**Introduction**

Japan is a rapidly aging society. The morbidity rate of dementia in people over 65 years has reached over 14% (Shimokata, 2004), and the coping skills of certified caregivers who have provided the majority of care to those with behavioral and psychological symptoms of dementia (BPSD) are insufficient (The project team of dementia measures of the Mental Health of the Ministry of Health, Labour and Welfare 2012). Meanwhile, depression and anxiety patients consult psychiatric clinics frequently (Saito, 2009). The morbidity rate of mental and cognitive impairment in people over 65 years old who were provided with primary care was 48.1% (Watts, SC., Bhutani, GE., Stout, IH., Ducker, GM., Cleator, PJ., McGarry, J., & Day, M., 2002), and 10% of elderly people had anxiety, while the rate of anxiety coexisting with depression was high. Moreover, previous studies reported that the rates of depression, agitation and psychotic symptoms in Alzheimer’s disease in home care patients were 80%, 80%, and 70%, respectively (Tractenberg, RE., Weiner, MF., Patterson, MB., Teri, L., & Thal, LJ., 2003). The number of elderly people with mental and cognitive impairments due to a decline in physical and mental functions with aging is increasing. Issues regarding general physicians’ skills to diagnose depression and prescribe medication have been reported (Mellor, D., Davison, T., McCabe, M., & George, K., 2008a; Nakano et al., 2011) and it is necessary to construct a system of consultation by psychiatrists about residents’ mental problems at institutions for the elderly (Loebel, JP., Borson, S., Hyde, T., Donaldson, D., Van Tuinen, C., Rabbitt, TM., & Boyko, EJ., 2008).

Long-term care insurance was introduced in 2000 in Japan to improve the care of elderly people with mental disorders, and care workers who are not mental health care specialists have provided the majority of care. In 2013, education for dementia care was included in the training programs of first grade caregivers, but a large number of certified caregivers providing care at present...
are second grade home helpers (HH). They received education in a short period to get the license and did not study dementia.

Authors investigated HH regarding the actual care of elderly people with mental disorders, and found that HH could not consult any medical professionals if they had trouble, and that they were experiencing problems (Harada & Yamane, 2013a). HH understood the need for collaboration with mental health care medical staff to cope with emergency correspondence regarding suicidal tendencies and sexual behaviors, but HH did not consult them about dealing with hallucinations, delusions and hypochondria that HH experience in daily care, even if they experienced difficulties because they thought that the difficulties in dealing with symptoms were caused by their lack of knowledge about the features of mental and cognitive functions among elderly people. Therefore, the education for certified caregivers is necessary (Harada, 2013).

Important research indicated that a comprehensive behavior-management-skills training program for certified nursing assistants who provide care for cognitively impaired nursing home residents reduced the residents’ agitation levels (Burgio, LD., Stevens, A., Burgio, KL., Roth, DL., Paul, P., & Gerstle, J., 2002; McCallion, P., Toseland, RW., Lancey, D., & Banks, S., 1999). As for depression, some previous research reported that skills for dealing with people with depression increased among care workers who attended depression training programs (Mellor, D., Davison, T., McCabe, M., & George, K., 2008b; Mellor, D., Russo, S., McCabe, MP., Davison, TE., & George, K., 2008b; Mellor, D., Kiehne, M., McCabe, MP., Davison, TE., Karantzas, G., & George, K., 2010). The fundamental position of Japan’s Ministry of Health, Labour and Welfare initiated training systems and programs for dementia patients in 2012, and promoted care skills for dementia patients for certified caregivers; however, there is little research evidence about the programs.

Therefore, authors framed and implemented programs for certified caregivers that provide care services for elderly people with mental and cognitive impairments. The purpose of this study was to clarify the effects and durability of these effects, and examine issues involved when teaching care skills to certified caregivers.

**Methods**

**Participants**

The participants in this study were certified caregivers working in long-term care insurance community care offices in an area with a population of 320,000 and a 17.9% elderly population. Authors explained the purpose of this study to the managers of 12 home care offices introduced to the authors by community comprehensive service centers or home visit nursing stations. The authors recruited over 50 participants, but the home care offices were small, and there were a few offices that had meetings among certified caregivers. Finally, 2 offices consented to the proposal. There were 14 people working in the home visiting care offices linked to home visit nursing stations offices and 19 people working in home visit care and day service care offices linked to group homes for people with dementia. Both offices were managed by a social welfare corporation and the managers of the offices were professional care workers who provided care to elderly people with mental disorders and dementia.

