Factors Related to the Desire to Enter a Nursing Home among Elderly Japanese

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A cross-sectional survey on 1462 residents aged 55 years and over was conducted in an urban Japanese community to describe the factors influencing the people's desire to be institutionalized in later life. Multiple logistic regression analyses were performed to identify the variables associated with the desire for a nursing home placement. Men unsatisfied with their family bonds were more likely to desire placement in a nursing home. Younger women living alone or dissatisfied with their health status demonstrated a greater desire to be institutionalized. Among the elderly aged 70 years old and over, those who were dissatisfied with their family bonds or disabled in going outdoors were more likely to desire to live in a welfare facility. Gender, housing and financial characteristics were not significant factors for the desire to be institutionalized. Numerous factors were similar with actual predictors of nursing home placement; however, the elderly advancing in age were more concerned to remain at home. The present findings suggest that, aside from physical and mental disability, the family-related issue is the most important factor prompting the desire for institutionalization.

Japan, with the longest life expectancy associated with a rapid decline in fertility, has to face the dramatic aging of its population. According to the Ministry of Health and Welfare, in 1994, those aged 65 and over represented 14 percent of the total population; this figure is estimated to reach 17 percent by 2000 ². The elderly population itself is aging: the "older old" present the highest increase among the elderly group. These recent demographic changes have had considerable impact on family size and structure ³.

Even if three-generation family households still represent the largest proportion among the households of people aged 65 and over, their percentage has rapidly decreased (54% in 1975, 35% in 1994). An increase of aged-single-person households has been concomitantly observed (9% in 1975, 16% in 1994) ⁴. Traditionally, Japan was well known for its "stem family" system i.e. multi-generational households ⁴. Nowadays, social values among the Japanese are changing towards a western perspective ⁵. One national survey indicated that 61% of Japanese elderly expressed the desire to live with their children and grandchildren. This percentage rose if they were likely to become frail or widowed ⁶. Another national survey, however, showed that the majority of the respondents of all ages stated that children and grandchildren should live near to, but separately from, their parents ⁷. Nevertheless, due to the cultural influence of Confucianism and kin-orientation, the virtue of filial piety is still widely appreciated and practised among the Japanese ⁴. ⁸. This is particularly relevant when an older person becomes frail or is widowed, he or she tends to bring relatives into the home or to join the relative's household ⁹.

This tenacity of the Japanese stem-family is one of the reasons for lower institutionalization rates among Japanese than among Western elderly. According to the Japanese Ministry of Health and Welfare, 1.8 percent of the elderly aged 65 years and over live in long-term care facilities ¹⁰. Welfare institutions for the elderly in Japan are categorized into Special Nursing Homes for the Aged (68%), Homes for the Aged (22%), and Homes for the Aged with a Moderate Fee (10%) respectively ¹⁰. Welfare facilities represent 95% of institutions for the elderly,
the remaining five percent are private retirement homes, or Fee-Charging Homes for the Aged. Special Nursing Homes provide caring and nursing services, especially for bedridden elders, while Homes for the Aged and with a Moderate Fee provide basic accommodation. In 1993, the Ministry of Health and Welfare held a survey to describe the characteristics of the residents in the Special Nursing Homes for the Aged, and in the Fee-Charging Homes for the Aged. The factors related to living at a Special Nursing Home were advancing age (average age: 81.9 years old) and being a female (Male : Female = 1 : 3 ; the sex-ratio increased with age). Regarding the family structure, half of the elderly lived with their children and 23% lived alone before they entered a nursing home. Physical disability and cognitive impairment were strongly associated with nursing home entry (91% needed help in bathing, 76% in dressing, 72% in going outdoors, 72% presented memory impairment).

The persons institutionalized in Fee-Charging Homes were younger than the persons living in the Special Nursing Homes (average age: 77.3 years old). The sex-ratio was 1 : 2, this ratio remained constant in different age groups. Before institutionalization, 58% of males lived with their spouse only, and 19% lived alone; while 31% of females lived with their spouse only and 42% lived alone. More than half of the elderly were independent in the activities of daily living (ADL) and instrumental ADL.

