

Qualitative Research

Photojournalism-Based Intervention Reduces Caregiver Burden and Depression in Alzheimer's Disease Family Caregivers

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Purpose: Art interventions have demonstrated holistic benefits for persons living with dementia and their caregivers. In this article, we describe the results of a pilot photojournalism program for 10 unpaid caregivers of persons living with dementia, with respect to caregivers' experience in the program and their psychological well-being. **Design:** Caregivers participated in four sessions led by a professional photojournalist who taught principles of photography. Between the sessions, caregivers took photographs that represented what caregiving meant to them using digital cameras provided in the program. During the sessions, instruction was interspersed with discussion of caregivers' photographs. **Method:** Caregiver burden and depressive symptoms were measured pre- and postprogram. Qualitative exploration included sessions' observations, viewing caregivers' photographs, and recording caregivers' accompanying comments. **Findings:** For participants with pre- and postprogram data, caregiver burden decreased significantly ($p = .037$). For caregivers with pre- and postprogram data, depressive symptoms decreased nonsignificantly ($p = .066$). Clinically meaningful reductions in caregiver burden and depressive symptoms were attained. Qualitative findings highlighted caregivers' strong engagement with the project, the facilitator, and other participants, and reflection on multiple aspects of their experience. **Conclusions:** This intervention helped caregivers creatively communicate their experience and demonstrated efficacy in the improvement of caregivers' psychological well-being.

Keywords: *caregivers; art-based interventions; photojournalism; dementia; Alzheimer's disease*

More than 15 million individuals in the United States provide unpaid care to individuals living with Alzheimer's disease (AD) and other dementias (Friedman, Shih, Langa, & Hurd, 2015). This dynamic has been shown to benefit the person living with AD but may adversely affect family caregivers' physical and psychological health. The complex caregiver experience depends on many factors, including the patient's disease state, relationship configuration (spouse vs. child), and the individuals'

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gender and race (Gonzalez, Polansky, Lippa, Gitlin, & Zauszniewski, 2014). Depression and stress have been linked to caregiving, and both are independent risk factors for AD (Ory, Hoffman, Yee, Tennstedt, & Schulz, 1999; Pinquart & Sörensen, 2003; Vitaliano, Zhang, & Scanlan, 2003). Holistic interventions for caregivers are wide-ranging and include individual, family, and group talk/mindfulness therapy, such as structural ecosystems therapy (Mitrani & Czaja, 2000), cognitive/behavioral group interventions (Gallagher-Thompson, Gray, Dupart, Jimenez, & Thompson, 2008), counseling (Mittelman, Roth, Coon, & Haley, 2004; Mittelman, Roth, Haley, & Zarit, 2004), and multicomponent approaches targeting caregivers' depression, burden, healthy behaviors and self-care, social support, and their persons' behavioral and psychological symptoms of dementia (Belle et al., 2006; Eisdorfer et al., 2003; Gitlin et al., 2003; Gitlin, Hauck, Dennis, & Winter, 2005; Hepburn, Lewis, Tornatore, Bremmer, & Center, 2007). Recently, participatory art-based interventions have been introduced as a holistic therapy that might elicit cognitive and mood-related benefits for both the persons living with AD and caregivers.

The few prior studies of art interventions have shown that they can enhance the quality of life for families caring for individuals with AD by decreasing caregiver burden (Camic, Tischler, & Pearman, 2014). Engagement in art activities using a holistic approach can also support cognitive stimulation, improve self-esteem, and facilitate social connectedness for individuals living with AD and their caregivers (Flatt et al., 2015). Artistic expression may reduce agitation and improve behavioral issues that are often cited as the most stressful part of the disease and the caregiver role (Norton et al., 2009). Interactive art-based interventions may provide a method to connect, even after verbal communication has become difficult. Moreover, the social engagement afforded by group activities may exert mood-related benefits and facilitate meaningful connectedness (Camic, Baker, & Tischler, 2016; Camic et al., 2014; Camic, Hulbert, & Kimmel, 2017; Flatt et al., 2015; McFadden & Basting, 2010; Norton et al., 2009; Young, Camic, & Tischler, 2016). The benefits of art-based interventions extend to caregivers and family members of persons living with AD by reducing stress and reestablishing connections with their persons (Camic et al., 2016; McFadden & Basting, 2010). Thus, art-based interventions not

only entertain and educate but they may also provide clinical and reductions in depression and caregiver burden (Cowl & Gaugler, 2014; Young et al., 2016).

