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# Impact of an Intensive Dementia Caregiver Training Model on Knowledge and Self-Competence: The Improving Caregiving for Dementia Program

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Compared to caregivers of persons with other chronic diseases, dementia caregivers have a higher level of burden.<sup>1,2</sup> There is evidence that caregiver burden and the consequent outcomes to care recipients can be ameliorated with caregiver education and training.<sup>3,4</sup> However, existing caregiver training interventions typically involve multiple visits over several weeks, which can be challenging to deliver to caregivers with limited time and availability. We organized an intensive, 1-day caregiver training program and evaluated its acceptability and effectiveness in improving caregiver knowledge and self-rated caregiver competency.

## METHODS

### Intervention

The University of California Los Angeles (UCLA) Alzheimer's and Dementia Care Program (ADCP) is a dementia care comanagement program whose interventions and outcomes have previously been described.<sup>5,6</sup> We developed the UCLA Improving Caregiving for Dementia (I-CareD) Caregiver Bootcamp, an intensive, community-based, 1-day training for caregivers enrolled in the ADCP. To identify priority topics, we performed a needs assessment by surveying five nurse practitioner dementia care managers on the most challenging issues brought to them by dementia caregivers. The boot camps were

held at older people day care centers in Los Angeles County with good accessibility and on-site respite availability. The program was organized as interactive large- and small-group breakout sessions with interspersed panel discussion. The boot camp also included an on-site support group and a standardized patient role-play session that allowed participants to practice and demonstrate skill acquisition via observed interaction with trained standardized patient actors. The boot camp and respite care were provided free of charge through a grant from the Archstone Foundation.

### Evaluation

Boot camp attendees were caregivers of patients enrolled in the UCLA ADCP who were referred to the boot camp by their care manager. Participants completed the Pearlin Caregiving Competence Scale (CCS),<sup>7</sup> the Zarit Burden Interview-Short Version (SV),<sup>8</sup> and a dementia caregiving knowledge test before and immediately after completion of the boot camp. A 15-item knowledge test was created by study investigators (Z.S.T. and L.E.) and addressed dementia caregiving principles and techniques covered in the boot camp. To determine the acceptability of the boot camp, we administered a seven-item survey assessing caregiver satisfaction with the program. Paired-sample *t*-tests were used to compare before and after summary scores for the CCS and knowledge test. McNemar's test was used to compare individual knowledge test items. We also stratified change in CCS before and after boot camp completion by caregiver burden score (low/moderate vs high vs severe burden).

## RESULTS

A total of 284 participants attended 12 caregiver boot camps held over a 3-year period (January 24, 2015, to January 27, 2018). Most caregivers were nonwhite (53%), were female (74%), had completed at least some college education (92%), and lived with (61%) and were spouses or adult children of the care recipient (75%). One hundred

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**Table 1. Caregiver Self-Competence and Knowledge Before and After Boot Camp<sup>a</sup>**

Variable	Before Training	After Training	P Value
<b>Pearlin Caregiver Competence Scale (N = 163)<sup>b</sup></b>			
How much do you believe that you have learned how to deal with a very difficult situation? (possible answers: not at all [1], just a little [2], somewhat [3], very much [4])	2.9 (0.8)	3.7 (0.5)	<.0001
How much do you feel that all in all, you are a good caregiver? (possible answers: not at all [1], just a little [2], somewhat [3], very much [4])	3.2 (0.8)	3.4 (0.6)	<.0001
Putting all these things together, how competent do you feel? (possible answers: not at all [1], just a little [2], fairly [3], very [4])	3.1 (0.8)	3.4 (0.6)	<.0001
Putting all these things together, how self-confident do you feel? (possible answers: not at all [1], just a little [2], fairly [3], very [4])	3.1 (0.7)	3.4 (0.6)	<.0001
Summary score (range = 4-16)	12.2 (2.6)	13.7 (1.9)	<.0001
<b>Caregiving Knowledge Test (N = 111)<sup>c</sup></b>			
Level of support provided by an assisted living facility	40 (37)	64 (59)	.0007
Activities most appropriate for someone with severe dementia	75 (68)	100 (90)	<.0001
Activities most appropriate for someone with mild or moderate dementia	82 (74)	100 (90)	.003
Level of support provided by adult day care	76 (69)	101 (92)	<.0001
Foods appropriate for someone with a swallowing problem	103 (96)	99 (93)	.39
Interventions to improve oral intake for someone with a swallowing problem	54 (51)	89 (83)	<.0001
Medicare benefit coverage	44 (42)	71 (68)	<.0001
Signs of caregiver stress	85 (92)	89 (97)	.34
Techniques to reduce caregiver stress	87 (95)	90 (98)	.38
Use of an assistive device to reduce fall risk	50 (54)	76 (83)	<.0001
Interventions to prevent falls	52 (56)	69 (75)	.006
Principles of medication use for behavioral symptoms of dementia	74 (82)	86 (96)	.002
Complications of antipsychotic medications	60 (69)	71 (82)	.041
Behavioral approaches to resistance to taking medications	62 (69)	77 (86)	.008
Behavioral approaches to repetitive questioning	75 (83)	84 (93)	.035
Summary score (range = 0-15)	10.3 (2.3)	11.4 (3.4)	.0005

<sup>a</sup>Survey items were compared using McNemar's test, and summary scores were compared using paired *t*-tests. Item-level response rates ranged from 78% (N = 87) to 100% (N = 111).

<sup>b</sup>Data are given as mean (SD).

<sup>c</sup>Data are given as number (percentage) correct, except for summary score, given as mean (SD).

seventy-six (62%) of participants participated in the before-after evaluation. Of participants, 93% (N = 163) included in the evaluation completed the CCS before and after the boot camp, and 63% (N = 111) completed the caregiving knowledge test at both time points.

Caregivers' perceived self-competence improved by 1.5 points, or 12.5 percentage points, after completion of the boot camp (Table 1). Caregivers reporting low/moderate burden had no change in self-competence, while caregivers reporting high or severe burden improved by 1.3 and 2.1 points, respectively ( $P < .0001$  for both comparisons). Similarly, knowledge of dementia caregiving principles and techniques improved.

Caregivers expressed high satisfaction with the boot camp, with 85% rating overall program quality as "excellent." Most (80%) felt the program met stated objectives, covered relevant themes (83%), and addressed a variety of topics important to dementia caregivers (86%). Eighty-two percent felt the boot camp met or exceeded their overall expectations.

## DISCUSSION

Effective dementia caregiver training programs,<sup>4,9,10</sup> most spanning 6 to 12 weeks, have used different educational strategies, including active learning and personalization to the learning needs of caregivers. However, the resource and

time intensiveness of these interventions have limited their wider dissemination. The I-CareD Bootcamp addresses some of these limitations, as its 1-day model is time efficient and the community-based setting and provision of on-site respite care make it more accessible. Similar to other successful models, it encourages active learning through small-group sessions, standardized patient role play, panel discussions, and participation in a support group. Limitations of the current study include the lack of validation of the knowledge test and evaluation of longer-term retention and application.

The boot camp was well received by participants and demonstrates the acceptability and feasibility of an intensive 1-day program that focuses on practical concerns of strained family caregivers. The boot camp model improved caregiver knowledge and perceived self-competence to complete dementia caregiving tasks, particularly among more strained caregivers. Future investigation of the boot camp model should be conducted with other groups of dementia caregivers to confirm its effectiveness and acceptability.

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