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Developing a social capital scale for family caregivers of people with dementia

ABSTRACT

Although several scales have been designed to measure social capital, none have been specialized for caregivers of people with dementia, even though social capital is important in terms of continuing care provision. Therefore, we developed and validated a 17-item measure to assess social capital among caregivers of people with dementia. We assessed psychometric properties using responses from a questionnaire survey that included a draft of a social capital scale. Factor analysis identified three factors involving 17 items with a Cronbach's alpha of .85. The intra-class coefficient for test–retest reliability was .71. The correlation with positive aspects of caregiving was .62 ($p < .01$). The results suggest that our scale could be a useful tool to assess social capital among caregivers of people with dementia.

Keywords: Social capital, Scale development, Caregivers of people with dementia, Reliability, Validity.

Introduction

It is estimated that 47 million people worldwide are currently living with dementia; the cost of dementia care was estimated to be 604 billion USD in 2010 and 818 billion USD in 2015.[1] The global incidence of dementia doubles with every 5.9-year increase in age.[2] Dementia impacts not only developed, but also developing countries because the increasing incidence of dementia translates into not only higher medical, but also social costs. The development of effective dementia measures is therefore a critical issue.

It is important that people with dementia live in their community as long as possible because changes in the residential environment, such as moving to an unfamiliar out-of-home residence, can lead to increased difficulties, including anxiety and disorientation.[3] Most people with dementia around the world live at home rather than in institutional facilities.[4] People with dementia living at home report a significantly better quality of life (QOL) than those living in nursing homes.[5] Older adults with dementia living at home also show better QOL, a greater ability to carry out activities of daily living, and a higher level of social connectedness compared with those living in institutional facilities.[6] The costs associated with dementia are significantly lower for people receiving home care than for those receiving long-term institutional nursing care.[7] Therefore, living in the community as long as possible is beneficial for people with dementia in terms of not only QOL, but also the cost of future dementia care.

Families of people with dementia are one of the most important resources for dementia care because many people with dementia are cared for by their spouse or children at home.[8, 9,10] However, family caregivers of people with dementia are well known to experience high levels of mental distress and be at high risk for developing health problems caused by the caregiving burden, such as depression and anxiety.[11] Providing care for an individual with dementia has been shown to be more stressful than for a physically-impaired older adult.[12]

Related to reducing the burden of caregivers of people with dementia, support resources in the community play an important role in promoting positive experiences among caregivers such as expanding social networks, improving both reciprocity and trust between neighbors, and improving access to care services.[13, 14, 15] Social capital theory can help provide a better understanding of the social interactions of caregivers of people with dementia through support resources in the community.

The most accessible definition of social capital was developed by Putnam, who stated that social capital refers to connections among individuals – social networks and the norm of reciprocity and trustworthiness.[16] Reciprocity is mutual assistance between members of a community.[17] It is well known that caregivers of people with dementia are willing to help other caregivers who experience dementia symptoms. Lu et al. [15] found that the provision of support to other residents in the community is associated with positive aspects of caregiving, and that caregivers who use their acquired caregiving knowledge and skills to support others recognize their personal strengths and resources and encourage their confidence and self-efficacy. Regarding reciprocity, there are two types: specific and generalized. Specific reciprocity means doing something for others with the recognition that they will do something for you in return,[18] whereas generalized reciprocity is the norm of mutual exchange that motivates people to care for unknown others.[19, 20] Both types of reciprocity can help encourage caregivers of people with dementia to continue providing care.

Efforts made in terms of trust building help improve local health care management, trust in physicians, and access to and the quality of health care.[21] Health care professionals can focus on building up residents' trust to encourage social capital in the community, which can become a beneficial strategy for health promotion and disease prevention.[17] There are also two types of trust: generalized and particularized.[22, 23] Generalized trust is a rather abstract attitude toward people in general, whereas particularized trust is trust at close social range directed at people the individual knows personally through daily interactions.[22] Both types of trust are important for helping caregivers to maintain their health and continue providing care.

Social networks are also important in terms of support in the daily lives of caregivers of people with dementia. Clare found that social support plays an important role in enabling caregivers to live well.[24] Caregivers of people with dementia have been found to use formal types of support and perceive informal support as a safety net.[25–27] Therefore, measuring these types of social support as part of the social network could be important for assessing the well-being of caregivers of people with dementia.