Here we describe the results of an art-based study in photojournalism in 10 AD family caregivers. The pilot study aimed to holistically reduce caregiver burden and depression and provide a nonverbal outlet for participants to portray their lives as AD caregivers. We also sought to use this study to promote AD awareness and encourage research participation.

Method

Photography Workshop

Ten AD family caregivers who had daily interaction with their care recipients were invited to participate in a four-session photojournalism program, designed to reduce caregiver burden and depression and highlight the AD family caregivers' role. Individuals were recruited from ongoing NIH/NIA (National Institutes of Health/National Institute on Aging) funded trials at Emory University involving participants with a family history of AD, who were known to be caring for a family member with AD, and who had already consented to be contacted for research purposes. Participants were contacted via phone by a trained member of the Emory study team. In order to participate in the pilot study, individuals had to agree to attend all four class sessions.

At the beginning of the first class, participants provided institutional review board–approved, written consent, media release, and a contract allowing photographs to be used for future recruitment purposes or to be displayed. Participants also completed the structured questionnaires (quantitative measures described below) before any instruction took place. Individuals not involved in the study could not be photographed unless they signed a media release form. Participants were given a digital camera as a part of the study but were not otherwise compensated for participation. Participants met in a group setting on the Emory University campus for four sessions, each lasting 3 hours (between August and October 2015). The workshop was led by an experienced professional photojournalist, who was selected by the authors from a pool of eight applicants interested in participating in this program. The workshop setting was a “U-shaped” configuration of tables so participants were able to see the instructor,

each other, and the projection screen, on which they viewed the photographs. Each session provided instruction on camera mechanics and stylistic aspects of digital photography, including shape, framing, shadow, perspective, and so on. Considerable instruction was devoted to the stylistic aspects of photojournalism. Specifically, participants were instructed not to stage photos, but rather to attempt to capture moments and situations that non-caregivers of AD patients might not be familiar with.

In the first session, caregivers were encouraged to photograph aspects of life that they felt represented their caregiving experience or the experience of the person living with AD. In the next three sessions, most of the classes (approximately 2.5 hours) were spent viewing and discussing participants' photographs and caregivers' experiences in taking them; throughout, the instructor provided photography feedback and coaching. After the course, the investigators selected 10 photos from approximately 3,000 photos that caregivers took. The 10 photos were mounted in a 20 × 22 inch frame, along with the caregiver's description of the photograph; these are displayed at Emory University's Schwartz Center for Performing Arts.

Quantitative and Qualitative Data

Quantitative data were collected through self-completed questionnaires prior to the first session and after the last session at the workshop on the Emory University campus. These caregiver-centered questionnaires on depressive symptoms and burden were gathered through well-established, valid, and reliable scales: Patient-Reported Outcomes Measurement Information System (PROMIS) Short Form—Version 1.0 Depression 8b (Pilkonis et al., 2011), and 12-item Zarit Burden Interview (Bédard et al., 2001; Zarit, Reever, & Bach-Peterson, 1980). The Zarit Burden Interview was developed to measure subjective burden among caregivers of adults with dementia. The 22-item self-report inventory examines burden associated with functional/behavioral impairments and the home care situation. The items are worded subjectively, focusing on the affective response of the caregiver. The PROMIS questionnaire includes eight scaled questions regarding depressive feelings over the past week.

Qualitative data were obtained via three authors' observations and field notes of the photography

workshops. The authors observed participants' responses to the instructor, to each other, and to photographs that were shared during the workshop. While we refer to these data as qualitative to differentiate from the quantitative data, the content analyses were not collected via structured interviews in this pilot study. Additionally, participants completed a postprogram survey after the fourth (last) workshop.

