

Middle-aged daughters' attitude toward future caregiving for mothers: Effects of the mother-daughter relationship

Yukiko Suzuki (Faculty of Health Sciences, Kyorin University, y-suzuki@ks.kyorin-u.ac.jp, Japan)

Yutaro Kashiwagi (Department of Rehabilitation, Tsurukawa Sanatorium Hospital, yutaro_231_gtr@icloud.com, Japan)

Kyoka Tamura (Department of Rehabilitation, Nerima Takanodai Hospital, kyonkyon_maron.12_77@icloud.com, Japan)

Ayaka Tsukadaira (Department of Rehabilitation, Shiroyama Hospital, tsukadaira704@gmail.com, Japan)

Hideki Mochizuki (Faculty of Health Sciences, Kyorin University, hide9@ks.kyorin-u.ac.jp, Japan)

将来的な母親介護に対する中年期娘の意識

—母娘関係が与える影響—

鈴木 優喜子 (杏林大学 保健学部)

柏木 勇太郎 (鶴川サナトリウム病院 リハビリテーション科)

田村 恭花 (練馬高野台病院 リハビリテーション科)

塚平 文佳 (城山病院 リハビリテーション科)

望月 秀樹 (杏林大学 保健学部)

要約

本研究は、高齢の母親をもつ、まだ介護に直面していない中年期女性を対象として、母娘関係と、将来的な母親介護に対する娘の意識（介護意識）との関連性を明らかにすることを目的とした。本研究では、実の母親が生存している中年期女性 56 名に対して、Parental Bonding Instrument (PBI) によって評価する母娘関係と介護意識に関する web 調査を実施した（有効回答率 35.0 %）。参加者の約 8 割が、将来、母親を介護しようと思うと回答した。PBI (25 項目) を因子分析した結果、「過干渉」「愛情」「否定」の 3 因子が抽出された。重回帰分析をした結果、中年期女性の介護意識には、否定の母娘関係の影響が確認された。母親から否定される関係だと感じている中年期女性は、将来的に母親を介護しようとする意識が低いことが示唆された。病前からの母娘関係が、母親介護の意識に影響を及ぼす可能性がある。母親から否定される関係だと捉えている中年期女性においては、将来的に母親の介護問題に直面した場合を想定して、社会的なサービス利用や環境整備のサポート体制を整えるなどの早めの対応が必要である。

Key words

caregiver, parent-child relationship, daughters' awareness, middle-aged, survey

1. Introduction

In Japan's ultra-aging society, the demand for home care is rapidly increasing. As of April 2024, approximately 7.1 million people in Japan require care; there is a significant rise in the use of home-based nursing care services. Reports indicate that 59.5 % of those requiring care (approximately 4.22 million individuals) receive nursing care services at home (Ministry of Health, Labour and Welfare, 2024). Consequently, there is an urgent need to implement home care strategies, including health deterioration prevention, caregiver burden reduction, and establishing caregiver health education systems.

To this end, Japan is promoting a comprehensive community care system to provide integrated medical and nursing care services. However, only 45.9 % of primary caregivers are family members living with care recipients (Ministry of Health, Labour and Welfare, 2022). Notably, the majority of caregivers are women (Koyama, 2016). In Japan's aging, low-birth-rate society, daughters typically assume the primary caregiving

role for their older parents. While more women are entering the workforce, a greater proportion of them are leaving their jobs for caregiving than men (Ministry of Health, Labour and Welfare, 2022). In recent years, around 95,000 people have left their jobs annually, with approximately 80 % being women (Ministry of Internal Affairs and Communications, 2022). For middle-aged women with older parents, home care poses significant challenges, making it crucial to identify factors contributing to caregiver burden for early intervention.