**Interventions**

The program looked at the way in which participants grappled with studying actively and consisted of lectures about the features of mental and cognitive functions among elderly people and case studies for dealing with elderly people with mental and cognitive impairments (Amata, 2004; Hotta, 2012; Yamane, 1994; Takenaka, 2000; Japan Dementia Communication Conference, 2011). The basic program was done twice. The first time, authors provided a lecture about the behaviors of elderly people with mental and cognitive impairments, and the contents were based on previous research in which home care recipients were perceived by certified caregivers as creating difficulties in terms of care and coping. In the programs, participants studied a procedure for considering how care recipients behaved.

After 1–2 months, authors provided a second program with a review of the first lecture and case studies were provided by participants. The program lasted from one- to one-and-a-half hours, and the authors provided it three times; two groups consisted of 7 members and one group consisted of 19 members. After 6 months, the authors provided a follow-up program with a review of the basic program. In particular, communication skills and case studies were provided by participants. The program was carried out from August 2012 to March 2013 (Fig. 1).

**Ethical concerns**

Authors obtained approval from the participants after explaining that they would participate in this study of their own free will, that the records would be kept safely, and that they would not be used outside the auspices of this study in either oral or written form. The study protocol was approved by the Medical Ethics Committee at Kyoto University.
**Data collection**

Authors administered self-rating questionnaires survey to participants three times as follows: before and after the basic training and after the follow-up training. Authors distributed and collected the self-rating questionnaires to participants directly at the time of training. Authors asked participants to write code numbers for personal identification so they could identify who wrote questionnaires and analyze the difference between before and after the basic training and after the follow-up training. The self-rating questionnaires asked about participants’ attributes and “feeling care difficulties”. The authors collected data of participant’s attributes regarding age, sex, and number of experiences of care for recipients with mental and cognitive functional disorders: schizophrenia, depression, home care or day service in the first questionnaire before the basic training. The authors collected data regarding “feeling care difficulties” before and after the basic training and after the follow-up training, as well as data regarding impressions about the programs, and a free description after the programs regarding experiences of “feeling care difficulties” before the basic training and the follow-up training. There were 24 items about “feeling care difficulties” grouped as follows: dealing with psychiatric symptoms, depression, anxiety, refusal and aggression, communication skills, and dealing with cognitive impairments, which authors referred to in previous research (Harada, 2013). Feeling care difficulties were assigned levels from 1−4 on the Likert Scale.

**Analysis**

Authors analyzed the rates of the participants’ characteristics, experiences and feeling of difficulty levels of the 24 items. Authors used Friedman’s Test and Bonferroni multiple comparison of analyses to compare each pair with levels of difficulty as follows: before and after the basic training and after the follow-up training, and Mann-Whitney U test for the relations between experiences and feeling of difficulty levels. IBM SPSS Statistics (Statistical Package for Social Sciences v20 for Windows) was used for the statistical analyses, and the significance level was p < 0.05. Regarding feeling of difficulty, authors processed data excluding missing values for every feeling of difficulty level item.

Authors classified free descriptions into categories according to the contents of participants’ comments on care and coping. In the following sections, double quotes and square brackets enclose categories and spoken contents, respectively.
Results

1. Characteristics and experiences of the participants’ care

The participants were comprised of 2 male and 31 female individuals, and they were aged 46.8 ± 9.7; eight participants were regular workers employed full-time and twenty-five participants were part time workers. Their average number of years of experience as certified caregivers was 5.82 and the range was 1.2 to 13 years. Fourteen participants were professional care workers and twenty-five participants were part time workers. The participation rates of those who attended the training with dementia and mental disorders were 42.4% and 12.2%, respectively. The rates for giving care to patients with schizophrenia, depression, and others, were 15.5%, 12.2%, respectively (Table 1).

2. Participants’ experience for items of care difficulties

Regarding having had experience of the 24 items, over 50% of items both before the basic training and before the follow-up training had been experienced by 54.5% and 66.7%, 78.8% and 63.6%, 66.7% and 57.6%, 57.6% and 57.6%, 78.8% and 66.7%, 66.7% and 54.5% (1, 2, 7, 10, 12 and 22, respectively). Over 50% of items before the basic training or before the follow-up training were experienced at rates of 3, 15 and 17, respectively. Items at low rates were experienced at rates of 5, 8, 11, 19 and 24, respectively (Table 2).