With this background, we assumed that social capital among caregivers of people with dementia is constructed by mutual support, including reciprocal aspects and trust between neighbors. For example, reasons given for participating in mutual help groups for families of people with dementia include searching for care knowledge, listening and sharing experiences, helping others, and performing voluntary work,[28] which highlight aspects of both providing and receiving support for caregivers of people with dementia. The aspects of providing support allow caregivers to recognize their personal strengths and resources and encourage their confidence and self-efficacy.[15] On the other hand, an aspect of receiving support is social support, a social psychological concept through which the mechanisms and processes underlying interpersonal relationships protect and help people in their day-to-day lives.[29] Considering the interpersonal relationships among caregivers of people with dementia, social support lacks the aspects of providing support, and therefore differs from social capital on this point.

Trust is the foundation of personal relationships and is considered to be a key factor in terms of social outcomes[30]; thus, it is one of the most important resources for caregivers of people with dementia in regard to providing care to families of people with dementia. A high level of trust helps to reduce distress among caregivers of people with dementia.[31]

Social capital can be conceptualized from two components: collective, such as the characteristics of the community, and individual, such as social supportive sources.[15, 32, 33] Support from the community is helpful for dementia care, and a mismatch has been identified between the supply and demand of social support from the community.[34] It is important that health care providers have an understanding of sources of social support to help caregivers of people with dementia on the individual level. Social capital is additionally classified into two types: cognitive and structural. Cognitive social capital is assessed based on caregivers' subjective aspects, such as social trust and reciprocity. Structural social capital is assessed using objective measures, such as support from formal organizations and citizenship activities.[35] A meta-analysis of social capital literature found that cognitive social capital is more significantly related to health than to structural social capital.[36] Positive appraisals of cognitive social capital could be beneficial for caregivers of people with dementia in terms of promoting improved health and enabling them to feel much more self-efficacious and continue providing care in the community. We therefore conceptualized social capital as an individual perspective and focused on its cognitive aspects.

Some existing tools can measure social capital in the workplace and school settings,[37, 38] and for adolescent students,[39] caregivers of children requiring special health care needs,[40] trainees in clinical and translational science,[41] adults,[42] and older people [43]. However, none of these existing tools can accurately measure social capital among caregivers of people with dementia, and some cannot measure general and specific reciprocity separately because they measure reciprocity as a single item.[37, 41, 43] Likewise, several scales cannot measure generalized and particularized trust separately because they do not measure trust or only consider it as a single.[41, 43] Some scales have been developed for use in a single or multiple cities[38, 41, 42] or for use with convenient samples,[40] and most of these do not include reverse items.[37–39, 41–43] Including negative and positive items on a scale would be desirable.[49] To the best of our knowledge, no social capital scale specialized for caregivers of people with dementia has been developed.

Understanding the diversity of social interactions among caregivers of people with dementia could also be considered beneficial for encouraging health care professionals to continue providing care. Compared with the general population, caregivers of people with dementia have different social connections, such as peer support and dementia cafés.[44, 45] Additionally, caregivers obtain formal and/or informal support from their community.[46, 47] Thus, a scale that can measure the social interactions of caregivers of people with dementia in relation to social capital is needed. Such a scale could also be expected to help health care professionals assess the personal social capital of, and implement appropriate interventions for, caregivers of people with dementia and clarify whether they recognize their community as being rich in social capital, which would be beneficial for not only health care professionals, but also policy-makers, in terms of developing communities where people with dementia could live well as long as possible. Therefore, the aim of the present study was to develop and assess the validity and reliability of a social capital scale for caregivers of people with dementia.

Methods

Study design

A cross-sectional study design was used to develop the social capital scale.

Recruitment and procedures

The study participants were caregivers of people with dementia living in the Kinki region of Japan. Based on the recommendation of Gorsuch regarding a minimum sample size of at least 100 for conducting exploratory factor analysis,[48] we randomly selected 1,373 facilities related to the dementia caregiver, including 872 community general support centers, 101 daycare centers, 94 Alzheimer cafés, 206 home-visit nursing stations, and 100 federations for families with dementia, to participate in the study. These facilities were asked to disseminate a questionnaire that included an explanation of the study purpose, methods, and ethical considerations to caregivers for people with dementia. A total of 2,825 questionnaires were then distributed to these facilities through postal mail. Distribution of questionnaire to the caregivers by staffs of facilities was considered to represent consent to cooperate with this study. Facilities were asked to distribute the questionnaire to caregivers who met the following criteria. The inclusion criteria for the caregivers were being a family caregiver of people with dementia living in a community, who was self-identification as a primary caregivers of people with dementia, and who has the ability to read and understand Japanese. The exclusion criteria were having diagnosis of serious psychological disease or dementia performed by a physician diagnosis. Completing and return a questionnaire by caregivers was considered to represent consent to participate in this study.