A prior study showed that the pre-caregiving mother-daughter relationship impacts how daughters accept caregiving responsibilities in the future (Baba, 2020). They also found that caregivers who perceive a trusting relationship with their parents are more likely to embrace caregiving responsibilities. Previous research identified a positive disposition toward caregiving as a crucial factor in caregiving capability, emphasizing the fact that the relationship between the care recipient and caregiver is an important determinant of whether caregiving is viewed positively (Sakurai, 1999; Ichiki et al., 2019). Furthermore, research also reported that family discord often becomes evident during end-of-life care (Baker, 2005; Prince-Paul, 2008). These findings suggest that pre-existing family dynamics may influence

the “caregiving attitude,” which comprises acceptance of caregiving, perceived burden, and enthusiasm for caregiving.

Individuals who reported a distant parent-child relationship prior to their parent’s illness experience a higher caregiving burden (Dantzler, 2011). Understanding the dynamics of these relationships before caregiving begins is thus essential for assessing caregiving attitudes. Identifying caregivers at risk of greater burden can help provide more comprehensive and timely social support and adopt interventions for caregiving challenges. By anticipating potential caregiving issues before they arise and preparing in advance—such as learning about available social services and making environmental adjustments—may alleviate feelings of caregiving burden. However, the relationship between parent-child dynamics and attitude toward caregiving remains under-researched. This is particularly true for middle-aged women with aging parents who have yet to take on caregiving responsibilities. This study aimed to explore the associations between mother-daughter relationships and caregiving attitudes in this population.

2. Method

2.1 Operationally defined terms

Middle-aged individuals were defined as those aged 40 to 64 years. Following a prior study, “attitude toward caregiving” was defined as the willingness to provide care or assistance (including financial support and environmental adjustments) for one’s mother if she required help with activities such as eating in bed or using the toilet (Kigo et al., 2001).

Individuals who were already engaged in caregiving were excluded from the study. In this study, “caregiving” refers to assisting with daily activities such as bathing, dressing, using the toilet, mobility, and eating. This included care for individuals who have not been certified as requiring assistance under Japan’s nursing care insurance system and family members who reside outside the home. However, it excluded care for those who are temporarily bedridden due to illness or other reasons. Individuals were considered to be “caregiving” if they provided assistance for 30 days or more per year.

2.2 Participants

A description of the study was mailed to middle-aged women (aged 40-64 years). The study instructions explained that respondents would be excluded if they were already receiving care because they were hospitalized, admitted to a facility, or in need of long-term care and that they should respond only if their biological mother was still alive and living at home (whether cohabiting or living separately) and did not currently require long-term care. An online survey was also conducted. The sample size was calculated using G-Power, determining that 47 participants were necessary for multiple regression analysis, assuming an effect size of 0.26, a p-value of less than 0.05, a power of 0.8, and three explanatory variables. The final analysis included data

from 56 participants, meeting the required sample size. All responses to the online survey were anonymous and compiled for analysis, so respondents could not be identified.

2.3 Evaluation

The survey questionnaire comprised three items: general information (respondent’s attributes and those of their mothers), mother-daughter relationships, and attitude toward caregiving. General information included details about the respondent’s age, health status, occupation, and the distance from the mother’s residence (categories included living together, living next door, within 30 minutes one way, within one hour one way, and more than one hour one way). Data on the mother’s attributes, such as her age and health condition, were also collected.

The Japanese version of the PBI was used (Ogawa, 1991) to assess mother-daughter relationships. The PBI comprises 25 items to evaluate the parent-child relationship with both parents and has been widely used across various surveys (Takeuchi et al., 1989; Kendler, 1996; Sato et al., 1999; Komada, 2018). While Ogawa (1991) identified a two-factor structure (care and overprotection), Takeuchi et al. (1989) reported a three-factor structure (affection, interference, freedom). Komada (2018) revealed differing four-factor structure for fathers (caregiving, freedom, over-interference, anxiety) and mothers (negativity, freedom, affection, over-interference), indicating an instability in the PBI factor structure. However, in this study, only the daughters’ perceptions of their relationship with their mothers were assessed using the Japanese version of the PBI. Participants rated each item on a five-point scale, ranging from “Not true at all” to “Very true.”