3. The scores for feeling care difficulties (Table 3)

There were missing values before the basic training, so authors processed data excluding missing values every feeling of difficulty levels of items. Eighteen items’ rates showed significant results between the score before after training.

The items’ rates that showed significant results between the score before the training and after the basic training, and between the score before the training and after the follow-up training included 6 items as follows:

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**Table 1. Characteristics of the participants**

|                          | \( N = 33 \) |
|--------------------------|-------------|
| Sex                      |             |
| Male                     | 2 (6.1)     |
| Female                   | 31 (94.9)   |
| Employment               |             |
| Regular worker           | 8 (24.2)    |
| Part time worker         | 25 (75.8)   |
| License                  |             |
| Professional care worker | 14 (42.4)   |
| Home helper              | 19 (57.6)   |
| Attended the Training    |             |
| Mental disorder          | yes 4 (12.1) |
|                          | no 29 (87.9) |
| Dementia                 | yes 14 (42.4) |
|                          | no 19 (57.6) |
| Care Experience          |             |
| Schizophrenia            | yes 5 (15.2) |
|                          | no 28 (84.8) |
| Depression               | yes 11 (33.3) |
|                          | no 22 (66.7) |
| Other mental disease     | yes 7 (21.2) |
|                          | no 26 (78.8) |

**Table 2. Participants’ experience of difficulty with each item**

| Item                                                                 | before basic training | before follow-up training |
|-----------------------------------------------------------------------|-----------------------|---------------------------|
| 1. Hallucinations and delusions                                       | yes (54.5)            | no (45.5)                 |
| 2. Fluctuations in care recipient’s mood                             | yes (78.8)            | no (21.2)                 |
| 3. Hallucinations in which someone steals                             | yes (13.3)            | no (86.7)                 |
| 4. Sexual behaviors                                                   | yes (21.2)            | no (78.8)                 |
| 5. Threatened by care recipients                                     | yes (4.1)             | no (95.9)                 |
| 6. Causing care recipients anxiety about being dirty                  | yes (33.3)            | no (66.7)                 |
| 7. Talking about suicide                                              | yes (22.6)            | no (77.4)                 |
| 8. Suicidal ideation                                                  | yes (24.2)            | no (75.8)                 |
| 9. Care recipients not speaking and being silent                      | yes (19.5)            | no (80.5)                 |
| 10. Mentioning anxiety about life                                     | yes (57.6)            | no (42.4)                 |
| 11. Many phone calls                                                  | yes (6.1)             | no (93.9)                 |
| 12. Symptoms of hypochondria                                          | yes (26.7)            | no (73.3)                 |
| 13. Certified caregivers scolded by care recipients, but not understanding why | yes (11.3)            | no (88.7)                 |
| 14. Care recipient’s violence                                         | yes (15.4)            | no (84.6)                 |
| 15. Refusal of care that certified caregivers could not understand    | yes (20.6)            | no (79.4)                 |
| 16. Care recipients cannot dump trash                                 | yes (10.3)            | no (89.7)                 |
| 17. Ingnorance of social norms                                        | yes (14.8)            | no (85.2)                 |
| 18. Insufficient care time                                            | yes (14.2)            | no (85.8)                 |
| 19. No sense of the value of money                                    | yes (9.1)             | no (90.9)                 |
| 20. Difficulties understanding life skills                            | yes (16.8)            | no (83.2)                 |
| 21. How to maintain appropriate distance from care recipients         | yes (14.2)            | no (85.8)                 |
| 22. Hurting care recipient’s pride                                    | yes (22.6)            | no (77.4)                 |
| 23. The appropriate way to speak to care recipients                    | yes (14.2)            | no (85.8)                 |
| 24. Care recipients forget when certified caregivers will visit        | yes (8.2)             | no (91.8)                 |
2, 7, 12, 17, 18, 22 and 24. The items before the basic training, after the basic training and after the follow-up training of items were experienced by 3.06 ± .61 to 2.24 ± .61 to 2.15 ± .57 ($\chi^2 = 25.47, p < .000$), 3.03 ± .77 to 2.13 ± .82 to 2.15 ± .57 ($\chi^2 = 16.69, p < .000$), 2.83 ± .70 to 1.97 ± .62 to 1.70 ± .53 ($\chi^2 = 28.23, p < .000$), 2.67 ± .82 to 1.87 ± .68 to 1.84 ± .63 ($\chi^2 = 15.39, p < .000$), 2.96 ± .83 to 2.26 ± .83 to 2.18 ± .53 ($\chi^2 = 15.57, p < .000$), 2.27 ± .59 to 1.93 ± .46 to 1.70 ± .64 ($\chi^2 = 26.44, p < .001$) and 3.16 ± .83 to 2.21 ± .86 to 1.97 ± .65 ($\chi^2 = 15.96, p < .001$), all of df = 2, with average scores of 2, 12, 17, 18, 22 and 24, respectively.

