% female and 53% people of color (including 37% black/African American, 12% Latinx, and 4% Asian/Pacific Islander),[6] live in low-income households and 15% meet the federal definition of living in poverty,[6] and provide emotionally and physically demanding care, while their role is undervalued and lacks advancement opportunities.[5] Furthermore, many CNAs report racial discrimination on the job and in their lives,[7] economic insecurity,[1] exposure to trauma,[8] and work-related hazards and injury.[9] In the context of the pandemic, many CNAs have been placed in high-infection-risk environments with limited training, protective gear, or job benefits, further amplifying staffing shortages, burnout, and stress.[10] Because of these issues, CNA workforce retention and reform are a national priority.[11]

Many strategies for improving CNA job quality have been recommended, including increasing compensation and benefits, changing the organizational culture, and providing additional job skills training and career advancement.[5] In addition to these critical structural changes, CNAs can benefit from skills for effective stress management, coping, and to minimize burnout.[12] Indeed, evidence suggests that supportive workplace environments that offer emotional well-being and self-care training may promote job stability in addition to providing important health benefits.[13]

Self-compassion—a personal resource that shifts the way one relates to oneself in difficult times—holds promise for improving well-being for persons who experience high work and life stress burdens, including CNAs. It encompasses six interrelated components relevant during difficult circumstances: increased self-kindness (responding to challenges with self-support), common humanity (recognizing hardships are part of the shared human experience), and mindfulness (reacting to negative thoughts and emotions with a balanced perspective) and reduced self-judgment (harshly criticizing oneself), isolation (seeing oneself as alone in their suffering), and over-identification (catastrophizing about outcomes of an event).[14] Self-compassion has been positively linked to multiple measures of well-being;[15] is inversely related to stress, depression, and anxiety;[16] and is associated with relational benefits including increased empathy and compassion for others.[17]

Key Points

- Self-compassion training for nursing assistants in nursing homes is feasible and acceptable.
- Self-compassion training links to improved psychosocial outcomes (lower stress and depression) over 3 months.

Why Does this Paper Matter?

Improved psychosocial outcomes in nursing assistants may lead to higher-quality resident care.

Self-compassion interventions have demonstrated positive effects on stress, anxiety, and depression; positive and negative affect; and life satisfaction across diverse populations.[18] An 8-week (24-h) mindful self-compassion (MSC) intervention among nurses reported increases in resilience (Cohen's $d = 1.50$, 95% confidence interval [CI] = [0.27–2.73]) and reductions in both burnout (Cohen's $d = 1.55$, 95% CI = [−2.79–0.31]) and secondary traumatic stress (Cohen's $d = 0.82$, 95% CI = [−1.9–0.32]).[19] Recently, a new, shortened, 6-week (6-hour) version of MSC, called Self-compassion for Healthcare Communities (SCHC), was developed specifically for busy healthcare providers with the purpose of meeting the needs of persons unable to engage in a longer program. SCHC has demonstrated improvements in well-being and reductions in secondary traumatic stress ($R^2 = 0.24$, $p \leq \underline{0}.001$) and burnout ($R^2 = 0.40$, $p \leq \underline{0}.01$) among a mixed group of clinicians, allied healthcare providers, and staff.[20] However, no previous study has applied self-compassion interventions to CNAs in NHs.

This pilot study examined the feasibility, acceptability, and potential efficacy of two versions of self-compassion

training in relation to CNA stress, emotional well-being, and work-related attitudes. At the outset of our study, only the full-length (24-h) MSC training format had been manualized and tested; this version was provided to NH1. However, by the time recruitment began for NHs 2 and 3, the 6-h training format (SHSC) had been developed, tested, and showed promising results in healthcare provider populations. Our planned protocol refinement was to implement the shorter format in NH3 and compare it to results from NHs 1 and 2. However, recruitment for the full-length training proved challenging in NH2, so we opted to test the brief self-compassion training format in both NH2 and NH3.

