Self-efficacy and related factors in caregivers affecting the care burden for elderly people with dementia

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Abstract

This examined self-efficacy and related factors in caregivers that affect the caregiving burden in dementia care and considered strategies for the improvement of those factors. Questionnaires were mailed to 102 residential facilities in A city from July to August, responses, and were obtained from 39 facilities (a response rate of 38.2%). It was found that having less than 3 years of experience was correlated with lower self-confidence in environmental improvements and lower self-confidence in safety considerations ($p < 0.05$), along with poorer ratings for support systems and staff conflict ($p < 0.05$) than found in those with more than 10 years of experience. Working in nursing homes led to lower ratings for all of these factors than working in group homes ($p < 0.05$). In addition, multiple regression analyses determined that self-confidence in relationship formation ($\beta = 0.32$, $p < 0.01$) and self-confidence in environmental improvement ($\beta = 0.15$, $p < 0.05$) reduced the general difficulty of dementia care.

Key words: dementia, self-efficacy, care burden

Introduction

The number of elderly people with dementia is increasing year by year, and their proportion in nursing home populations exceeds 90%. However, it is has been reported that care staff know about as much about dementia as family caregivers [1]. There is little evidence that proper medical care for dementia is being supplied in nursing homes, and various support methods are used for dementia, often left to individual staff to decide. Ad hoc response worsens dementia symptoms, and staff responds poorly, which increase helplessness, stress, and the care burden. Therefore, increasing self-efficacy is necessary so that care staff will be able to cope with dementia.

Self-efficacy, proposed by Bandura, refers to the degree of confidence that individuals have in their ability to perform their duties. The higher the self-efficacy, the higher the dedication with which a person pursues a task and carries out related actions. Self-efficacy buffers the caregiving burden in nursing care. In previous studies, it has been found that caregivers with high self-efficacy feel less pain from the burden of dementia care. Care staff with high self-efficacy have lower emotional burdens and increased motivation for self-study. Likewise, the quality of dementia care they provide improves [2-3].

Some studies, however do not show a significant association between self-efficacy and care burden[4], implying that the relationship between the two is not simple. Dementia care is not limited to direct care of

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elderly people with dementia but consists of many elements, such as relationship building between elderly people, care for family members, and teamwork between staff members. Furthermore, the care burden is not simply the burden on the body of nursing care but includes psychological stress and conflict, which are rooted in relationships with dementia and the workplace. Beyond these, basic attributes such as the gender, age, and years of experience of care staff, along differences in the workplace environment, affect the burden of dementia care.

Thus, we must measure not general self-efficacy and its effects on the daily-life behaviors but the specific self-efficacy that affects the behavior specific to the scene of dementia care. Thus, it is necessary to examine the relationship of specific self-efficacy and care burden. In this way, we can investigate the self-efficacy required by each situation where the burden of nursing care occurs in detail, contributing to the specification of concrete intervention strategies to improve self-efficacy.

This study examined self-efficacy and related factors that affect the care burden in dementia care to develop strategies to improve self-efficacy and reduce the care burden.

Material and Methods

Survey method, period, participants

This survey used a self-administered questionnaire. In July to August 2017, we sent questionnaires to 102 administrators of elderly residential facilities in A city, requesting that they be distributed to care staff and also requesting a reply with a completed questionnaire. Residential facilities contacted included nursing homes, health care facilities, medical care facilities, specified facility, group home. We received responses from 39 facilities, a response rate of 38.2%.

Survey item

Demographic information such as sex, age, years of experience, occupation, and dementia qualifications were measured. Care staff working to support BPSD completed a self-efficacy scale[5] and a difficulty scale[6]. Completed dementia care practitioner training, completed dementia care practice leader training, dementia care specialist qualification, dementia life partner qualification were counted as dementia qualifications.

The self-efficacy scale measures the five self-efficacy factors that support improvement in BPSD: self-confidence in support for the elderly (six items), self-confidence in environmental improvement (four items), self-confidence in safety considerations (four items), self-confidence in relationship formation (three items), and self-confidence in support of relationship with family (two items). Responses were provided on a 4-point Likert scale, anchored at 1 (not confident at all) and 4 (quite confident) for each item. The higher the final score, the higher the self-efficacy.