Items experienced with significant results only between the score before the training and after the follow-up training included 6 items as follows: 1, 10, 14, 15, 20, 21 and 23. The items’ rates before the training and after the follow-up training were experienced by 2.54 ± .51 to 1.81 ± .58 ($\chi^2 = 14.83, p = .001$), 2.64 ± .91 to 1.76 ± .67 ($\chi^2 = 15.64, p = .001$), 3.12 ± .90 to 2.45 ± .67 ($\chi^2 = 7.80, p = .020$), 3.31 ± .74 to 2.28 ± .63 ($\chi^2 = 12.43, p = .002$), 2.77 ± .87 to 1.97 ± .67 ($\chi^2 = 13.35, p = .001$), 2.57 ± .90 to 1.96 ± .71 to 1.76 ± .61 ($\chi^2 =$

### Table 3. The scores for items before and after the basic training and after the follow-up training

| Item Description                        | Mean | SD  | $\chi^2$-Score | P-value | multiple comparison P-value |
|-----------------------------------------|------|-----|----------------|---------|-----------------------------|
| 1. Hallucinations and delusions (n = 25) |      |     |                |         |                             |
| before basic                            | 2.54 | .51 | 14.83          | .001    |                             |
| after basic                             | 2.00 | .67 |                |         |                             |
| follow-up                               | 1.81 | .58 |                |         |                             |
| 2. Fluctuations in care recipient's mood (n = 27) |      |     |                |         |                             |
| before basic                            | 3.06 | .61 | 25.47          | .000    |                             |
| after basic                             | 2.24 | .61 |                |         |                             |
| follow-up                               | 2.15 | .57 |                |         |                             |
| 3. Hallucinations in which someone steals (n = 18) |      |     |                |         |                             |
| before basic                            | 2.91 | .85 | 8.97           | .011    |                             |
| after basic                             | 2.17 | .72 |                |         |                             |
| follow-up                               | 2.00 | .67 |                |         |                             |
| 4. Sexual behaviors (n = 12)             |      |     |                |         |                             |
| before basic                            | 2.27 | 1.07| 3.50           | .174    |                             |
| after basic                             | 2.22 | .88 |                |         |                             |
| follow-up                               | 2.13 | .66 |                |         |                             |
| 5. Threatened by care recipients (n = 9) |      |     |                |         |                             |
| before basic                            | 3.00 | 1.34| 2.14           | .343    |                             |
| after basic                             | 2.36 | .92 |                |         |                             |
| follow-up                               | 2.42 | .61 |                |         |                             |
| 6. Causing care recipients anxiety about being dirty (n = 16) |      |     |                |         |                             |
| before basic                            | 2.75 | .97 | 9.52           | .009    |                             |
| after basic                             | 1.95 | .76 |                |         |                             |
| follow-up                               | 1.82 | .68 |                |         |                             |
| 7. Talking about suicide (n = 26)        |      |     |                |         |                             |
| before basic                            | 3.03 | .77 | 16.69          | .000    |                             |
| after basic                             | 2.13 | .82 |                |         |                             |
| follow-up                               | 2.15 | .57 |                |         |                             |
| 8. Suicidal ideation (n = 14)            |      |     |                |         |                             |
| before basic                            | 3.07 | 1.28| 4.48           | .107    |                             |
| after basic                             | 2.60 | .28 |                |         |                             |
| follow-up                               | 2.67 | .65 |                |         |                             |
| 9. Care recipients not speaking and being silent (n = 17) |      |     |                |         |                             |
| before basic                            | 2.86 | .79 | 13.56          | .001    |                             |
| after basic                             | 1.86 | .66 |                |         |                             |
| follow-up                               | 2.10 | .72 |                |         |                             |
| 10. Mentioning anxiety about life (n = 21) |      |     |                |         |                             |
| before basic                            | 2.64 | .91 | 15.64          | .000    |                             |
| after basic                             | 1.88 | .53 |                |         |                             |
| follow-up                               | 1.76 | .50 |                |         |                             |
| 11. Many phone calls (n = 12)            |      |     |                |         |                             |
| before basic                            | 2.67 | 1.18| 1.27           | .529    |                             |
| after basic                             | 2.20 | .68 |                |         |                             |
| follow-up                               | 2.06 | .62 |                |         |                             |
| 12. Symptoms of hypochondria (n = 24)     |      |     |                |         |                             |
| before basic                            | 2.83 | .70 | 28.23          | .000    |                             |
| after basic                             | 1.97 | .62 |                |         |                             |
| follow-up                               | 1.70 | .53 |                |         |                             |