Our final study design, therefore, investigates whether two formats of a self-compassion intervention were feasible and acceptable to CNAs and associated with (a) lower stress, burnout, and depression and (b) increased self-compassion, greater job satisfaction, and more positive attitudes toward residents. We include preliminary exploration of differences in these outcomes by training format.

METHODS

Participants

Participants were recruited at three separate NHs for a program advertised as a "CNA Well-being Program." Inclusion criteria included (1) being employed at a target NH, (2) being at least 18 years old, (3) able to speak English and attend at least 75% of the classes, and (4) working at least 20 h per week at the NH with the expectation of employment throughout the duration of the program and 6-month follow-up.

Intervention

Two versions of interventions were implemented:

- MSC[21]—the 8-week, 2.5 h/week (20-h) program was implemented in NH1. (We did not include the optional 4-h retreat as all participants indicated that they would not be able to attend it).
- SCHC[20]—the 6-week, 1 h/week (6-h) SCHC. It was implemented in NH2 and NH3.

Details of both interventions are provided in Table S1. Both were taught by the same two certified MSC instructors; one instructor was a member of the research team and the second taught MSC in the community and was paid $2000 per class to co-teach the intervention. In both interventions, participants were introduced to didactic material, guided meditation practices, and skill-building exercises; participants engaged in discussions following the activities. Additionally, practicing newly learned skills at home was encouraged, and instructors provided participants with a website where audio recordings of meditation practices could be found. As noted earlier, the 6-h format of the intervention was newly available after the completion of the intervention in NH1 and was provided in NHs 2 and 3. The first NH received the 20-h format in April and May 2019; NH2 and NH3 received the 6-h format between September and November 2019.

Procedure

Following human subjects approval, the study team recruited three NHs by scheduling introductory meetings with NH administrators and Directors of Nursing. NHs were selected based on (1) distance (within 50 miles of the study office), (2) size (between 100 and 120 beds), (3) quality rating (4 or 5 quality stars by Nursing Home Compare)22 and (4) nonprofit status. Higher-quality NHs were sought given that this was essentially an efficacy study.

CNAs were recruited through presentations at staff meetings and flyer postings. Interested CNAs consented to complete an initial screening questionnaire; eligible CNAs then completed a written consent process and the baseline interview (rather than a self-administered questionnaire, given reading comprehension limitations for some CNAs). Participants attended weekly intervention sessions held in private meeting rooms within the NH; to accommodate participants' work schedules, sessions were held at two separate times, such that participants could attend either before second shift or immediately following first shift.

Participants completed an interview at the end of the training, 3 and 6 months after intervention, either in person or over the phone. Participants in the longer version were compensated $180. Participants in the shorter program were compensated $140. All participants were offered snacks or lunch during each session.

Measures

Feasibility was evaluated based on 80% of participants attending 75% of classes, and acceptability was based on six 4-point Likert-scale questions modified from other work[23] (e.g., I was satisfied with this course). The *Job Satisfaction Scale*[24] was used to measure how satisfied respondents are with their job, and one item was used to