Ethical aspects

Institutional review board approval was obtained for this study. All participants received a full explanation of the purposes and ethical considerations of this study, and voluntarily provided written informed consent to participate.

Measures

Social capital scale for caregivers of people with dementia

Based on a review of the literature and previous studies on social capital, we generated 41 items using the following three theoretical components of social capital: social networks, reciprocity, and trust. To assess content validity, two experts in the areas of dementia nursing, one psychologist, and two gerontological nursing educators rated the relevance of each item on a four-point Likert scale. A content validity index (CVI) was computed based on the proportion of experts who rated each item as 3 or 4. The CVI for the entire scale, which included all items with a CVI $\geq .8$ ($N = 35$), was calculated as .94 based on the mean of all individual CVI values (Polit and Beck, 2017).[49] To assess face validity, a draft questionnaire was conducted on a convenience sample ($N = 5$) of caregivers of people with dementia, and items that were found to be unclear were revised. The social capital scale for caregivers of people with dementia was scored on a five-point Likert scale ranging from “1 = strongly disagree” to “5 = strongly agree”. A higher score indicated greater social capital.

Positive aspects of caregiving (PAC) scale

PAC are related to socio-emotional support.[53] The three components of social capital are considered to be associated with PAC, in that higher social capital reduces the stress and burden associated with caregiving, which leads to high PAC. The PAC scale, which was developed by Tarlow et al.,[50] has shown promise as a valid and reliable instrument. They proposed a nine-item, two-factor solution composed of “*self-affirmation*” and “*outlook on life*.”[50] A higher score on the PAC scale indicates higher PAC. Cronbach’s alphas for all items and the two PAC subscales used in this study were .895, .851, and .885, respectively.

Demographic data

The following demographic data were collected: gender and age of caregivers, relation with care recipient, highest level of education, duration of caregiving, gender and age of care recipient, and long-term care level of the care recipient (Table 1).

Data analyses

Cronbach’s alpha coefficient was used to assess internal consistency. An alpha coefficient over .70 indicates acceptable internal consistency.[51] Four weeks later, a second test for the social capital scale for caregivers of people with dementia was conducted on 50 caregivers. Then, intra-class correlation coefficients (ICCs) were used to estimate test–retest reliability. An ICC over .70 indicates acceptable reliability.[52] For construct validity, exploratory factor analysis with maximum likelihood estimation was used. The components of the social capital scale were assumed to be correlated with each other. Promax rotation, which relaxes the assumption of orthogonality of the resultant components, was used. The extracted number of factors was decided as three based on the three theoretical components of social capital: social networks, reciprocity, and trust. The criterion for estimating the number of factors to retain was a factor loading of .4 or higher. Concurrent validity was assessed using the PAC scale. All data were analyzed using SPSS (version 24; IBM Corp., Tokyo, Japan).

Results

Participants' characteristics

In total, 199 responses were received (response rate, 7.0%). After excluding 21 caregivers who did not answer one or more items on the social capital scale, 178 caregivers (43 males [24.2%]; mean age ± standard deviation [*SD*], 63.7 ± 12.1 years) were finally included in the analytical sample. Table 1 shows the participants' characteristics. Most caregivers were daughters (37.1 %) or spouses (29.8%). The mean length ± *SD* of caregiving was 5.5 ± 4.2 years. Regarding the care recipients (60 males [33.7%]; mean age ± *SD*, 83.7 ± 10. 2 years), 152 (85.3%) required support or care, and four were not certified for long-term care insurance (2.2%).

Selecting items from the item pool

In total, 35 of the original 41 items (18, 9, and 8 items from the social network, reciprocity, and trust components, respectively) were retained based on a content validity index.

Test of psychometric properties

Ceiling and floor effects on the social capital scale

Eight of the 35 items demonstrated ceiling effects; however, no floor effects were observed.

Item-total correlation analysis

After excluding the eight items for which ceiling effects were observed, the correlation coefficients between the total score for all items and those for the remaining 27 items were estimated. All items showed significantly positive relations, ranging from $r = .23$ to $r = .68$.