(continued)
12.16, \( p = .002 \) and 2.65 ± .88 to 1.76 ± .56 (\( \chi^2 = 11.31, p = .004 \)), all of df = 2, with average scores of 1, 10, 14, 15, 20 and 23, respectively. The scores of 3 and 6 items experienced with significant results between the scores before the training and after the basic training, but results of Bonferroni multiple comparison were not significantly, 3.03 ± .77 to 2.13 ± .82 to 2.15 ± .57 (\( \chi^2 = 8.97, p = .011 \)) and 2.75 ± .97 to 1.95 ± .76 to 1.82 ± .68 (\( \chi^2 = 9.52, p = .009 \)) all of df = 2, with average scores of 3 and 6, respectively. The score of 9 and 16 items experienced with significant results between the scores before the training and after the basic training, but results of Bonferroni multiple comparison were not significantly included 6 items as follows: 4, 5, 8, 11, 13 and 19.

The scores of 22 items after follow-up training showed significant differences between the participants who had experience before follow-up training and the participants who had no experience, 1.91 ± .725, 1.40 ± .27, \( z = −2.204 \) (\( p = .044 \), with average scores of 22.

### Table 1: Mean, SD, \( \chi^2 \)-Score, P-value, multiple comparison P-value

| Item Description | Mean | SD  | \( \chi^2 \)-Score | P-value | multiple comparison P-value |
|------------------|------|-----|---------------------|---------|-----------------------------|
| 13. Certified caregivers scolded by care recipients, but not understanding why (n = 16) | before basic | 2.74 | .93 | 1.27 | .531 |
|                  | follow-up | 2.33 | .69 |       |       |
| 14. Care recipient’s violence (n = 21) | before basic | 3.12 | .90 | 7.80 | .020 ** |
|                  | follow-up | 2.45 | .67 |       |       |
| 15. Refusal of care that certified caregivers could not understand (n = 20) | before basic | 3.31 | .74 | 12.43 | .002 ** |
|                  | follow-up | 2.28 | .63 |       |       |
| 16. Care recipients cannot dump trash (n = 17) | before basic | 2.63 | 1.01 | 9.70 | .008 * |
|                  | follow-up | 1.81 | .73 |       |       |
| 17. Ignorance of social norms (n = 21) | before basic | 2.67 | .82 | 15.39 | .000 ** |
|                  | follow-up | 1.84 | .63 |       |       |
| 18. Insufficient care time (n = 20) | before basic | 2.96 | .83 | 15.57 | .000 ** |
|                  | follow-up | 2.18 | .53 |       |       |
| 19. No sense of the value of money (n = 10) | before basic | 2.54 | 1.13 | .55 | .761 |
|                  | follow-up | 2.03 | .54 |       |       |
| 20. Difficulties understanding life skills (n = 19) | before basic | 2.77 | .87 | 13.35 | .001 ** |
|                  | follow-up | 1.97 | .53 |       |       |
| 21. How to maintain appropriate distance from care recipients (n = 18) | before basic | 2.57 | .90 | 12.16 | .002 ** |
|                  | follow-up | 1.76 | .61 |       |       |
| 22. Hurting the care recipient’s pride (n = 25) | before basic | 2.72 | .59 | 26.44 | .000 ** |
|                  | follow-up | 1.70 | .64 |       |       |
| 23. The appropriate way to speak to care recipients (n = 17) | before basic | 2.65 | .88 | 11.31 | .004 ** |
|                  | follow-up | 1.76 | .56 |       |       |
| 24. Care recipients forget when certified caregivers will visit (n = 16) | before basic | 3.16 | .83 | 15.96 | .000 ** |
|                  | follow-up | 1.97 | .65 |       |       |

before: before the basic training; basic: after the basic training; follow-up: after the follow-up training

The Likert scale of feeling care difficulties (can handle with no feelings, can handle without feeling difficulties, can handle, but feel difficulties, and cannot handle and feel difficulties) were assigned from levels 1–4