Data Analysis

Paired samples *t* tests were used to analyze pre-post program differences in the quantitative data. Since several participants had missing data, baseline and postprogram values are stated for those whose data were present for pre- or postprogram (group as a whole, not for paired samples). However, differences between the measures were calculated only for those who have both pre- and postprogram data to enable paired samples' comparisons. Analyses were performed in IBM SPSS Version 22.0 (IBM Corporation, 2015).

Qualitative data were collected to determine (1) how caregivers responded to workshops; (2) what effect, if any, the workshops had on the caregivers; and (3) why photographs were chosen by participants to portray their life experiences. To combat the likelihood of experimenter bias, individuals who conducted the interviews did not conduct the qualitative analyses. Data were analyzed according to the conventional content analysis (Hsieh & Shannon, 2005) and qualitative description method, which is well suited to exploring individuals' responses to events (Sandelowski, 2000). Two authors read each set of observation notes for the four photography sessions. Two authors also reviewed the photographs taken by the caregivers and care recipients. Reflexive statements summarizing initial impressions of the notes and photographs were maintained to acknowledge authors' involvement in the analysis and reduce bias in results' interpretation (Barry, Britten, Barber, Bradley, & Stevenson, 1999; Malterud, 2001). Constant comparison analysis (Miles & Huberman, 1994) was then used to identify themes and sub-themes. Constant comparison allows identification of patterns—their presence, absence, and comparison between them (Ryan & Bernard, 2003). Observation notes were compared to determine differences and commonalities between sets of text

(Sandelowski, Davis, & Harris, 1989). Groups of photographs were compared to determine how the photographs differed from one another and address common themes. The authors followed this process to achieve consensus for the themes and any disagreement of a potential theme was resolved by a coauthor (KH or WW).

Due to the pilot nature of this study, participants were asked to complete a five-question, post-workshop satisfaction survey. Participants ranked their level of satisfaction or dissatisfaction with workshop specifics (i.e., length of classes, the instructor etc.), and a comment area was available for additional suggestions.

Results

Participants

Table 1 shows sociodemographic information for the 10 caregivers. Participants included seven women and four African Americans with a mean age of 63.4 years. Participants' relationship to their AD care recipient was diverse and included mother and son, husband and wife, mother and daughter, and sisters. Caregivers reported caring for their family member for an average of 6.2 years, and six persons reported working outside of home.

Quantitative Results

As Table 2 indicates, five participants provided complete pre- and postprogram data on burden, seven provided baseline data, and eight provided postprogram data. Baseline data indicated severe caregiver burden ($n = 7$; $M = 21.714 \pm 11.011$; Bédard et al., 2001). While postprogram caregiver burden remained severe ($n = 8$; $M = 17.625 \pm 6.844$), caregiver burden in those with both pre- and postprogram data decreased significantly ($p = .037$). Notably, caregiver burden postprogram was one point below the standardized cutoff for "severe burden" (Bédard et al., 2001; $n = 5$; $M = 15.8 \pm 5.797$), indicating a clinically meaningful reduction in caregiver burden.

For calculating depression scores, we used scoring instructions issued by PROMIS (2011), where raw scores are converted into T scores. These T scores are based on the 2000 U.S. Census in terms of gender, race, age, and educational attainment

(Pilkonis et al., 2011). PROMIS does not publish depression cutoff values. Hence, we used a recent study that explored depressive symptoms among persons living with multiple sclerosis (Kim et al., 2017). Kim et al. (2017) estimated PROMIS Short Form–Version 1.0 Depression 8b cutoff scores via comparison with other depression instruments that have cutoff values: the 20-item Center for Epidemiologic Studies Depression Scale (Radloff, 1977) and the 9-item Patient Health Questionnaire–9 (Spitzer, Kroenke, & Williams, 1999).