Exploratory factor analysis

The Kaiser–Meyer–Olkin index was .83, and Bartlett's test of sphericity was significant ($\chi^2 = 2261.43$, $df = 351$, $p < .001$), indicating that the sample fulfilled the prerequisites for conducting factor analysis. Exploratory factor analysis using maximum likelihood estimation with oblique rotation for three factors identified 17 items. The three-factor solution showed an eigenvalue greater than 1. The items contained in the three factors had factor loadings higher than .4. Ten items with a factor loading lower than .4 were eliminated. These 17 items explained 46.5 % of the total variance before promax rotation.

Table 2 shows the results of the exploratory factor analysis. Factor 1 consisted of six items, and was called "*Support for people with dementia and their caregivers*". The items included in this factor related to helping others, such as teaching, helping, and counseling people who have trouble in dementia care. This factor also included items about improving the community and helping people understand dementia. These items reflected giving support and help to other caregivers regardless of direct rewards were received.

Factor 2 consisted of seven items, and was called "*Trust in providing dementia care*". The items included in this factor related to trust among medical staffs, members of the community, and others. In addition, in this factor contained an item related to feeling like a part of the community. Therefore, this factor was interpreted as involving reciprocal trust.

Factor 3 included four items, and was called "*Support from neighbors*". The items included in this factor related to neighbors and included the words "help" or "kind". These items reflected the perception of support from people in the community.

Internal consistency

Cronbach's alpha was .85 for all 17 items, and .86, .74, and .78 for Factors 1, 2, and 3, respectively.

Concurrent validity

It was assumed that a higher social capital scale score would be associated with a higher PAC scale score. The correlation coefficient between social capital and the PAC scale was computed, and a significant correlation was found ($r = .62$, $p < .01$). Each factor on the scale was significantly correlated with the PAC scale (Factor 1: $r = .42$; Factor 2: $r = .58$, and Factor 3: $r = .40$).

Test-retest reliability

In total, 50 respondents were reexamined 4 weeks after the first survey. The ICC was .71, which indicated adequate stability. [52]

Discussion

To our knowledge, the social capital scale developed in the present study is the first for caregivers of people with dementia. Caregivers of people with dementia require considerably more social resources compared with the general population. Health care providers should understand whether the social resources provided to caregivers can reduce their burdens and encourage care provision, so an assessment tool that can measure social capital among caregivers of people with dementia is needed. We believe that our scale could help health care professionals gain a better understanding of the strengths and weaknesses of caregivers of people with dementia in terms of social capital. Our scale could also help policy-makers foster communities where people with dementia can live well as long as possible.

The exploratory factor analysis showed that the three extracted factors corresponded almost perfectly with the conceptual components of reciprocity, trust, and social support. Factor 1, *Support for people with dementia and their caregivers*, is interpreted as reciprocal behavior between people with dementia and their caregivers. This factor contained items regarding caregivers of people with dementia who have trouble in dementia, such as in helping, teaching care, and counseling. These items were considered to indicate specific reciprocity because caregivers who used their acquired caregiving knowledge and skills to support others recognized their personal strengths and resources and encouraged their confidence and self-efficacy.[15] In addition, this factor also included items related to the community and helping people understand more about dementia. These items were interpreted as indicating general reciprocity because generalized reciprocity is the norm of mutual exchange and motivates people to care for unknown others.[19, 20] This factor can therefore measure both types of reciprocity, specific and generalized.

Factor 2, *Trust in providing dementia care*, is useful for helping health care providers and policy-makers know two types of trust: generalized and particularized.[22, 23] This factor included items related to others and the community. Some items (e.g., "*In general, I trust others*", "*The community where I live is safe for taking care of people with dementia*") reflected generalized trust, because generalized trust is an abstract attitude toward people in general.[22] Additionally, two items in this factor were related to medical staffs ("*I trust medical staffs to care for people with dementia*" and "*I feel like I can consult medical staffs for anything in regard to dementia care*"). These items were interpreted as particularized trust, because particularized trust is directed at people the individual knows personally.[22]

Factor 3, *Support from neighbors*, can assess help and support in regard to dementia care from neighbors. Social support was defined as the network accessible to an individual through social ties to family, friends, neighbors, and the community.[54] Gibson et al. [27] reported that most caregivers in a rural setting found strength from their community, which was beneficial as a safety net of support. This factor can measure such networks though social relationships with neighbors. In addition, the items included in this factor can assess social cohesion in the community, because social cohesion refers to interdependence among neighbors.[55]