The difficulty scale measures the four difficulties of engaging in dementia care: conflict with the patients (five items), support system in the workplace (five items), conflict among staff members (five items), and sense of being burdened (four items). Responses were provided on a 4-point Likert scale anchored at 1 (expected) and 4 (unexpected). The higher the score, the lower the difficulty level. All items on the difficulty scale were added to calculate a total score that was used for later analysis.

Analysis

The frequency distribution of the basic attributes of the respondents was calculated. Next, the differences between the scores on the self-efficacy scale and the scores on the difficulty scale for each basic attribute were analyzed using a t-test or variance analysis. Multiple-comparison analysis was conducted using Tukey's method. Pearson correlation analysis was also conducted on the self-efficacy scale and difficulty scale. Finally, multiple-regression analyses were performed on the total score of the difficulty scale as the dependent variable and the

score of the self-efficacy scale as the independent variable. SPSS 22 was used for statistical analyses.

Ethical consideration

The questionnaire announced to the participants that personal information was only to be used for research and privacy would be protected; all analyses were conducted after anonymizing. Responding to the survey was considered consent. To prevent the administrators from observing the staff's replies, we asked the participants to seal the envelopes themselves. The study was conducted with the approval of the ethics review committee of Tokushima Bunri University (H29-4).

Results

Participant attributes

Participant attributes are shown in Table 1. About twice as many women as men responded (169 women and 80 men), and 114 respondents had 3 to 10 years of experience. In all, 204 care workers, 30 nurses, 16 working in other occupations responded, and 143 worked at a nursing home. There were 39 who had dementia qualifications.

Comparison of scale scores by attributes

Table 2 shows the score on the self-efficacy scale for each attribute. Those who had more than 10 years of experience had significantly higher scores on self-confidence in environmental improvement ($F(234,2) = 4.5$, $p < 0.05$), self-confidence in safety considerations ($F(234,2) = 3.0$, $p < 0.05$), and self-confidence in support of relationship with family ($F(235,2) = 7.0$, $p < 0.01$) than those with less than 3 years of experience. A significant difference was seen in the self-confidence in the support of relationship with family ($F(243, 2) = 12.7$, $p < 0.01$) for occupation, where care workers were less self-confident than other occupations. Group home staff had higher scores in self-confidence in support for the elderly ($F(240,3) = 7.9$, $p < 0.01$), self-confidence in environmental improvement ($F(238,3) = 3.1$, $p < 0.05$), self-confidence in safety considerations ($F(238,3) = 2.7$, $p < 0.05$), and self-confidence in relationship formation ($F(241,3) = 3.3$, $p < 0.05$) than nursing home staff. People with dementia qualifications had higher self-confidence in environmental improvement than those without ($t(243) = 2.2$, $p < 0.05$).

Table 3 shows the difficulty scale scores for each attribute. Those who had 10 years of experience or more had significantly higher scores than those with less than 3 years of experience in support system in the workplace ($F(225,2) = 3.7$, $p < 0.05$) and conflict among staff members ($F(236,2) = 5.1$, $p < 0.01$). Nursing home staff had more difficulty than the group home staff in the following items: support system in the workplace ($F(231,3) = 2.7$, $p < 0.05$) and conflict among staff members ($F(242,3) = 3.8$, $p < 0.05$). Those with dementia qualifications had higher conflict among staff members ($t(245) = 2.9$, $p < 0.01$) and sense of being burdened ($t(240) = 2.9$, $p < 0.01$) than unpossessed people.

Pearson correlation analysis between self-efficacy scale and difficulty scale

Table 4 showed the results of Pearson's correlation analysis between the self-efficacy scale and the difficulty scale. Conflict with elderly people with dementia had a significant positive correlation with all self-efficacy scales at the 1% level ($r = 0.35$–0.55, $p < 0.01$). Support system in the workplace showed a significant positive correlation with self-confidence in relationship formation ($r = 0.18$, $p < 0.01$). Conflict among staff members showed a significant positive correlation with self-confidence in relationship formation ($r = 0.13$, $p < 0.05$). The sense of being burdened showed a significant positive correlation at the 1% level with self-confidence in environmental improvement, self-confidence in safety considerations, and self-confidence in relationship formation ($r = 0.21$–0.28, $p < 0.01$).