Baseline data suggest mild depressive symptoms ($n = 7$; $M = 18.429 \pm 5.996$; T score = 56.2; Kim et al., 2017; PROMIS, 2011). Depressive symptoms decreased nonsignificantly ($p = .066$) postprogram for those who had both baseline and postprogram data ($n = 4$; $M = 14.25 \pm 4.349$; T score = 52.3). Importantly, scores shifted from the category of mild depressive symptoms to minimal or none, indicating a clinically meaningful result. All those who had data postprogram ($n = 7$; $M = 16 \pm 4.726$; T score = 54.3) indicated no depressive symptoms if PROMIS scores are compared to the Center for Epidemiologic Studies Depression Scale (Kim et al., 2017; Radloff, 1977) and mild depressive symptoms if PROMIS scores are compared to the Patient Health Questionnaire–9 (Kim et al., 2017; Spitzer et al., 1999).

Comments from the postprogram survey indicated participants' satisfaction with the program. Out of eight participants who completed the survey, three said that they were extremely satisfied, four expressed satisfaction, and one was neutral. All respondents endorsed a sense of community with fellow participants.

Qualitative Results

The following themes were discovered from the qualitative analysis of observation notes taken by the investigators during the four workshop sessions: (1) caregiver emotional health, (2) shared experiences, and (3) caregiver classroom engagement.

Caregiver Emotional Health. Participant discussions about caregiver burden and stress arose from viewing and commenting on photographs during the four class sessions. One participant, an African American daughter, showed many photographs of transporting her mother; these prompted discussions on the

Table 1. Demographics of Participants of the Photography Workshop

Characteristic	N (%) or M ± SD (Range)
No. of participants ^a	10
Caregiver's age (years)	63.4 ± 6.2 (55-71)
Caregiver's gender (% male)	3 (30)
Caregiver's ethnicity (% Hispanic)	1 (10)
Caregiver's race (% African American) ^b	4 (40)
Caregiver currently employed outside of home (%) ^c	6 (75)
Caregiver's education ^c	
High school graduate (%)	1 (12.5)
Associate degree (%)	1 (12.5)
Some college (%)	1 (12.5)
College graduate (%)	2 (25)
Master's degree (%)	2 (25)
Doctoral degree (%)	1 (12.5)
Type of caregiver residence ^c	
Urban (%)	3 (37.5)
Suburban (%)	4 (50)
Rural (%)	1 (12.5)
Relationship with the person living with dementia ^b	
Spouse (%)	2 (20)
Child (%)	7 (70)
Sister (%)	1 (10)
Care recipient's age ^c	77.3 ± 9.5 (64-84)
Caregiver is living with the care recipient (%) ^c	2 (25)
Approximate number of years since the person was diagnosed with dementia ^c	5.6 ± 4.3 (2-13)
Approximate number of years the person needed attention and care due to dementia ^c	3.9 ± 3.2 (1-11)
Approximate number of years the caregiver has been caring for the person living with dementia ^c	6.2 ± 3.8 (1-13)
Caregiver receives help in the provision of care from someone in the community (paid or unpaid help) ^c	7 (87.5)
How much help the caregiver receives in the provision of care ^d	
A great deal of help (%)	3 (42.9)
Some help (%)	1 (14.3)
A little help (%)	3 (42.9)
Caregiver is responsible for provision of care or support to anyone other than the person living with dementia (%) ^c	4 (50)
How much strife and disagreement family friends have added to the difficulties that the caregiver is experiencing ^e	
Some serious difficulties (%)	3 (50)
Occasional strife and difficulties (%)	1 (16.7)
Hardly any problems (%)	2 (33.3)

Note. M = mean; SD = standard deviation.