As mentioned above, the social capital scale developed in this study can measure three dimensions of social capital: reciprocity, trust, and social networks. This scale is beneficial for health care professionals and policy-makers in that it provides information on whether caregivers of people with dementia are perceived in their community as being rich in social capital. For example, health care professions might be able to facilitate mutual group help for a caregiver with a low score for Factor 1 or 3 that could allow him or her to listen to and share care experiences, help others, or perform voluntary work. When the area where caregivers with low scores of Factor 2 live exist on jurisdiction, policy-makers might strengthen developing the dementia friendly community.

The development process of our measurement tool described here has several strengths. First, whereas few studies have assessed the content and/or face validity of such a scale, both the content and face validity of our scale were tested by experts in dementia nursing and actual caregivers, who represent the intended population for its use.[37, 39–41, 43, 56] Evaluating content validity is a critical early step in enhancing the construct validity of the measurement.[49] Face validity is important if respondents' resistance to being measured reflects the view that is not relevant to their situations.[49] Overall, 14 of the original 41 items were excluded because of poor content validity and ceiling effects, leaving 27 to be entered into the exploratory factor analysis; from these 27 items, 17 were extracted. These 17 items showed that the model almost fit the component of social capital. Confirmatory factor analysis did not show extremely low values. Additionally, the correlation coefficients between the social capital scale, all three factors, and the PAC scale indicated significant moderate positive correlations. The PAC scale has been reported to be positively related to social support.[57] These results suggest that our newly developed scale has sufficient validity.

The results suggest that our newly developed scale has sufficient internal consistency and test–retest reliability. Cronbach's alphas for the total items and each factor were > .70, which indicated acceptable internal consistency.[52] This result suggested that the retained items measured the same constructs of social capital. Additionally, test–retest reliability was assessed using ICCs. The ICC in the present study was .71, indicating acceptable reliability.[53] This result suggested that the score of this scale was stable for 1 month among caregivers of people with dementia.

The construct of our scale is different from those of other social capital scales. Although some of the recently developed social scales have a reciprocity component, it is constructed based on provided and received support.[41, 43] An aspect of receiving support protect and help people in their day-to-day lives.[29] On the other hand, the aspects of providing support allow caregivers to recognize their personal strengths and resources and encourage their confidence and self-efficacy.[15] Our scale can measure aspects of providing and receiving support separately. Therefore, compared with other scales, ours might help provide a better understanding of the aspects of providing and receiving support among caregivers of people with dementia.

The trust component on our scale can measure general trust using the item, "I*n general, I trust others*." Some of other social capital scales have a similar item.[38, 39, 42] Trust is the foundation of personal relationships and is considered to be a key factor in terms of social outcomes.[30] Generalized trust is one of the important resources for caregivers of people with dementia because generalized trust is a rather abstract attitude toward people in general.[22] In addition, our scale can measure particularized trust using items, such as "*I trust medical staffs to care for people with dementia*." Particularized trust is trust at close social range directed at people the individual knows personally through daily interactions.[22] Some of other social capital scales similarly have items in relation to particularized trust,[38, 39, 42] but do not have items for caregivers of people with dementia. Both of generalized and particularized trust are important for helping caregivers to maintain their health and continue providing care. Our scale might help provide a better understanding of trust among caregivers of people with dementia.

Our scale can also measure social capital without placing a great burden on respondents. Recently developed social capital scales have more than 10 items.[38–40, 42, 43] Ours is composed of 17 items, which is not larger than other social capital scales and can measure the multi dimensions of social capital.

This scale might be useful as a new outcome measure for interventions among caregivers of people with dementia. A number of intervention studies in relation to caregivers of people with dementia have been conducted using the following variables as research outcomes: burden, stress, anxiety, depression, well-being,[58–61] QOL, competence, physical and mental health,[61] and the usefulness of web-based platforms.[44] Social relationship have rarely used as a research outcome.

Here, we described the development and validation of a new social capital scale specialized for caregivers of people with dementia. This scale can measure the social capital of caregivers of people with dementia, and is therefore beneficial for both health care providers and policy-makers. However, further studies are needed to examine whether social capital affects physical and psychological health, because in the present study, we did not examine this association using our scale.