Multiple regression analyses with total score on the difficulty scale as dependent variable and self-efficacy as independent

variable
Multiple regression analyses were performed using the stepwise method, with the total score of the difficulty scale as the dependent variable and self-efficacy as the independent variable (Table 5). It was found that self-confidence in relationship formation ($\beta = 0.32$, $p < 0.01$) and self-confidence in environmental improvement ($\beta = 0.15$, $p < 0.05$) reduced the overall difficulty of dementia care.

Discussion

Examining the self-efficacy scale for each attribute, it is clear that the greater the number of years of experience, the greater the self-confidence, and group home staff have more self-confidence than nursing home staff. Care staff may acquire a method of coping with dementia using trial and error. Because group home staff encounter various individual levels of care in a small number of units, they can develop more self-confidence than nursing home staff. Moreover, people with dementia qualifications understand the importance of improving the environment to cope with dementia. Likewise, it is considered that self-confidence increases where the familiar environment is improved.
However, comparing the difficulty scale for each attribute, the greater the experience, the more the difficulty with the support system in the workplace and the worse the conflict among staff members. Nursing home staff also have greater difficulty in these areas than group home staff. The greater the experience, the denser the relationships on staff, but it is also likely that conflicts can appear within the staff, and team work can become difficult. In addition, nursing home have more staff than the group home, and it is divided by the hierarchy of facilities and units, so workers in nursing homes have more difficulty in obtaining support in their workplaces. Finally, due to their abundance of knowledge and understanding of dementia, those with dementia qualifications may feel it to be difficult to avoid conflicts stemming from the limitations of the care site, resulting in a dilemma that is too much for one person
Correlation analyses confirmed that increasing self-efficacy reduces conflict with elderly people with dementia. In particular, self-confidence in relationship formation with the elderly leads to a reduction effect on conflict with elderly people with dementia, the support system in the workplace, conflict among staff members, and sense of being burdened. The key to dementia care is providing conscious and appropriate responses. Establishing a good human relationship between elderly dementia patients and staff members must be the core of care. A positive correlation was found between feeling burdened and self-confidence in environmental improvement, self-confidence in safety considerations, and self-confidence in relationship formation. Working on the environment by improving the familiar living space and taking safety into consideration contributes to the above-mentioned creation of human relationships and helps reduce the care burden.
The results of multiple regression analyses indicate that self-confidence in relationship formation and self-confidence in environmental improvement reduce the general difficulty of dementia care. To reduce the difficulty of dementia care, it is essential to investigate both sides and prepare familiar environments to develop soft relationships with elderly people with dementia.
Finally, to reduce the sense of being burdened, it is necessary to acquire accurate knowledge of dementia and appropriate coping skills to improve self-efficacy. In addition, through establishing an appropriate support system based on good teamwork and eliminating staff conflict among staff with little experience and those who work at nursing homes, the formation of good human relationships must be foregrounded.

Limitations of study

The self-efficacy scale and the difficulty scale that were used in this study were crafted for use in dementia care, which restrained us from measuring self-efficacy and the care burden for general nursing care. In addition, because this survey targeted residential facility staff in city A, we expect that different results would be found for home-based services, such as outpatient care or home-visit care. The relationship between self-efficacy and care burden should be clarified with a survey that investigates the severity of dementia and the level of care required as indicators and with surveys of the staff of home-based services.

Conflicts of interest: There were no conflicts of interest to declare.
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Table 1. Participant attributes

Item	Number of people (%)
Sex	
Female	169 (67.9)
Male	80 (32.1)
Age (years old)	
Less than 20	60 (24.1)
30–39	70 (28.1)
40–49	60 (24.1)
50–59	40 (16.1)
more than 60	19 (7.6)
Years of experience	
Less than 3 years	49 (20.2)
3–10 years	114 (47.1)
More than 10 years	79 (32.6)
Occupation	
Care worker	204 (81.6)
Nurse	30 (12.0)
Other	16 (6.4)
Facility type	
Nursing home	143 (57.4)
Health care facility	17 (6.9)
Specialized facility	20 (8.0)
Group home	69 (27.7)
Dementia qualification	
Has	39 (15.6)
Does not have	211 (84.4)