To assess the attitudes of middle-aged daughters toward caregiving, we used Kigo et al.’s (2001) approach. Participants were asked to respond to the statement, “If my mother needed assistance with eating in bed or using the toilet, I would actively try to care for or assist her (including financial support and adjusting her environment).” The response options ranged from “Strongly disagree” to “Strongly agree”. They were also asked to identify potential obstacles to caregiving if their mother required assistance, allowing for multiple responses (open-ended question).

2.4 Procedure

A research explanation sheet was distributed to the mothers of medical students attending University A, and an online survey was conducted using Microsoft Forms. The participants gave their consent to participate in the anonymous survey before completing the questionnaire.

Y.S. designed this study, performed the statistical analysis, interpreted the results, and authored this paper. Y.K., K.T., and A.T. reviewed the literature, collected the data, interpreted the results, and authored this paper. H.M. interpreted the results and authored this paper. All of the authors approved this paper for

submission.

2.5 Data analysis

To clarify the overall structure of midlife mother-daughter relationships, we conducted factor analysis (using Promax rotation) and reliability analysis using the principal factor method on the 25-item PBI (Ogawa, 1991). Criteria for factor analysis included factor loadings of 0.40 or higher, cumulative contribution ratios of 50 % or greater, and alpha coefficients of 0.60 or above.

The percentage of participants who indicated their intention to actively care for their mother in the future (hereafter referred to as “caregiving attitude”) was calculated. Additionally, a multiple regression analysis was conducted using the forced entry method to examine the influence of the mother-daughter relationship on caregiving attitudes among middle-aged women. The analysis was performed using SPSS (Ver. 21.0), with a significance level of $p < 0.05$. This study was approved by the ethics committee of the Kyorin University (approval number 2022-72).

3. Results

3.1 Questionnaire response rate

A research description was mailed to 160 individuals, out of which, 56 responded via an online survey; all required items were completed. A total of 56 valid responses were obtained,

resulting in a valid response rate of 35.0 %. The survey period was from March 2023 to June 2023.

3.2 Participants attributes

The participant demographics are presented in Table 1. The analysis included 56 middle-aged women with an average age of 49.8 ± 4.1 years. Their biological mothers had an average age of 77.1 ± 5.4 years, and of the total, 14.3 % of respondents lived with their biological mothers.

3.3 Categorization of middle-aged women's perspectives on mother-daughter relationships

A factor analysis was conducted using Promax rotation on the 25-item PBI using the principal factor method. The analysis revealed that a three-factor structure was suitable for the participants' responses. To clarify the three-factor structure, items with loadings below 0.40 or high cross-loadings (seven items total) were excluded. After considering the reliability coefficient values, 18 items were retained (see Table 2). The first factor, over-interference, comprised seven items, including “[My mother] tried to control everything I did” and “She was overprotective” ($\alpha = 0.85$). The second factor, affection, included five items such as “She spoke to me in a warm, friendly voice” and “She was kind and caring toward me” ($\alpha = 0.90$). The third factor, negativity, comprised six items, including “She made me feel unwanted” and “She seemed cold toward me emotionally” ($\alpha = 0.86$).

Table 1: Analysis targets and distribution of characteristics

Sex	Female	56
Mean age (in years)		49.8 ± 4.1
Mother's health status	Healthy	51 (91.1)
	Neither healthy nor unhealthy	3 (5.4)
	Unhealthy	2 (3.6)
Cohabiting family members	Husband/children	37 (66.1)
	Children and mother	2 (3.6)
	Both parents	2 (3.6)
	Only mother	4 (7.1)
	Only father	1 (1.8)
	Living alone	1 (1.8)
	Other	9 (16.1)
Distance to mother's residence	Cohabiting	8 (14.3)
	Neighbors	4 (7.1)
	Within 30 minutes one way	9 (16.1)
	Within 1 hour one way	1 (1.8)
	More than 1 hour one way	19 (33.9)
Mother's mean age		77.1 ± 5.4
Mother's health status	Very healthy	9 (16.1)
	Somewhat healthy	41 (73.2)
	Not very healthy	6 (10.7)

Note: Age is given as the mean value \pm standard deviation, and gender, household composition, and caregiving experience are shown as the number of people (%).