In spite of the accumulation of studies regarding predictors of actual nursing home placement, the elder’s involvement in the decision making on their own entrance to nursing home has been scarcely examined. The aim of the present study is to determine the factors involved in the decision to be institutionalized, among residents aged 55 years and older. The question to be answered is which socio-demographic characteristics influence the elderly, living independently at home, to choose a welfare institution in which to spend the last part of their life.

**METHOD**

A survey on residents aged 55 years and over in Sendai City, Japan, was conducted in June 1994. Sendai City, located in the northeastern part of Japan had a population of approximately 955,000 of whom 20.1 percent were aged 55 years and over in 1994. One percent (n = 2096) of the residents aged 55 years and over were randomly sampled from the residential registration lists maintained by the city. A questionnaire, mail-delivered to the study subjects, asked questions about their desire to live or not in a welfare institution - in the broadest sense of the word - in their later life, demographic characteristics, living and housing conditions, family bonds, health status, and finance, etc.

**Study Variables**

The demographic characteristics covered age, sex, and family structure. The questions about living and housing conditions included the type of dwelling, the number of rooms in the dwelling, the degree of satisfaction with the place of living and living conditions, whether the elderly lived nearby his/her family, and the degree of satisfaction with the family bonds. Self-rated health status was categorized in two groups: satisfied with his/her health status or not. The existence of disability in going outdoors was examined. Questions concerning finance covered subjective opinions on their own income level, the proportion of health expenditures in the household budget, and whether or not the elderly had financial problems residing in

| Variable                      | Desire to enter a nursing home | Statistical Significance |
|-------------------------------|--------------------------------|--------------------------|
|                               | Yes : N* (%)                  | No : N* (%)              |                           |
|                               | (Total=118)                   | (Total=684)              |                           |
| Sex (males)                   | 61(51.7)                      | 401(58.6)                | n.s.                     |
| Living alone                  | 21(17.8)                      | 46(6.7)                  | ***                      |
| Not living near the family    | 39(33.1)                      | 201(29.4)                | n.s.                     |
| Not satisfied with family bonds| 9(7.6)                        | 15(2.2)                  | **                       |
| Living in collective housing  | 15(12.7)                      | 68(9.9)                  | n.s.                     |
| Not satisfied with dwelling place | 10(8.5)                      | 46(6.7)                  | n.s.                     |
| Not satisfied with present dwelling | 22(18.6)                    | 57(8.3)                  | **                       |
| Not satisfied with health status| 50(42.4)                     | 131(19.2)                | ***                      |
| Disability in going outdoors  | 28(23.7)                      | 92(13.5)                 | **                       |
| Financial problems with housing | 20(17.0)                     | 59(8.6)                  | **                       |
| Low income level              | 36(30.5)                      | 132(19.3)                | **                       |
| High health budget            | 38(32.2)                      | 179(26.2)                | n.s.                     |

*: p<0.05, **: p<0.01, ***: p<0.001, n.s.: non significant
*: N = number of persons with each characteristic
his/her present dwelling.

**Statistical Analysis**

The independent variables mentioned above were compared between the elders desiring to live later in a nursing home and the elderly who did not. The statistical difference between the two groups was examined by the chi-square test for binary variables, and by the Student's t-test for continuous variables such as age and number of rooms per dwelling. The variables which were significant in the above bivariate analysis were then included in a multiple logistic regression analysis (excepting sex which was not significant but included in the analysis). We calculated odds ratios (OR) for having the desire to enter a nursing home, and their 95 percent confidence intervals (95% CI). We performed the analysis on all subjects, then on males and females, then on those aged less than 70 and those aged 70 years and over, separately. All the variables were treated as categorical variables: sex; age (younger than 70 vs equal or older); way of living (not alone vs alone); opinion about the family bonds (satisfied vs not satisfied); opinion about the place of living (satisfied vs not satisfied); opinion about the present dwelling (satisfied vs not satisfied); number of rooms (more than two vs two or less); opinion about the health status (satisfied vs not satisfied); ability to go outdoors (no disability vs disability); stay in the present dwelling (no financial problems vs financial problems); opinion about income level (high vs low). For all analyses, p-value less than 0.05 was considered significant. Analyses were performed with the Statistical Analysis System (SAS).