^aSociodemographic data were collected retrospectively. Thus, out of 10 caregivers who participated in the photography workshop, we were able to contact eight participants to obtain their sociodemographic data. We report on caregivers' gender and relationship to the care recipient for all 10 participants, since we maintained those data and did not have to retrieve them retrospectively. For other parameters, data are reported on eight caregivers, unless otherwise noted (e.g., caregiver refused to answer). ^bBased on 10 participants. ^cBased on data for eight responders who were available for postprogram retrospective sociodemographic data collection. ^dBased on data for seven participants (out of 10 participants, one refused to answer, two were unavailable for the survey). ^eBased on data for six participants (out of 10 participants, two refused to answer, two were unavailable for the survey).

assistance caregivers may receive and challenges they face. Another African American daughter remarked on her role as a solitary caregiver for her parent despite having siblings: "I feel like I am the

only child; I have a sister in California, one in New York; they don't go through what I am going through." During one session, the instructor prompted substantial discussion by asking about emotional issues.

Table 2. Caregiver Well-Being Data for the Participants of the Photography Workshop

Characteristic	Results for All Participants Who Either Had Baseline or Postprogram Data, N (M ± SD), [Range]	Results for Participants Who Had Both Baseline and Postprogram Data, N (M ± SD) [Range]	Change From Baseline to Postprogram for Those Who Had Both Baseline and Postprogram Data, N (M ± SD), 95% CI, p
Caregiver burden—Baseline	7 (21.714 ± 11.011) [0-33]	5 (23.8 ± 5.167) [19-32]	
Caregiver burden—Postprogram	8 (17.625 ± 6.844) [6-28]	5 (15.8 ± 5.797) [6-23]	5 (8 ± 5.788), 95% CI [0.813, 15.187], p = .037
Depressive symptoms—Baseline	7 (18.429 ± 5.996) [8-27]	4 (20.25 ± 5.377) [14-27]	
Depressive symptoms—Postprogram	7 (16 ± 4.726) [8-24]	4 (14.25 ± 4.349) [8-18]	4 (6 ± 4.243), 95% CI [0.751, 12.751], p = .066

Note. SD = standard deviation; CI = confidence interval.

Participants reflected on the life of their care recipients, what they do for their persons, and their emotions, including their anger about the disease and what it took to understand dementia. Participants endorsed feelings of loneliness.

Shared Experiences. The instructor did not need to “create” discussion topics; the shared caregiving experience offered a common ground for engagement and discussion while viewing photographs. In-class picture-viewing provided the basis for seamlessly and naturally describing personal caregiving situations, asking questions, and seeking and giving advice about caregiving logistics, finances, and health care. Discussions of the difficulties arranging health care for persons living with dementia were prevalent, encompassing the need for education and support for caregivers, experiences with institutional care, deficits in care for those with dementias other than AD, alienation that care recipients and caregiving families endure, and problems with paid health care personnel. Several participants discussed the gaps in the health care of their persons in assisted living facilities. A Caucasian daughter endorsed families’ continued challenges after institutionalizing their persons. Caregivers of persons with dementia other than AD voiced difficulties: “. . . behavior problems are the most prevalent. My mother was kicked out of day care. She is crying for no reason.” Several caregivers described the reluctance of day care center staff to touch persons living with dementia. Such apprehension was attributed to staff members’ fear of being sued for being abusive. Caregivers spoke about their perception that paid personnel are poorly prepared. Caregivers described their need to constantly retrain certified nursing assistants given frequent turnover and lack of skills in caring for persons living with dementia.

Caregiver Classroom Engagement. Participants described their experience in the program as meaningful and providing them with an altruistic opportunity to engage with the project, which may produce results that may be useful to others. One participant remarked on the study: “Gave me an opportunity to spend quality time with Mom photographing her.” Such high level of engagement was manifested by participants’ attention during the sessions; they asked many questions, responded to the work of others, commented on their own work, and interacted with each other and the photographer during the break and after each class.

Photojournalistic Themes

Participants took several thousand photographs, and many were shown and discussed in class. Three main themes were observed: (1) the continued personhood of the care-recipient, (2) living with the illness, and (3) the experience of caregiving.