Friedman’s test, df = 2, Bonferroni multiple comparison: significant at **\( p < .01 \), *\( p < .05 \)
4. The contents of the free descriptions

There were 47 descriptions after the follow-up training. “How to deal with care recipients” was experienced by 14: [We should provide care service to respect care recipients’ feelings], “exchange information in the office” was experienced by 9: [It is important to behave jointly with other staff care recipient’s behaviors which I felt difficulties to deal with], “multidisciplinary collaboration” was experienced by 10: [It is necessary to report and consult the mental medical staff the difficulties of dealing with care recipient’s behaviors and request medical judgment], [It is necessary to exchange opinions with other professional staff], and “impressions of this program” was experienced by 14: [I studied the case studies about cases with which the other staff deal with], [The way in which participants grappled with studying actively was good].

Discussion

In a comparison of “care difficulties” between before the training and after the basic and follow-up training, authors investigated the effects of this education program and other issues related to the education of certified caregivers.

1. Concerning the items for which the levels difficulty were reduced

Both after the basic and follow-up trainings, the average scores of the care items with respect to dealing with anxieties such as ‘fluctuations in care recipient’s mood’ and ‘symptoms of hypochondria’, ‘ignorance of social norms’, ‘insufficient care time’ and ‘hurting the care recipient’s pride’ decreased. The participants could understand that care recipients’ anxieties were caused by the feeling of loss and loneliness elderly people experience; therefore, they could develop inner reserves and deal with care recipients with composure. Regarding ‘hurting the care recipient’s pride’, the scores of the participants who had care experience were significantly higher than those who had no experience. The authors assume that the participants were confident having experienced mistakes; therefore, it is desirable that certified caregivers have training as soon as possible after they experienced mistakes; therefore, it is desirable that certified caregivers.

Furthermore, the care difficulties of care recipient’s regarding the rules of life caused differences in the values between certified caregivers and care recipients (Harada & Yamane, 2013b). Authors included the experience of the care recipients’ feelings as if it had been the participants’ own in the program, so the certified caregivers could understand care recipient’s sense of values and thinking, and consider care recipients’ feelings. It is easy for certified caregivers to understand care recipients’ anxieties and the rules of life.

The average scores of the care items with respect to ‘hallucinations and delusions’, ‘the appropriate way to speak to care recipients’, ‘refusal of care that certified caregivers could not understand’ and ‘care recipient’s violence’ decreased. The care items with respect to understanding psychiatric symptoms, the assessment of disabilities in life and communication skills were effects experienced after the follow-up training. If certified caregivers received acknowledgment and understand the recipients’ mental disease, it is easy for them to deal with psychiatric symptoms and mental disabilities in practice. The participants should understand care recipients’ communication disabilities and study them, then acquire communication skills to address this problem. In the implementation of case studies in this program, authors selected care recipients’ behaviors which caused difficulties for participants in practice. Authors had shared differences with care recipients’ responses, integrated our information and clarified how to deal with care recipients’ behaviors which caused difficulties for participants. Consequently, the care difficulties for certified caregivers improved. The rate of experience of the items for which the levels of difficulty were reduced was high, meaning certified caregivers have a lot of experience of care; consequently, they can make the most of their opportunities.

2. Concerning the items for which the levels difficulty deteriorated after the follow-up training

The average scores of items ‘care recipients not speaking and being silent’ and ‘care recipients cannot dump trash’ deteriorated after the follow-up training. The certified caregivers have to finish care services after a limited length of time for care-plans under Long-term care insurance. Also, certified caregivers need to confirm care recipients’ wishes in order to provide appropriate care services; they were sometimes hasty in reacting to care recipients’ silence. The dissatisfaction with the behavior ‘cannot dump trash’ indicates the certified caregivers cannot clean rooms and provide the care services in the care-plan. Therefore, the authors assume that the participants thought they could deal with the care recipients’ behaviors immediately after the basic program, but could not deal with them easily in practice. The follow-up programs supplemented the basic programs to clarify the factors that caused the behavior and why the care recipients behaved in that way. Consequently, ‘feeling care difficulty’ about these items could not be easily reduced. Previous research reported that skills to clearly deal with BPSD were taught in communication skills training for nursing assistants for the care for
dementia patients (Spore, DL., Smyer, MA., & Cohn, MD., 1991; McCallion, P., Toseland, RW., Lancey, D., & Banks, S., 1999; Hakuya, Y., Suzuki, K., & Shitita, K., 2004; Cankurtaran, ES., Kutluer, I., Senturk, M., Erzin, GB., Gursoy, D., & Tombak, E., 2008; Levy-Storms, L., 2008; Roue, FP., Ortiz, KZ., Araújo, MSC., & Bertolucci, PHF., 2009; Burgio, LD., Stevens, A., Burgio, KL., Roth, DL., Paul, P., & Gerstle, J., 2002). Concerning care recipients 'not speaking and being silent' and 'care recipients cannot dump trash', it is necessary to teach both awareness of the background factors and how to practically deal with these issues in practice.