Table 2: Results of factor analysis of overall mother-daughter relationships in middle age (principal factor method, Promax rotation)

		Factor 1	Factor 2	Factor 3
Factor 1: Over-interference ($\alpha = .85$)				
9	She tried to control everything I did.	.796	-.246	-.087
13	She tended to treat me like a child.	.787	.117	.218
10	She violated my privacy.	.760	-.375	-.244
20	I feel like I would not have been able to cope without my mother.	.698	.254	.064
23	She was overprotective.	.682	.298	.148
15	I forced myself to decide.	-.662	-.135	-.231
21	She gave me as much freedom as I wanted.	-.659	.283	.261
Factor 2: Affection ($\alpha = .90$)				
1	She spoke to me in a warm, friendly voice.	-.016	.930	.101
12	She smiled at me often.	.199	.791	-.189
6	She was kind and forgiving to me.	-.015	.738	-.217
3	She let me do the things I wanted to.	.022	.670	-.216
5	She showed that she understood my problems and worries.	-.031	.667	-.234
Factor 3: Negativity ($\alpha = .86$)				
16	She made me feel unwanted.	.077	.033	.840
18	She did not speak to me very much.	-.084	-.181	.707
14	I did not feel like she understood my needs and wants.	.252	-.006	.674
17	She helped me feel better when I was upset or troubled.	-.141	.059	-.660
11	She wanted to talk things through with me.	.220	.194	-.617
4	She felt cold toward me emotionally.	.053	-.294	.599
	Factor correlations		Factor 2	Factor 3
	Factor 1		-.26	.33
	Factor 2		—	-.49

Cronbach's alpha was calculated to assess the reliability of the PBI subscale results, yielding values for "over-interference" ($\alpha = 0.85$), "affection" ($\alpha = 0.90$), and "negativity" ($\alpha = 0.86$; see Table 2). These results indicated that the factor structure had an acceptable reliability, and subsequent analyses were conducted using these three factors.

3.4 The reality of middle-aged women's caregiving attitude

Regarding caregiving attitude, one participant (1.8 %) responded with the option, "Strongly disagree," two participants (3.6 %) answered with "Disagree," six participants (10.7 %), "Neither agree nor disagree," 32 participants (57.1 %) chose "Agree," and 15 participants (26.8 %) selected "Strongly agree." Of 56, 47 (83.9 %) exhibited a positive caregiving attitude (agree or strongly agree). Only nine participants (11.1 %) were categorized as lacking a caregiving attitude (strongly disagree, disagree, or neither agree nor disagree). A chi-square test revealed a significant bias, showing that many middle-aged women expressed an intention to actively care for their mothers ($\chi^2 = 25.786$, $df = 1$, $p < .01$).

3.5 Mother-daughter relationships and caregiving attitudes in middle-aged women

The factor analysis revealed three factors and 18 items; the scores for each item were summed to calculate a composite score for each of the three factors. The total possible score for all three factors ranged from 0 to 54 points. Participants in this study scored between 11 and 42 points, with an average total score of 21.1 ± 5.2 for the three factors. A multiple regression analysis using the forced entry method was conducted to investigate caregiving attitude, with the three mother-daughter relationship factors as explanatory variables. The results showed that "negativity" was a significant contributor in the relationship ($\beta = 0.135$; see Table 3).

3.6 Obstacles to caregiving among middle-aged women

It was found that the most frequently identified factors that would hinder caregiving if the mother required assistance included lack of personal time ($n = 12$, 21.4 %), heavy physical burden ($n = 10$, 17.9 %), constant vigilance over the mother's condition ($n = 9$, 16.1 %), a lack of confidence in caregiving knowledge and skills ($n = 6$, 10.7 %), long-distance caregiving challenges ($n = 6$, 10.7 %), financial difficulties ($n = 19$, 20.9 %),

Table 3: Results of multiple regression analysis of mother-daughter relationships and caregiving attitudes in middle age ($n = 56$)

	B	Standard error	95 % CI		<i>p</i> -value
			Lower bound	Upper bound	
Over-interference	.015	.013	-.011	.040	.246
Affection	.004	.020	-.037	.045	.849
Negativity	-.050	.019	-.087	-.012	.010 *
Adjusted R^2	.165				
<i>N</i>	56				

difficulties in balancing work and caregiving responsibilities ($n = 5$, 8.9 %), and the presence of another caregiver ($n = 3$, 5.4 %).