| Variable | All subjects | O.R.* | 95% CI † |
|----------|--------------|-------|-----------|
| **Age**  |              |       |           |
| < 70 years | (N=606)     | 1.00  |           |
| ≥ 70 years | (N=227)     | 0.45**| 0.26-0.77 |
| **Sex**  |              |       |           |
| female   | (N=362)     | 1.00  |           |
| male     | (N=471)     | 1.06  | 0.69-1.64 |
| **Way of living** |         |       |           |
| not alone | (N=761)     | 1.00  |           |
| alone    | (N=72)      | 3.13***| 1.64-5.96 |
| **Family bonds** | |       |           |
| satisfied | (N=809)     | 1.00  |           |
| not satisfied | (N=24) | 3.91**| 1.53-9.98 |
| **Present dwelling** |       |       |           |
| satisfied | (N=748)     | 1.00  |           |
| not satisfied | (N=85) | 1.70 | 0.94-3.05 |
| **Number of rooms** |     |       |           |
| ≥ 3 rooms | (N=772)     | 1.00  |           |
| ≤ 2 rooms | (N=61)      | 1.59  | 0.77-3.25 |
| **State of health** |       |       |           |
| satisfied | (N=652)     | 1.00  |           |
| not satisfied | (N=181) | 2.93***| 1.82-4.70 |
| **Disability in going outdoors** | |       |           |
| no        | (N=709)     | 1.00  |           |
| yes       | (N=124)     | 1.50  | 0.85-2.66 |
| **Financial problems with housing** | |       |           |
| no        | (N=421)     | 1.00  |           |
| yes       | (N=412)     | 1.32  | 0.85-2.06 |
| **Income level** |       |       |           |
| high      | (N=664)     | 1.00  |           |
| low       | (N=169)     | 0.99  | 0.60-1.65 |

*: p<0.05, **: p<0.01, ***: p<0.001
* : Odds Ratio
†: 95% Confidence Interval
RESULTS

The effective response rate to the questionnaire was 69.8 percent (n = 1,462). Males were more represented (53 percent). The age of participants ranged from 55 to 93 years (mean age was 65.7 years). Slightly more than a half (50.6 percent) of the persons was aged less than 65 years, and 44 percent was between 65 and 74 years old. Forty-one percent of the study subjects were engaged in occupations, while 30 percent had retired and 28 percent were housewives.

Less than a half (47 percent) reported living with children and/or grandchildren, and 35 percent with their spouse only. The mean number of years residing in the present dwelling was 25 years, and the mean number of rooms in that dwelling was five.

Table 1 shows the characteristics of the study population according to their wish to enter a nursing home or not. Those desiring to live later in a nursing home were more likely to be living alone; unsatisfied with family bonds, present dwelling and health status; disabled in going outdoors; with financial problems and low income. In addition, those desiring institutionalization were significantly younger (mean = 64.7 years old vs 66.2, p < 0.05) and lived in smaller housing (mean number of rooms = 4.1 vs 4.8, p < 0.001) than those not desiring institutionalization.

Table 2 presents the results of the multiple logistic regression analysis with the desire to live later in a nursing home as a dependent variable. The ORs on all subjects indicated that the following three characteristics significantly increased the desire to be institutionalized; living alone (OR = 3.13, 95% CI = 1.64-5.96), dissatisfied with their family bonds (OR = 3.91, 95% CI = 1.53-9.98), and dissatisfied with their health status (OR = 2.93, 95% CI = 1.82-4.70). On the other hand, those aged 70 years and over indicated a significantly lower desire to live in a nursing home (OR = 0.45, 95% CI = 0.26-0.77).