TABLE 1 Participant characteristics, by program and site

Characteristics	Total $N = 30$ M (SD) or N (%)	8-week program	6-week program		
		NH1; $N = 10$ M (SD) or N (%)	Total $N = 20$ M (SD) or N (%)	NH2; $N = 7$ M (SD) or N (%)	NH3; $N = 13$ M (SD) or N (%)
Demographic					
Age	48.7 (10.2)	46.4 (11.4)	49.7 (9.8)	50.00 (9.5)	49.6 (10.3)
Female	29 (96.7)	10 (100.00)	19 (95.0)	6 (85.7)	13 (100.0)
Race					
White	1 (3.3)	0	1 (5.0)	0	1 (7.7)
Black/African American	25 (83.3)	8 (80.0)	17 (85.0)	7 (100.0)	10 (76.9)
Asian	1 (3.3)	1 (10.0)	0	0	0
Other	3 (10.0)	1 (10.0)	2 (10.0)	0	2 (15.4)
Hispanic/Latino/a	1 (4.6)	0	1 (5.9)	0	1 (8.3)
Highest level of education					
High school degree or equivalent	4 (13.3)	2 (20.0)	2 (10.0)	0	2 (15.4)
Some college	17 (55.7)	4 (40.0)	13 (65.0)	5 (71.4)	8 (61.5)
Associate degree	5 (16.7)	2 (20.0)	3 (15.0)	0	3 (23.1)
Bachelor or graduate degree	4 (13.3)	2 (20.0)	2 (10.0)	2 (28.6)	0
Marital status					
Married	15 (50.0)	5 (50.0)	10 (50.0)	3 (42.9)	7 (53.9)
Widowed	2 (6.7)	0	2 (10.0)	1 (14.3)	1 (7.7)
Divorced or separated	5 (16.7)	2 (20.0)	3 (15.0)	2 (28.6)	1 (7.7)
Never married	7 (23.3)	2 (20.0)	5 (25.0)	1 (14.3)	4 (30.8)
Other	1 (3.3)	1 (10.0)	0	0	0
Number of dependents	1.3 (1.5)	1.0 (1.4)	1.4 (1.5)	1.8 (1.7)	1.3 (1.6)
Professional					
Years as a Certified Nursing Assistant	16.8 (10.4)	19.0 (13.4)	15.8 (8.8)	17.4 (8.8)	14.9 (9.0)
Years working at current position at NH	8.4 (8.8)	11.8 (10.7)	6.7 (7.4)	5.0 (5.7)	7.7 (8.2)
Hours/week at NH	39.1 (9.5)	37.4 (6.7)	39.9 (10.6)	43.9 (16.3)	37.8 (5.5)
Number of residents with dementia cared for on a daily basis	6.9 (2.9)	5.4 (3.3)	7.6 (2.6)	7.4 (2.6)	7.7 (2.7)
Confidence in training to provide care for residents with dementia (0–4)	3.4 (0.9)	3.7 (0.7)	3.3 (1.0)	3.7 (0.5)	3.0 (1.1)

Note: Source = participant self-report at preintervention. NH, nursing home. Data comprise the 30 of 32 (93.8%) who completed both pre- and postintervention measures. The 8-week program had 150-min classes; and the 6-week program had 60-minute classes. Due to missing data, sample size ranged from 22 to 30. There were no significant differences between participants enrolled in the 8-week versus 6-week program in demographic or employment variables ($p \geq 0.14$).

assess likelihood to leave job within the next year. To evaluate attitudes toward NH residents (hypothesizing they would become more positive if feelings of well-being increased), the personhood subscale of the *Approach to Dementia Questionnaire*[25] was used; this measure has been significantly associated with work satisfaction among nursing assistants in long-term care.[26] The 10-item *Perceived Stress Scale*[27] was used to assess the degree to which participants felt their lives were "unpredictable, uncontrollable, and overloading." Depression was assessed with the *PROMIS Depression Scale-Short Form*,[28] which assesses depression over the