4. Discussion

4.1 Categorizing mother-daughter relationships: comparing middle-aged women's perspectives

The factor analysis of the 25-item PBI identified “over-interference,” “affection,” and “negativity” as the main factors that define the relationship shared between the mothers and the middle-aged daughters. While various parent-child relationship surveys have utilized the PBI, findings differ across studies. For instance, Ito et al. (2014) reported a two-factor structure, identifying “consideration” and “overprotection,” (Ito et al., 2014) whereas Inoue et al. (2006) found three: “affection,” “expectation of dependence,” and “respect for decisions” (Inoue et al., 2006). Although there is some overlap in factor items between studies, the present study’s “negativity” factor was absent in both the above-mentioned studies. These discrepancies may stem from differences in the age of the target populations; for example, Ito et al. (2014) focused on elementary and junior high school students, while Inoue et al. (2006) examined women from adolescents to older adults.

4.2 Context of middle-aged women's attitude toward caregiving

Approximately 80 % of middle-aged women indicated a willingness to care for their mothers in the future. This intention among middle-aged women in Japan suggests a strong cultural expectation regarding caregiving. According to the Cabinet Office of Japan, around 50 % of individuals aged 40 to 49 and 40 % of those aged 50 to 59 perceive caregiving for parents as an expected responsibility of the children (Cabinet Office, 2003). This perspective may stem from a widespread recognition among middle-aged individuals in Japan that caring for older parents is a core familial obligation. Additionally, as middle-aged individuals often encounter illness and death among close relatives, they may develop a heightened awareness of the caregiving role. Such experiences can underscore caregiving as an urgent concern, prompting increased reflection on the need to support aging parents. Additionally, the fact that our study subjects were mothers of medical university students may explain

why many of the subjects responded that they were conscious of maternal caregiving. Mothers of medical university students may have relatively good knowledge of caregiving and may work in the medical industry, so they may be more familiar with caregiving.

4.3 Mother-daughter relationships shape caregiving attitudes in midlife

The perception of being treated “negatively” by one’s mother during childhood significantly influences future caregiving attitudes in midlife.

A multiple regression analysis using three factors of the mother-daughter relationship as explanatory variables yielded an R^2 of .165 ($p < .001$), with perceived negative relationships showing a particularly strong impact ($\alpha = .86$). This indicates that the nature of the mother-daughter relationship is crucial in shaping middle-aged women’s future attitudes toward caregiving to her mother. The study findings suggest that perceived negative treatment from their mother’s correlates with a reduced willingness to engage in caregiving in the future, while feeling positively regarded fosters a proactive caregiving attitude. This positive recognition strengthens their commitment to future caregiving. Thus, it can be safely concluded that spending quality time with one’s mother is essential for effective caregiving during the mother’s old age. However, daughters who feel rejected by their mothers may intentionally avoid caregiving situations that necessitate close contact, leading them to limit their time together. This reluctance underscores the complex dynamics within mother-daughter relationships and their implications for future caregiving attitudes.

Middle-aged daughters commonly cited “lack of personal time” as the biggest obstacle to future caregiving towards their mothers, followed closely by concerns over “the heavy physical burden.” Previous research has highlighted various negative aspects of family caregivers’ experiences, often linking them to factors such as the duration of caregiving commitments and subjective health assessments (Washio et al., 2021; Schulz & Sherwood, 2006; Hirose et al., 2006).

Conversely, Sakurai (1999) found that positive attitudes toward caregiving can mitigate caregivers’ sense of limitation, and satisfaction with caregiving can alleviate their burden. Addition-

ally, Ichiki et al. (Ichiki et al., 2019) emphasized the necessity of fostering an objective understanding of illnesses, dispelling misconceptions, and acquiring appropriate caregiving skills to support caregivers effectively. The current study reinforces the importance of establishing a robust caregiving support system that provides middle-aged women with essential information on illness comprehension, caregiving techniques, and available social welfare services.