Table 3 shows the ORs for the desire to enter a nursing home:

**Table 3. Multiple Logistic Regression Analysis for males and females.**

| Variable                        | Males                       | Females                     |
|---------------------------------|-----------------------------|-----------------------------|
|                                 | O.R.* 95% CI†               | O.R.* 95% CI†               |
| Age                             |                             |                             |
| < 70 years                      | 1.00                         | 1.00                         |
| ≥ 70 years                      | 0.56 0.27-1.17              | 0.31** 0.13-0.72           |
| Way of living                   |                             |                             |
| not alone                       | 1.00                         | 1.00                         |
| alone                           | 2.27 0.57-9.07              | 3.59** 1.64-7.83           |
| Family bonds                    |                             |                             |
| satisfied                       | 1.00                         | 1.00                         |
| not satisfied                   | 5.63** 1.61-19.75           | 1.97 0.48-8.12             |
| Present dwelling                |                             |                             |
| satisfied                       | 1.00                         | 1.00                         |
| not satisfied                   | 1.67 0.75-3.69              | 1.67 0.68-4.11             |
| Number of rooms                 |                             |                             |
| ≥ 3 rooms                       | 1.00                         | 1.00                         |
| ≤ 2 rooms                       | 1.19 0.37-3.83              | 2.23 0.84-5.94             |
| State of health                 |                             |                             |
| satisfied                       | 1.00                         | 1.00                         |
| not satisfied                   | 1.74 0.89-3.41              | 6.02*** 2.89-12.55         |
| Disability in going outdoors    |                             |                             |
| no                              | 1.00                         | 1.00                         |
| yes                             | 1.90 0.84-4.28              | 1.12 0.49-2.53             |
| Financial problems with housing |                             |                             |
| no                              | 1.00                         | 1.00                         |
| yes                             | 1.23 0.68-2.21              | 1.36 0.68-2.72             |
| Income level                    |                             |                             |
| high                            | 1.00                         | 1.00                         |
| low                             | 1.26 0.65-2.45              | 0.73 0.33-1.61             |

*: p<0.05, **: p<0.01, ***: p<0.001

*: Odds Ratio
†: 95% Confidence Interval
home of males and females, separately. The two sexes did not share the significant variables for the desire to be institutionalized. Males dissatisfied with family bonds were 5.63 times as likely to desire to enter a nursing home, while those 70 years and more of age showed significantly less desire to live later in a nursing home, respectively.

Table 4 presents the ORs for the desire to enter a nursing home of those aged less than 70 and those aged 70 years and over, respectively. In the younger group, living alone (OR = 3.46), or being dissatisfied with health status (OR = 3.35) increased the desire to be institutionalized. Among the older group, those who were not satisfied with their family bonds (OR = 15.44), or those who had a disability in going outdoors (OR = 3.37) were more likely to desire a nursing home placement.

**DISCUSSION**

Among community residents aged 55 years and over in urban Japan, those who desire to enter a nursing home in later life were more likely to be young, to live alone, to have some disability in going outdoors, and to be unsatisfied with their family bonds and perceived state of health, respectively. The separate analysis of males and females showed that they did not share the same significant predictors. Men dissatisfied with family bonds had six times as great a desire to enter a welfare institution in later life. Older women were less likely to desire institutionalization, while those who lived alone and were dissatisfied with perceived health increased by four and six times, respectively, the desire to live later in a nursing home. Among the persons aged less than 70 years, those desiring a long-term care placement were more likely to be alone and dissatisfied with their health status. Those aged 70

| Variable                      | < 70 years old | ≥ 70 years old |
|-------------------------------|----------------|----------------|
| Sex                           |                |                |
| female                        | 1.00           | 1.00           |
| male                          | 0.98           | 1.71           |
| Way of living                 |                |                |
| not alone                     | 1.00           | 1.00           |
| alone                         | 3.46**         | 2.45           |
| Family bonds                  |                |                |
| satisfied                     | 1.00           | 1.00           |
| not satisfied                 | 2.76           | 15.44***       |
| Present dwelling              |                |                |
| satisfied                     | 1.00           | 1.00           |
| not satisfied                 | 1.45           | 3.32           |
| Number of rooms               |                |                |
| ≥ 3 rooms                     | 1.00           | 1.00           |
| ≤ 2 rooms                     | 2.09           | 0.36           |
| State of health               |                |                |
| satisfied                     | 1.00           | 1.00           |
| not satisfied                 | 3.35***        | 2.01           |
| Disability in going outdoors  |                |                |
| no                            | 1.00           | 1.00           |
| yes                           | 1.19           | 3.37*          |
| Financial problems with housing|               |                |
| no                            | 1.00           | 1.00           |
| yes                           | 1.47           | 0.62           |
| Income level                  |                |                |
| high                          | 1.00           | 1.00           |
| low                           | 1.02           | 0.85           |

*: p<0.05, **: p<0.01, ***: p<0.001
* : Odds Ratio
† : 95% Confidence Interval
years and over who were dissatisfied with family bonds and disabled in going outdoors, had 15 and three times as great a desire to be institutionalized, respectively.