TABLE 2 Program feasibility and acceptability, by program and site

Measures	Total $N = 30$ N (%)	20-h program	6-h program		
		NH1; $N = 10$ M (SD) or N (%)	Total $N = 20$ M (SD) or N (%)	NH2; $N = 7$ M (SD) or N (%)	NH3; $N = 13$ M (SD) or N (%)
Feasibility					
Attendance					
% of classes attended	95.0(7.3)	93.8(6.6)	95.7(7.7)	95.2(8.1)	95.9(7.8)
# of participants attending all classes	20.0(66.7)	5(50.0)	15(75.0)	5(71.4)	10(76.9)
% of minutes attended[a]	97.2(5.4)	95.3(6.1)	98.2(4.9)	98.7(3.5)	97.9(5.7)
Mindfulness practice[a]					
Days/week of informal practice	2.6 (1.1)	2.6 (1.3)	2.6 (1.1)	2.9 (1.2)	2.4 (1.0)
Days/week of formal practice	2.4 (1.4)	2.1 (1.6)	2.5 (1.4)	3.0 (1.4)	2.2 (1.3)
Acceptability					
I was satisfied with the course[b]					
Agree	1 (3.3)	0	1 (5.0)	0	1 (7.7)
Strongly agree	29 (96.7)	10 (100.0)	19 (95.0)	7 (100.0)	12 (92.3)
I intend to use the skills I learn in this course[b]					
Agree	3 (10.0)	2 (20.0)	1 (5.0)	0	1 (7.7)
Strongly agree	27 (90.0)	8 (80.0)	19 (95.0)	7 (100.0)	12 (92.3)
Taking this course has made a difference in my work life[b]					
Agree	8 (26.7)	1 (10.0)	7 (35.0)	1 (14.3)	6 (46.2)
Strongly agree	22 (73.3)	9 (90.0)	13 (65.0)	6 (85.7)	7(53.9)
Taking this course has made a difference in my personal life[b]					
Agree	10 (33.3)	2 (20.0)	8 (40.0)	0	8 (61.5)
Strongly agree	20 (66.7)	8 (80.0)	12 (60.0)	7 (100.0)	5 (38.5)
I would suggest this course to a friend[b]					
Agree	3 (10.0)	2 (20.0)	1 (5.0)	0	1 (7.7)
Strongly agree	27 (90.0)	8 (80.0)	19 (95.0)	7 (100.0)	12 (92.3)
I find this course to be useful in my daily life[b]					
Agree	4 (13.3)	1 (10.0)	3 (15.0)	0	3 (23.1)
Strongly agree	26 (86.7)	9 (90.0)	17 (85.0)	7 (100.0)	10 (76.9)
The length of the class sessions was just the right amount of time.					
Strongly disagree or disagree	3 (10.0)	1 (10.0)	2 (10.0)	1 (14.3)	1 (7.7)
Neither agree nor disagree	3 (10.0)	1 (10.0)	2 (10.0)	0	2 (15.4)
Agree	16 (53.3)	4 (40.0)	12 (60.0)	2 (28.6)	10 (76.9)
Strongly agree	8 (26.7)	4 (40.0)	4 (20.)	4 (57.1)	0
Having a class session once a week was just the right amount of sessions per week					
Strongly disagree or disagree	1 (3.3)	1 (10.0)	0	0	0
	2 (6.7)	0	2 (10.0)	0	2 (15.4)

TABLE 2 (Continued)

Measures	Total $N = 30$ N (%)	20-h program	6-h program		
		NH1; $N = 10$ M (SD) or N (%)	Total $N = 20$ M (SD) or N (%)	NH2; $N = 7$ M (SD) or N (%)	NH3; $N = 13$ M (SD) or N (%)
Neither agree nor disagree					
Agree	10 (33.3)	5 (50.0)	5 (25.0)	2 (28.6)	3 (23.1)
Strongly agree	17 (56.7)	4 (40.0)	13 (65.0)	5 (71.4)	8 (61.5)

Note: Source = participant self-report and observer logs during intervention. NH, nursing home. Data comprise the 30 of 32 (93.8%) who completed both pre- and postintervention measures. The 8-week program had 150-min classes; the 6-week program 60-min classes.

[a]Based on arithmetic mean of participant data.

[b]No respondents responded strongly disagree or disagree, or neither agree nor disagree.

previous 7 days. Burnout was indicated by the *Maslach Burnout Inventory—Human Services Scale* 20-item modified version, which contains three subscales: emotional exhaustion, depersonalization, and reduced personal accomplishment.[29] Response options were adjusted to accommodate the timeline of the research study, asking participants to consider items over the course of 2 months rather over the course of a year. The *Self-Compassion Scale—Youth*[30] was used to measure self-compassion because it employs easier-to-understand language than other self-compassion scales, and English was a second language for some participants.