As discussed in this study, daughter's intention to care for her mother in the future is crucial in facilitating support for mothers in need of care. If the mother lacks the intention to receive care, the support provided will likely be inadequate. Therefore, fostering a high level of caregiving awareness among daughters is essential. Furthermore, it is also important to note that factors that enhance family caregivers' motivation to continue providing care may also contribute to increased feelings of depression (Karasawa, 2006). The high job turnover rate due to caregiving responsibilities and the subsequent financial challenges necessitate a nuanced understanding of this issue. While a high level of caregiving awareness is beneficial, relying solely on awareness may overlook the complexities involved in other areas surrounding caregiving. Research indicates that utilizing social services can alleviate caregivers' burdens (Aoki et al., 2002). Thus, it is imperative to implement a caregiving support system that helps manage the caregiving responsibilities and safeguards the daughters' time and mental well-being when caregiving becomes necessary.

4.4 Strengths and limitations

This study was conducted in Japan and specifically examines the relationship between mother-daughter dynamics and caregiving attitudes, reflecting cultural aspects unique to the country. Elements such as culture, religion, healthcare costs, women's societal participation, and domestic situations can significantly influence attitudes toward caregiving and vary across different countries. Consequently, this study's findings may not be generalizable in other contexts. Moreover, the study's participants had not yet engaged in caregiving, as most of their mothers were in good health during the time of the study. This may have limited their ability to appreciate the realities of caregiving. There may be a discrepancy between the influence of the mother-daughter relationship on attitudes toward future caregiving—as observed in this study—and the actual caregiving experiences. Future research should thus explore differences in how the parent-child relationship impacts caregiving attitudes, focusing on those with and those without prior caregiving experience. This comparative approach could provide further insight into the complexities of caregiving attitudes influenced by maternal relationships in various contexts.

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The data that support the findings of this study are not publicly available due to their containing information that could compromise the privacy of research participants but are available from Y.S. upon reasonable request.

References

- Aoki, E., Tagashira, K., Morishita, K., Yamasaki, T., Hirai, T., Kira, H., and Jinno, Y. (2002). Needs of day care user family and factors of exercising influence on the using frequency. *Journal of Kochi Rehabilitation Institute*, 4, pp. 25-28. (in Japanese)
- Baba, A. (2020). The impact of parent-child psychological independence before caregiving on caregiving: Focusing on acceptance of mother-daughter caregiving. *Japanese Journal of Applied Psychology*, 5, pp. 198-206. (in Japanese)
- Baker, M. (2005). Facilitating forgiveness and peaceful closure: The therapeutic value of psychosocial intervention in end-of-life care. *Journal of Social Work in End-of-Life & Palliative Care*, 1, pp. 83-95.
- Cabinet Office (2003). Public opinion survey on elderly care (Retrieved April 26, 2024 from <https://survey.gov-online.go.jp/h15/h15-kourei/2-2.html>).
- Dantzler, B. A. (2011). An analysis of factors that impact the perceptions of strain, burden, and quality of life among primary caregivers of impaired, elderly family members [Dissertation]. [California] TUI University, 72 (6-B): 3379.
- Hirose, M., Okada, S., and Shirasawa, M. (2006). Factors related to cognitive caregiving appraisal by family caregivers: The positive and the negative aspects of caregiving. *Japanese Journal of Social Welfare*, 47, pp. 3-15. (in Japanese)
- Ichiki, N., Ogata, Y., and Egami, F. (2019). Influence of relevant factors among the structural factors associated with care capacity on the sense of care burden of family caregivers. *Journal of Japan Society of Nursing Research*, 42, pp. 111-122. (in Japanese)
- Inoue, S., Ooi, K., Nishimura, J., Imori, S., and Saito, K. (2006). Life-span development psychological study of the relationship of parents and their children II: Reexamination of the scales of PBI and IPA. *Bulletin of the Tokyo College of Do-*