3. Concerning items for which the difficulty level did not change before the training and after follow-up training

The difficulty level for deviant behaviors such as 'sexual behaviors' and 'suicidal tendencies' were not improved. Thesis items were characterized as to whether or not certified caregivers could resolve them. It is necessary that certified caregivers consult medical staff who deal with mental patients and have issues about this (Harada & Yamane, 2013a). Certified caregivers were undecided whether they should consult medical staff who deal with mental patients and worried that medical staff who deal with mental patients would not respond to their consultations. The item “multidisciplinary collaboration” was experienced as [It is necessary to report and consult medical staff who deal with mental patients about the care recipients’ behaviors with which they could not cope with through multidisciplinary collaboration and case studies. Medical staff who deal with mental patients should collaborate with certified caregivers actively and supply information about how to deal with care recipients’ deviant behaviors.

4. Limitations

This study consisted of examinations conducted in one area with a small number of participants, so the effects of this program are inconclusive. Authors could not set up a control group because authors could only select a few offices as the subjects of the research. Six participants left during the research period, so the authors did not have many participants to confirm the durability of the effects of the education program. As a result, the authors could not clarify the difference in distribution of the levels of difficulty by the participants’ characteristics such as age and number of experiences of care for recipients. Furthermore, the authors examined the care difficulties for certified caregivers, but they did not evaluate the index of outcome measures such as care recipient’s QOL (Quality of Life); therefore, the effects of this program have limited explanatory power. However, the programs provided by this research are consistent in the number of times, as well as the time required to fit in the working shifts of staff in home care offices, so other offices could easily introduce a similar program. The staff in the offices to which the authors provided the programs exchanged information after the program. Thus, the effects of our programs are ongoing. Furthermore, it is necessary to do future studies with more participants and examine the results quantitatively, as well as construct systems to implement education programs.

Conclusion

The following 3 points were the effects and issues related to the programs:

1) The difficulty levels of the items ‘understanding mental symptoms such as hallucinations, delusions, anxiety and hypochondria’, ‘understanding life skills such as ignorance of social norms’ and ‘communication skills such as the appropriate way to speak to care recipients’ were reduced significantly.

2) Concerning the levels of items ‘care recipients not speaking and being silent’ and ‘care recipients cannot dump trash’, authors should teach caregivers how to deal with practically deal with them.

3) The levels of items for deviant behaviors were not effective. Medical staffs who deal with mental patients should collaborate with certified caregivers actively and deal with deviant behaviors through multidisciplinary collaboration.

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References

Amata, Z. (2004). Oneself who have been growing older and failing with age, Liberty- The users’ theory of social practice care for elderly people (1st ed, pp.52–70). Tokyo: Harvest Press. (In Japanese).

Burgio, L.D., Stevens, A., Burgio, KL., Roth, DL., Paul, P., & Gerstle, J. (2002). Teaching and maintaining behavior management skills in the nursing home. Gerontologist. 42, 487–496. http://search.proquest.com/docview/210965722. [Medline] [CrossRef]
Harada, S. (2013). Care recipients’ behaviors that make it difficult for home helpers to cope with the provision of home care for elderly people with mental disorders. *Journal of Japan Health medicine association.* **22**, 26–35.

Harada, S., & Yamane, H. (2013a). The structure of difficulties of the care for elderly people with mental disorders in home care among home helpers. *The Japanese Journal of Home Care Nursing.* **18**, 151–155. (In Japanese).

Harada, S., & Yamane, H. (2013b). Difficulties of the care recipients of home care nursing. *In* Harada, S. (Eds.), *The Comprehensive Use of Nursing* (1st ed., pp.221–226). Tokyo: Tyoutouhouki Press. (In Japanese).

Hotta, H. (2012). Elderly people with mental disabilities and nursing. In M. Sakata, (Eds.), *The Comprehensive Use of Nursing* (1st ed., pp.221–226). Tokyo: Tyoutouhouki Press. (In Japanese).