The Care Recipient Is Present. Many photos captured moments when the caregivers saw or felt their person to be still present. Nonverbal communication with pets was frequently portrayed. Many photos depicted persons interacting with a dog or scenes in which a dog is near a person in the later stage of the illness who can no longer hold the dog (e.g., dog trying to climb the wheelchair). A Caucasian wife photographed her husband with his dog: “The dog gives him a reason to live. She is his caretaker. . . Dog is his primary relationship in his life.” A Caucasian son photographed his mother’s parrot at her assisted living facility, noting: “Mom has a connection with Morgan [the parrot].”

Several caregivers photographed care recipients’ engagement in faith-based activities. These included participating in a Communion at home, watching a

film on a religious topic, and reading the Bible. An African American daughter noted, “She enjoys the sermons, she is familiar with the Bible, she likes reading it, she likes hearing it, she knows what they are talking about.” Other photos captured religious figures (angels) important to the person.

A number of photographs portrayed care recipients’ engagement and enjoyment in the moment: holding toys, dolls, or gifts; make-up or jewelry; listening to music; or holding items including letters from a deceased spouse. Photographs often captured communication between the person living with AD and family members. One African American daughter created a series of photographs illustrating the initial moments of her sister visiting their mother: “Surprise visit. Trying to catch that quickly.” The photographs depicted the care recipient smiling at the visitor and trying to kiss her hand when she saw her. An African American sister stated, “She loves music and she sort of dances [sitting down].” A Caucasian daughter explained photographs of letters between the pages in the Bible:

These are letters that my dad wrote to her in the 1950s, I stick them [in different places]. Every time she finds [the letter], she will think it’s new, and she would be like: “That’s the letter that your dad wrote to me!”

Several photographs depicted objects related to a person important to the care recipient: portraits of a deceased spouse, a picture of a wedding ring, or portraits of the person’s parent or grandchildren. One African American daughter expressed that she plans to play classical music more because her mother’s husband was a classical musician: “She’ll point to it [picture of care recipient deceased husband’s music album] . . . she talks about her husband all the time.”

Living With the Illness. Many photographs portrayed the ways persons’ lives are affected by these dementing illnesses. For example, an African American daughter made a series of photographs depicting her mother in a chair, covered with a blanket from head to toe. The caregiver described her mother’s willingness to be in her “cocoon”: “She likes to put the cover over her head—her cocoon . . . we . . . have a conversation [while she is in her cocoon].” Another African American daughter said that her mother covers her

head with a blanket when the mother is angry with the daughter. Other images depicting the person’s behavior included inability to use familiar objects (“I can give her glasses in the right direction and she will every time put them upside down”); diminished attention span (“He is distracted easily”); gradual loss of speech (“She smiles at me when I sit with her, she doesn’t talk much anymore”); slowed eating (“She would pile and pile food on the fork and then she wouldn’t eat it, it would just be an object to watch”); and losing the ability to organize (“He is an engineer and he is typically very organized, but now his organizational skills are diminishing”).

A number of photographs included scenes at the doctor’s office or in the hospital, surgical scars from brain tumor removal, or hospital wrist bands. The caregiver commented, “You can read ‘dehydration,’ ‘stomach pain,’ etc.” Other photographs depicted objects related to health care (e.g., pill boxes, blood pressure cuffs, equipment for walking, etc.).

The Caregiving Experience. Many photographs illustrated the daily life of caregiving dyads. Scenes included a chair without the person in it; a baby monitor; pictures of the person’s meals, pill box, equipment (crutches, walkers), or shoes; a hallway and rooms in the assisted living facility; an outing to a café with the family and away from the assisted living facility; the person eating; the caregiver measuring person’s blood pressure; or the person with a nurse.

The burden and stress of the caregiving experience was highlighted through photographs of daily routines. One African American daughter’s photographs included helping her mother attempt to use the bathroom, helping her transfer from the car to the wheelchair, pictures at the dentist’s office and on the surgery table. She described her photographs: “It’s graphic stuff—no pictures of cuteness. [I wanted to document my experience of it.]; It’s not all pretty.”