Limitations

This study had several limitations. First, the low response rate may limit the generalizability of the results. A total of 2,825 questionnaires were sent to 1,373 facilities; however, because of the difficulties associated with directly distributing questionnaires to caregivers of people with dementia, only 199 responses were received. Staffs of facilities might have hesitated to distribute questionnaires to caregivers because the numbers of questions were not little. Moreover, they may not have distributed the questionnaire to caregivers because they did not want to impose additional burdens in addition to the daily care they were already providing for their family members with dementia. Furthermore, it was considered that caregivers did not have much time to complete and return the questionnaire because they were too busy providing daily dementia care. Therefore, we could not rule out the possibility of selection bias.

Second, our results may not be representative of caregivers for people with dementia in general, because we carried out this research only in the Kinki region, which involves but six of the 47 prefectures of Japan. A more representative sample may be needed for further study.

Conclusions

We developed a new social capital scale for caregivers for people with dementia and confirmed its reliability and validity. This scale could be expected to assist not only health care professionals in knowing about the strengths and weaknesses of caregivers of people with dementia in terms of social capital, but also policy-makers in terms of fostering communities where caregivers can take care of their family members with dementia as long as possible.

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Table 1

Participants' characteristics (*N* = 178).

Variable	*N* (%)
Sex of caregiver	
Male	43 (24.2)
Female	135 (75.8)
Age of caregiver	
Mean ± *SD* (years)	63.7 ± 12.1
Relation with care recipient	
Spouse	53 (29.8)
Brother/sister	3 (1.7)
Daughter	66 (37.1)
Son	16 (9.0)
Daughter-in-law	25 (14.0)
Grandson/granddaughter	5 (2.8)
Other	8 (4.5)
N/A	2 (1.1)
Education attainment of caregiver	
Junior high school	15 (8.4)
High school	71 (39.9)

Junior college/technical school	51	(28.7)
University	39	(21.9)
Graduate school	2	(1.1)
Duration of caregiving		
Mean ± *SD* (years)	5.5 ± 4.2	
Age of care recipient		
Mean ± *SD* (years)	83.7 ± 10.2	
Sex of care recipient		
Male	60	(33.7)
Female	113	(63.5)
N/A	5	(2.8)
Long-term care level of care recipient [a]		
Requiring support 1	8	(4.5)
Requiring support 2	6	(3.4)
Requiring long-term care level 1	29	(16.3)
Requiring long-term care level 2	44	(24.7)
Requiring long-term care level 3	31	(17.4)
Requiring long-term care level 4	20	(11.2)
Requiring long-term care level 5	28	(15.7)
Not certified for long-term care insurance	4	(2.2)
Other	2	(1.1)
N/A	6	(3.4)

Note. N/A = not available.

[a]: A higher long-term care or support level indicates a worse condition.

Table 2

Results of the exploratory factor analysis.

	1	2	3
Factor 1: Support for people with dementia and their caregivers			
I sometimes teach people who have trouble in dementia care how to care for people with dementia.	0.952	–0.073	–0.044
I sometimes help people who have trouble in dementia care.	0.890	–0.169	0.009
I sometimes counsel people who have trouble in dementia care.	0.881	–0.217	0.071
In general, I try to help people understand dementia.	0.601	0.165	0.002
I want to improve my community for people with dementia.	0.503	0.251	–0.019
I participate in an organization or association for families affected by dementia (i.e., a dementia family association)	0.467	0.098	–0.060
Factor 2: Trust in providing dementia care			
In general, I trust others.	0.017	0.636	0.068
I trust medical staffs to care for people with dementia.	–0.049	0.614	0.021
The community where I live is safe for taking care of people with dementia.	–0.007	0.606	0.020
I think my community has adequate health, medical, and welfare services for people with dementia.	–0.146	0.567	–0.029
I feel like I can consult medical staffs for anything in regard to dementia care.	0.094	0.509	–0.047
I feel that I am a member of my community.	0.113	0.507	0.054

I feel lonely when I take care of my dementia family.[a]	0.005	0.448	–0.079
Factor 3: Support from neighbors			
I think that my neighbors help each other.	–0.096	–0.06	0.993
I can get help from my neighbors in daily life.	0.109	0.063	0.466
I feel that my neighbors are kind.	–0.047	0.311	0.462
I can ask my neighbors when I need help in dementia care.	0.081	0.182	0.436

Note. [a] : reverse item. Exploratory factor analysis with promax rotation using maximum likelihood estimation.