Data Analysis

To characterize participants and measures, descriptive statistics were calculated by summarizing (1) participant demographic and professional characteristics, (2) feasibility and acceptability outcomes, and (3) employment and psychosocial outcomes using appropriate univariate statistics for each (1) program format (6-h or 20-h) and (2) time period (baseline, postintervention, 3-month follow-up, 6-month follow-up). All scales and subscales were summed into unweighted composites of individual items. Next, to determine postbaseline intervention effects on employment and psychosocial outcomes, Wilcoxon sign-rank tests were calculated on paired samples at each postintervention time point relative to baseline scores. All analyses were performed in Stata 16.1 with statistical significance set at $p < 0.05$ (two-sided) throughout.

RESULTS

Thirty-nine CNAs completed a screening questionnaire, all of whom were eligible to participate. Of these, four withdrew without providing a reason, and one withdrew because of the time commitment. Thirty-four completed a baseline interview after which two withdrew, both due to work obligations conflicting with scheduling. After the start of the intervention, two participants withdrew, also due to timing conflicts related to factors in and out of work. Thirty CNAs completed the intervention (i.e., provided pre- and postdata). Of those, 29 provided 3-month follow-up data and 26 provided 6-month follow-up data; the four who did not provide follow-up data did not respond to research team's phone calls, and therefore the reason for withdrawal is unknown. Overall, 97% of participants were female and 83% were black/African American. Demographic information is displayed in Table 1. Analysis found no significant differences between participants enrolled in the 20-h versus 6-h program in demographic or employment variables ($p \geq 0.14$).

Feasibility was evaluated by attendance and retention data (Table 2). Ninety-four percent of participants (30 out of 32) who attended the first class completed the program. Of the 10 participants who completed the 20-h program, 100% attended seven or more classes and 50% ($n = 5$) attended all eight classes. Of the 20 participants who completed the 6-h program, 96.7% ($n = 19$) attended five or more classes and 75.0% ($n = 15$) attended all six classes. Participants in both programs reported practicing activities that had been taught in class at least 2 days formally and 2 days informally per week.

All participants either "agreed" or "strongly agreed" with the six statements relating to benefits of the interventions, including "usefulness in daily life" (Table 2). The majority of participants in both program formats also indicated that the length and frequency of the sessions were reasonable.

Relative to baseline, outcome measures largely moved in the expected directions (Table 3). Although changes in job satisfaction and likelihood of leaving job did not change significantly, all other outcomes exhibited significant changes, with the overall self-compassion scale