Discussion

Our primary result is that our photojournalism intervention significantly reduced self-reported AD family caregiver burden. Depression reduction was not statistically significant but attained clinical meaningfulness. This study aligns with previous research that supports caregivers’ benefits related to art-based interventions (Camic et al., 2014; Camic

et al., 2016, Camic et al., 2017; McFadden & Basting, 2010). Specifically, Camic has reported multiple cognitive and behavioral benefits of art therapy in dementia participants, including improved mood and social inclusion. Moreover, these benefits extend to both the dementia patient and the caregiver, in addition to the general population when these interventions take place in public settings (i.e., art galleries), which serves to raise awareness of dementing illnesses.

The photojournalism study was well-received by participants and may be a novel, nonpharmaceutical alternative to decrease caregiver burden and depression. Caregivers' qualitative responses to the program revolved around three themes: (1) caregiver emotional health, (2) shared caregiving experiences, and (3) their engagement in the classroom. Photographs' central themes included (1) the continued personhood of the care recipient, (2) living with the illness, and (3) the experience of caregiving. The present project also should be considered as a holistic program that can provide education about AD family caregiving to non-caregivers. Indeed, participants' photos captured life events that are common in AD family caregiver's lives but may not be usually photographed or well understood in the broader community (e.g., a chair against a door to prevent wandering).

Implications for Clinical Practice and Research

Family caregivers who provide care for persons living with dementia experience a different journey in comparison to other caregivers. AD family caregivers experience a heightened level of psychological distress that challenges health care providers to meaningfully intervene by considering all mental and social factors related to their role as a caregiver. Approximately 30% to 40% of AD family caregivers suffer from depression, compared with 5% to 17% of non-caregivers of similar ages (Alzheimer's Association, 2017; Mausbach, Chattillion, Roepke, Patterson, & Grant, 2013). A recent meta-analysis reported that caregivers of people with dementia were significantly more likely have a diagnosis of depression and anxiety versus non-caregivers (Ma, Dorstyn, Ward, & Prentice, 2017). The prevalence of depression is higher among dementia caregivers than other caregivers, such as those who provide help to individuals with

schizophrenia (20%) or stroke (19%; Atteih et al., 2015; Sallim, Sayampanathan, Cuttilan, & Ho, 2015; Thunyadee Sitthimongkol, Sangon, Chai-Aroon, & Hegadoren, 2015).

Holistic interventions are valuable components of clinical care plans; thus, the health care team should acknowledge photojournalism-based interventions as significant holistic approaches to reducing negative outcomes for AD family caregivers as it relates to their psychological well-being. In fact, art activities should be considered part of curriculum for psychoeducation caregiver programs. Future research should further explore the significant relationship between photojournalism-based interventions and physical and psychological well-being of caregivers to holistically address the needs of AD family caregivers.

Limitations

The main limitation of this pilot study was the small sample size. While future photography classes will still be small to facilitate conversation, including caregivers from different regions would be informative. We were not able to acquire data on all participants, particularly postintervention. Specifically, we asked participants to return completed questionnaire forms, and some did not. This may have dampened our results, although a significant reduction in caregiver burden was attained. Both quantitative and qualitative data collection should happen in person, before the first session and after the last session. Our qualitative data were not collected according to standards per Sandelowski. Future research should more closely adhere to structured qualitative analyses. Finally, many factors affect caregiver burden. While we believe the program contributed to the reductions in burden and stress, we acknowledge that a pilot study cannot account for additional contributing factors that may have influenced burden reduction.

Conclusion

Approximately 15 million dementia family caregivers in the United States (Alzheimer's Association, 2017) provide vital support to their family members living with AD. It well documented that caregiving is linked to burden, stress, and depression, and more research targeting AD family caregivers via holistic and nonpharmacological approaches is imperative.

This study supports the use of photojournalism-based therapy as a viable intervention for family caregivers to reduce caregiver burden and depression. Further engagement in meaningful activity is significant for the quality of life for family caregivers. Moreover, the adaptation of photojournalism-based therapy to support caregivers may be a step toward creating dementia-friendly communities.

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