Table 2. Self-efficacy scores by attributes (average ± standard deviation)

	Self-confidence in support for the elderly	Self-confidence in environmental improvement	Self-confidence in safety considerations	Self-confidence in relationship formation	Self-confidence in support of relationship with family
Years of experience					
Less than 3 years	15.4±2.6	9.0±2.4	10.4±2.3	8.7±1.8	4.3±1.5
3–10 years	16.2±2.4	9.5±1.6	10.9±1.7	9.1±1.4	4.9±1.3
More than 10 years	16.3±3.0	10.1±2.1	11.3±2.0	8.8±1.5	4.9±1.4
Occupation					
Care worker	16.0±2.7	9.5±2.0	10.8±2.0	8.9±1.6	4.7±1.3
Nurse	15.6±2.2	9.5±1.7	11.0±1.6	8.9±1.5	5.3±1.3
Other	17.3±2.1	10.4±1.9	11.5±2.1	8.9±1.4	6.3±1.5
Facility type					
Nursing home	15.3±2.8	9.2±1.8	10.7±2.0	8.7±1.5	4.7±1.4
Health care facility	16.7±1.9	9.5±2.2	10.5±2.1	9.0±1.5	5.1±1.4
Specialized facility	16.1±2.6	10.1±2.5	10.9±1.9	9.3±1.4	4.9±1.2
Group home	17.2±2.3	10.0±2.0	11.5±1.7	9.3±1.6	5.1±1.4
Dementia qualification					
Has	16.8±2.2	10.2±1.9	11.4±1.7	9.1±1.5	5.2±1.2
Does not have	15.9±2.8	9.4±2.0	10.8±2.0	8.9±1.6	4.8±1.4

$^{**}p < 0.01$, $^{*}p < 0.05$

Table3. Difficulty scale score by attributes (average±standard deviation)

	Conflict with the dementia elderly	Support system at the workplace	Conflict within staff	Sense of being burdened
Years of experience				
Less than 3 years	13.7±2.7	9.5±2.6	13.0±3.1	10.6±3.2
3-10 years	14.0±2.7	9.0±2.8 *	12.5±2.9 **	9.9±2.4
More than 10 years	14.4±2.5	8.8±2.8	11.5±2.7 *	9.6±2.5
Occupation				
Care worker	13.9±2.8	8.9±2.8	12.4±3.0	9.9±2.7
Nurse	14.9±2.4	8.6±2.7	12.5±2.6	10.4±2.6
Others	14.5±2.1	8.3±2.2	11.2±2.8	10.0±2.1
Facility type				
Nursing home		8.5±2.4	11.8±2.9	9.5±2.6
Health care facility	13.8±2.6	8.6±2.7 *	12.5±3.2 *	11.1±2.3
Specialized facility	13.7±3.5	9.4±3.9	13.6±3.1	10.3±2.6
Group home	14.8±2.1	9.6±2.8	13.0±2.7	10.5±2.8
	14.6±2.9			
Dementia qualification				
Has	14.3±2.6	8.4±2.9	11.1±2.8 **	8.8±2.6 **
Does not	14.0±2.7	8.9±2.7	12.5±2.9	10.1±2.6

$^{**}p<0.01$, $^{*}p<0.05$

Table 4. Pearson correlation analysis between self-efficacy scale and difficulty scale

	Conflict with elderly dementia patients	Support system in the workplace	Conflict within staff	Sense of being burdened
Self-confidence in support for the elderly	0.47**	0.03	0.85	0.12
Self-confidence in environmental improvement	0.46**	0.05	0.06	0.21**
Self-confidence in safety considerations	0.55**	0.03	0.04	0.28**
Self-confidence in relationship formation	0.55**	0.18**	0.13*	0.21**
Self-confidence in support of relationship with family	0.35**	0.08	0.02	0.06

$^{**}p < 0.01$, $^{*}p < 0.05$

Table 5. Multiple regression analyses (dependent variable: total score of difficulty scale, independent variable: self-efficacy)

	Total score for difficulty scale β
Self-confidence in relationship formation	0.32**
Self-confidence in environmental improvement	0.15*
R^2	0.16

stepwise method $^{**}p < 0.01$, $^{*}p < 0.05$