TABLE 3 Employment and psychosocial outcomes, by time

Outcomes (range; desired change from baseline)	Time				*p* values for difference		
	1. Baseline; *N* = 30 Mean (SD) or *N* (%)	2. Postintervention; *N* = 30 Mean (SD) or *N* (%)	3. Three-month follow-up; *N* = 29 Mean (SD) or *N* (%)	4. Six-month follow-up; *N* = 26 Mean (SD) or *N* (%)	1 vs. 2	1 vs. 3	1 vs. 4
Job Satisfaction Scale (0–18; +)	14.70 (3.44)	14.87 (2.05)	15.38 (2.23)	15.04 (3.04)	0.70	0.66	0.84
Likelihood of leaving job in next year					0.18	0.34	0.13
Not at all likely	20 (66.67)	15 (50.00)	14 (51.9)	12 (52.2)			
Somewhat or very likely[a]	10 (33.33)	15 (50.00)	13 (48.2)	11 (47.8)			
Attitudes to Dementia Questionnaire: Recognition of Personhood (0–44; +)	37.33 (3.86)	38.53 (3.95)	37.72 (5.42)	38.96 (4.54)	0.015	0.34	0.002
Perceived Stress Scale (0–40; −)	13.57 (6.78)	10.67 (5.55)	10.69 (6.27)	10.62 (6.75)	0.022	0.020	0.09
PROMIS Depression (8–40; −)	13.07 (5.67)	11.23 (3.72)	11.62 (3.66)	12.12 (3.59)	0.05	0.044	1.00
Maslach Burnout Inventory—Human Services Survey for Medical Professionals (0.0–6.0)							
Emotional exhaustion (−)	1.94 (1.26)	1.59 (1.17)	1.56 (1.32)	1.33 (1.22)	0.15	0.12	0.018
Depersonalization (−)	0.73 (0.82)	0.49 (0.52)	0.66 (0.71)	0.49 (0.50)	0.023	0.56	0.16
Personal accomplishment (+)	4.67 (1.06)	4.85 (0.92)	4.57 (1.11)	4.63 (1.19)	0.33	0.88	0.67
Self-Compassion Scale—Youth (1.0–5.0)							
Self-kindness (+)	3.42 (0.71)	3.67 (0.81)	3.83 (0.80)	3.88 (0.75)	0.17	0.020	0.06
Self-judgment (−)	2.99 (1.07)	2.31 (1.03)	2.03 (0.84)	2.10 (0.70)	0.013	0.001	0.003
Common humanity (+)	2.81 (0.99)	3.72 (0.80)	3.57 (0.99)	3.40 (1.01)	0.001	0.010	0.09
Isolation (−)	3.18 (0.74)	2.24 (0.88)	2.01 (0.81)	2.00 (0.81)	<0.001	<0.001	<0.001
Mindfulness (+)	3.21 (1.17)	3.79 (0.76)	3.74 (0.83)	3.78 (0.84)	0.046	0.14	0.06
Over-identification (−)	3.07 (0.78)	2.28 (0.88)	2.18 (0.77)	2.24 (0.80)	<0.001	<0.001	0.001
Total (+)[b]	3.04 (0.58)	3.72 (0.58)	3.82 (0.58)	3.79 (0.56)	<0.001	<0.001	<0.001

Note: Source = participant self-report.
[a]Combination of two original response options.
[b]Total score is calculated by reverse-scoring self-judgment, isolation, and over-identification and finding mean of all six subscales.

demonstrating significant change at all follow-up evaluations (a change from 3.04 to 3.72–3.82 on a 1–5 scale, $p < 0.001$). Stress and depression improved significantly through 3 months, but not 6 months (stress changed from 13.57 to 10.69 [$p = 0.020$], and depression changed from 13.07 to 11.62 [$p = 0.44$], both on a 0–40 scale). Recognition of personhood exhibited improvement postintervention and at 6, but not 3, months.

Stratified results demonstrated somewhat less clear findings by the two intervention approaches. For the 20-h approach, although stress scores decreased significantly at follow-up relative to baseline (12.00–7.90; $p = 0.002$),

very little change was noted in self-compassion scores as baseline scores were already quite high (3.63–3.64, $p = 0.55$) and in depression scores, whose baseline scores were quite low (10.50–11.70; $p = 0.69$). For the 6-h approach, scores were more consistently in the expected direction at follow-up: self-compassion increased (2.74–3.77; $p < 0.001$), stress decreased (14.35 to 12.05; $p = 0.35$), and depression decreased (14.35–11.00; $p = 0.006$).

DISCUSSION

This preliminary study of self-compassion training for CNAs working in NHs, the first of its kind to our knowledge, demonstrated that such an intervention is feasible and acceptable. Attendance and retention data indicated that both the 6-h and 20-h programs had high attendance, although the rate was higher in the shorter program (75% vs. 50% attending all classes). Participants enthusiastically endorsed the programs upon completion, with 100% agreeing that the programs were useful in both their personal and work life. Physically attending classes was made as simple as possible by holding sessions onsite, either immediately following or preceding a work shift. There were, however, challenges recruiting participants for the 20-h program in NH2, with indications that this time commitment was impractical or impossible for some CNAs, which lead to our decision to shift to offering the shorter program in both NH2 and NH3.