Several variables were not associated with the wish to enter nursing homes: gender, housing conditions such as the small number of rooms per dwelling and the low degree of satisfaction with the dwelling, and economic characteristics including financial problems in staying in the present dwelling and perceived low income level, respectively.

The predictors of actual nursing home placement in Japan do not differ from those in western countries. Advancing age 12-20, being a female 16, 17-21, living alone 12, 14, 16, 17, 21-23, absence of family ties 36, bad perception of the state of health 10, lack of own room 14, 21, presence of physical and mental disability 12, 15, 17-21, 23, 25, 36 were associated with institutionalization. Comparison with the present results points out similarities and divergences between the actual nursing home placement factors and the desire for institutionalization.

The present study shows that family conflicts incite older persons, and particularly elderly males to wish to move to a nursing home. This result is consistent with a previous study demonstrating that, if they have discord with family members, Japanese males were more likely to ask for institutionalization than females 27. Another survey in Japan revealed that the psychological relationship between the aged and the family care provider was an important predictor of institutionalization 6. This result suggests the progressive changes in the socio-cultural environment of today's Japan. Nowadays, elderly Japanese do not expect to receive from their children and grand children the piety they used to have for their own parents.

A self-perception of poor health among women as well as low functional status among those aged 70 years and over were consistent predictors of the desire to enter a nursing home. As a matter of fact, the main reason expressed for entering a private retirement home in Japan is to feel secure if any medical problem should occur 25. Medical care is, however, very limited in the Japanese welfare institutions 14, 28. The present result indicates some confusion remaining among Japanese people concerning welfare and medical institutions 26. Moreover, it was demonstrated that the desire for institutionalization among those with perceived poor health was related to an inability to maintain living arrangements 30, 31 and to a concern not to become a burden on the family 29.

The present result demonstrated the females' fear of living alone. This fear is an important issue for the placement decision 28. Moreover, elderly women are more likely to live alone than elderly men. Living alone, i.e. the lack of a main care provider, would lead women to decide to live in a welfare institution, since home care services are still underdeveloped in Japan.

Regarding age, there is a gap between the desire and the actual factors leading to institutionalization. One of the strongest predictors of actual nursing home entry is advancing age; 63% of persons living in a Japanese public welfare facility are aged 80 years old and over 33. The present result showed that old old females were more anxious to remain at home and not to be institutionalized.

Surprisingly, living and financial characteristics were not associated with the desire for institutionalization, despite the fact that these characteristics represent the main social reasons for nursing home placement in Japan 14, 32, 20. However, a questionnaire survey conducted in Europe among elderly community residents showed that those living in uncomfortable and poor financial conditions were still satisfied with their life and did not want to move into better dwellings or welfare institutions. They had lived a long time in the same place and, therefore, any transfer would be disturbing 36.

Institutionalization is not a decision easily made. Most elderly people prefer to remain at home, and institutionalization is viewed as a last resort 17, 29. Despite the fact that the study population speculated about its future, and that no real indication of the decisive factors to enter a long-term care institution is given, the present study indicated a high number of similarities between actual factors of institutionalization and the desire for a nursing home placement in the future. Besides physical and mental disability, the family-related issue is the most relevant factor for institutionalization. Improvement of family support, and care-giver support would be a major factor in keeping the elderly at home as long as possible and enhancing their quality of life.

ACKNOWLEDGEMENTS

We are grateful to Mr Tréhony, director of "Observatoire Régional de Santé de Bretagne", France, and to Pr Chaperon of the Department of Public Health, School of Medicine, Rennes, France, for their material support in this study.

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