- mestic Science*, 46, pp. 245-251. (in Japanese)
- Ito, H., Nakajima, S., Mochizuki, N., Takayanagi, N., Tanaka, Y., Matsumoto, K., Ohtake, S., Harada, S., Noda, W., and Tsujii, M. (2014). Development of the positive and negative parenting scale (PNPS): Factor structure and construct validity. *The Japanese Journal of Developmental Psychology*, 25 (3), pp. 221-231. (in Japanese)
- Karasawa, K. (2006). The determinants of family members' intention to continue taking care of elderly persons. *Japanese Journal of Social Psychology*, 22, pp. 172-179. (in Japanese)
- Kendler, K. S. (1996). Parenting: A genetic epidemiologic perspective. *American Journal of Psychiatry*, 153, pp. 11-20.
- Kigo, R., Kihara, S., Umeki, S., Sawamura, M., and Shimonagata, I. (2001). Middle-aged and elderly people's concepts about taking care of family members. *Bulletin of Center for Educational Research and School Development, Faculty of Education, Kumamoto University*, 18, pp. 29-35. (in Japanese)
- Komada, R. (2018). The influence of parent's attitude and expectations on youth's anthropobic tendency. *Otemon Gakuin University Psychological Review*, 26, 1-10. (in Japanese)
- Koyama, Y. (2016). A preliminary analysis on care-giving for the elderly parents of married women. *Journal of Population Problems*, 72 (1), pp. 28-43. (in Japanese)
- Ministry of Health, Labour and Welfare (2022). Survey on employment trends, 2022 (Retrieved April 26, 2024 from <https://www.mhlw.go.jp/toukei/itiran/roudou/koyou/doukou/23-2/index.html>).
- Ministry of Health, Labour and Welfare (2022) Comprehensive survey of living conditions, 2022 (Retrieved April 26, 2024 from <https://www.mhlw.go.jp/toukei/saikin/hw/k-tyosa/k-tyosa22/index.html>).
- Ministry of Health, Labour and Welfare (2024). Nursing insurance business status report (Monthly report/provisional) (Retrieved April 26, 2024 from <https://www.mhlw.go.jp/topics/kaigo/osirase/jigyom24/dl/2404a.pdf>).
- Ministry of Internal Affairs and Communications (2022). 2022 employment structure basic survey (Retrieved April 26, 2024 from <https://www.stat.go.jp/data/shugyou/2022/pdf/kgaiyou.pdf>).
- Ogawa, M. (1991). Reliability and validity of the Japanese version of PBI. *Japanese Journal of Psychiatric Treatment*, 6, pp. 1193-1201. (in Japanese)
- Prince-Paul, M. (2008). Relationships among communicative acts, social well-being, and spiritual well-being on the quality of life at the end of life in patients with cancer enrolled in hospice. *Journal of Palliative Medicine*, 11, pp. 620-25.
- Sakurai, N. (1999). The moderating effects of positive appraisal on the burden of family caregivers of older people. *The Japanese Journal of Psychology*, 70, pp. 203-210. (in Japanese)
- Sato, T., Narita, T., Hirano, S., Kusunoki, K., Sakado, K., and Uehara, T. (1999). Confirmatory factor analysis of the parental bonding instrument in a Japanese population. *Psychological Medicine*, 29, pp. 127-133.
- Schulz, R. and Sherwood, P. R. (2006). Physical and mental health effects of family caregiving. *The American Journal of Nursing*, 108, pp. 23-27.
- Takeuchi, M., Suzuki, T., and Kitamura, T. (1989). Factor analytic study on the parents' attitude for childcare. *Journal of Perinatal Medicine*, 19, pp. 108-112. (in Japanese).
- Washio, M., Saitoh, S., Arai, Y., Takagi, S., Oonishi, H., Isobe, T., Takeuchi, H., Oohata, J., Mori, M., and Shimamoto, K. (2005). Risk factors for heavy burden among family caregivers in a rural town in Hokkaido. *Japanese Journal of Geriatrics*, 42 (2), pp. 221-228. (in Japanese)

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