The majority of outcomes associated with participants' well-being moved in modest, and in many cases statistically significant, positive directions. Improvement in self-compassion was significant across all time points. Self-compassion has been demonstrated in prior research to serve as a mediator that subsequently predicts well-being outcomes;[31,32] we would therefore expect changes in self-compassion to occur first and be greater in magnitude than that of other outcomes.

CNAs self-perception of stress and depression significantly decreased across the intervention and at 3-month follow-up, but was no longer significant at 6-month follow-up. Although the reason for the lack of change at 6-months is unknown, it is possible that self-compassion practice waned over time, raising the possibility that periodic refreshment may be needed to maintain gains brought about by the intervention. Another explanation for these findings could be increased work-associated stress during the follow-up period, as the COVID-19 outbreak was beginning to affect NHs at the time of our 6-month follow-up in NH2 and NH3.

Two of three Maslach Burnout subscales changed variably over the 6 months following the intervention. Immediately postintervention, depersonalization, defined as detached and impersonal response and treatment toward those receiving service, that is, residents, improved significantly; this change in how CNAs viewed residents is also reflected in the positive change in the attitudes toward residents with dementia scale at the same time point. These findings suggest that augmenting *self*-compassion, which includes the recognition that all humans are imperfect and face emotional pain, may have provided CNAs with additional capacity to be more understanding, and compassionate toward the residents for whom they provide care.

Job satisfaction and likelihood of leaving the job did not change significantly at any time point. Self-compassion facilitates changing the way one relates to oneself in challenging circumstances; however, it is likely that other changes relating to CNA job quality must also be simultaneously addressed to greatly impact job satisfaction and, ultimately, retention.

Sensitivity analyses support the analysis of all groups together, as differences are to be expected in the small samples found in exploratory studies. They do, however, show a trend toward improved responses in the 6-h group, providing additional support for the study's decision to use this approach once it became available.

This study has a number of limitations. First, the sample size was small, limiting generalizability. Second, without a control group it is not possible to determine whether changes resulted from the intervention or other factors. Also, because the intervention was provided during the daytime and outside of work hours, it was largely inaccessible to CNAs working night shifts and those with time pressures due to family responsibilities or other work commitments. We also note that the CNAs who participated in this study tended to be middle-aged and highly experienced; it is possible that younger CNAs, who may have more out-of-work commitments, may have responded differently to this intervention. Finally, given the homogeneity and high quality of the NHs that participated, it is unclear if these results are generalizable to CNAs across all types of NHs.

CONCLUSION AND IMPLICATIONS

Self-compassion training is a feasible, acceptable, and comparatively low-cost program with potential to provide stress management and interpersonal benefits for CNAs. The 6-h format provided benefits with less time burden, suggesting that it may be more feasible for broad dissemination. To confirm these results, larger samples and randomized controlled designs are indicated. Furthermore, future studies should assess intervention impact on job

retention and determine whether self-compassion training embedded in CNA training curricula or provided in conjunction with other improvements in the work setting (e.g., salary increases) may amplify positive outcomes for the CNAs. Also, options to provide self-compassion training remotely, such as via Zoom, merit examination given that they may be even more feasible than the 6-h on-site session.

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CONFLICT OF INTEREST

Author KB discloses that she is a Mindful Self-Compassion instructor. All other authors have no conflicts to disclose.

AUTHOR CONTRIBUTIONS

Karen Bluth, Christine Lathren, Philip D. Sloane, Sheryl Zimmerman, Johanna V. T. Silbersack Hickey, and Christopher J. Wretman all provided input on the study design, implementation, and data collection protocols. Johanna V. T. Silbersack Hickey collected all data. Christopher J. Wretman provided statistical support. All authors provided editing and approved the final version of this article.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

Table S1 Intervention description

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