Hukaya, Y., Suzuki, K., & Shitita, K. (2004). Predictors and correlates of the frequency and the length of verbal communications between nursing staff and elderly residents in geriatric care facilities. *Japan Journal of Nursing Science.* **23**, 107–115. doi:10.1101/j.1724-7924.2004.00019.x.

Japan Dementia Communication Conference (2011). *Life partner for dementia examination Basic Grade certified textbook* (1st ed., pp79–90). Tokyo: Chuohoki Press. (In Japanese).

Loebel, JP., Borson, S., Hyde, T., Donaldson, D., Van Tuinen, C., Rabitt, TM., & Boyko, EJ. (1991). Relationships between requests for psychiatric consultations and psychiatric diagnoses in long-term-care facilities. *Am J Psychiatry.* **148**, 898–903. [Medline] [CrossRef] Retrieved from http://search.proquest.com/docview/220483750?accountid = 11929.

McCallow, P., Toesland, RW., Lancey, D., & Banks, S. (1999). Educating nursing assistants to communicate more effectively with nursing home residents with dementia. *The Genrontorogist.* **39**, 546–558. Retrieved from http://search.proquest.com/docview/61314392.

Mellor, D., Davison, T., McCabe, M., & George, K. (2008a). Professional carers’ knowledge and response to depression among their aged-care clients: the care recipients’ perspective. *Aging Ment Health.* **12**, 389–399. [CrossRef] [Medline]

Mellor, D., Russo, S., McCabe, MP., Davison, TE., & George, K. (2008b). Depression training program for caregivers of elderly care recipients: implementation and qualitative evaluation. *J Gerontol Nurs.* **34**, 8–15. quiz 16–17. http://search.proquest.com/docview/204152701. [Medline] [CrossRef]

Mellor, D., Kiehne, M., McCabe, MP., Davison, TE., Karantzaz, G., & George, K. (2010). An evaluation of the beyondblue Depression Training Program for aged care workers. *Int Psychogeriatr.* **22**, 927–937. [CrossRef] [Medline]

Nakamura, M., Go, T., Saito, M., and Mii, K. (2012). Elderly people with mental disabilities and psychiatric diagnoses in long-term-care facilities. *Japan Journal of Gereiatric Psychiatry.* **20**, 773–780. (In Japanese).

Saito, M. (2009). Psychiatric problems in elderly patients—An analysis of clinical recordsin psychiatric clinic in the Tokyo Metropolitan area—. *Japanese Journal of Gereiatric Psychiatry.* **20**, 773–780. (In Japanese).

Shimokata, H. (2004). [Epidemiological statistics in Japan, Dementia Science]. *Nihon Rinsho.* **62**(Suppl 4), 121–126. (In Japanese). [Medline]

Sore, DL., Smeyer, MA., & Cohn, MD. (1991). Assessing nursing assistants’ knowledge of behavioral approaches to mental health problems. *Gerontologist.* **31**, 309–317. [CrossRef] [Medline]

Levy-Storms, L. (2008). Therapeutic communication training in long-term care institutions: recommendations for future research. *Patient Educ Couns.* **73**, 8–21 [CrossRef] [Medline]

Takenaka, H. (2000). *Geriatric Psychiatry Clinical-Comprehension and Treatment for mentally old age* (3rd ed., pp. 13–41). Tokyo: Iwasakigakuyutsu Press. (in Japanese).

The project team of dementia measures of the Mental Health of the Ministry of Health, Labour and Welfare (2012). The course of the policy for dementia from now on. Retrieved from the Ministry of Labour and Welfare Achievement website: http://www.mhlw.go.jp/topics/kaigo/dementia/dl/houkousei-02.pdf (in Japanese).

Tractenberg, RE., Weiner, MF., Patterson, MB., Teri, L., & Thal, LJ. (2003). Comorbidity of psychopathological domains in community-dwelling persons with Alzheimer’s disease. *J Geriatr Psychiatry Neurol.* **16**, 94–99. [CrossRef] [Medline]

Watts, SC., Bhutani, GE., Stout, IH., Ducker, GM., Cleator, PJ., McGarry, J., & Day, M. (2002). Mental health in older adult recipients of primary care services: is depression the key issue? Identification, treatment and the general practitioner. *Int J Geriatr Psychiatry.* **17**, 427–437. [CrossRef] [Medline]

Yamane, H. (1994). Mental function and aging. *Japan Journal of Occupational Therapy.* **28**, 255–259. (In Japanese).