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The relationship between active aging and the quality of life of older people in Indonesia

Związek pomiędzy aktywnym starzeniem się a jakością życia osób starszych w Indonezji

Summary: Prolongation of life expectancy is one of humanity's most outstanding achievements; it provides essential resources and makes significant structural contributions to our communities. Simultaneously, the aging population presents tremendous challenges due to its increased social and economic needs. This research aims to improve older people's quality of life by considering active aging variables. In order to gather information for the case studies and assessments in the three areas of active aging, the study used quantitative analysis with cross-sectional analysis. The Geriatric Division of Cipto Mangunkusumo Hospital (RSCM) employed geriatric assessment tools for diagnosis. The quality of life was measured using the Indonesian version of the EQ-5D index, with a cut-off score of 0,692. According to the study, the older adults' quality of life moderately correlates with their regular health examinations, gratitude, social interactions, cooperation, and participation in and out of the environment. Furthermore, while cognitive performance tends to be relevant, vocational position and the number of illnesses are also significantly connected to quality of life. The experience of falling, social interaction, and physical activity were all connected with life satisfaction. A moderate correlation was found between health

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check-up habits and quality of life. The study's findings suggest that future research would be better if it included social security, especially pensions, as these are the most crucial security sources directly impacting older adults' well-being.

Keywords: quality of life, elderly, participation, security, active aging

Streszczenie: Wydłużenie średniej długości życia człowieka jest jednym z osiągnięć ludzkości, które ma wpływ na kształt struktury populacji. Jednocześnie starzenie się społeczeństwa stwarza ogromne wyzwania społeczne i gospodarcze. Celem tego badania jest wyodrębnienie czynników związanych z aktywnym starzeniem się, które przyczyniają się do poprawy jakości życia osób starszych. W niniejszym projekcie wykorzystano podejście ilościowe. Projekt ma charakter badań przekrojowych, które przeprowadzono na oddziale geriatrycznym szpitala Cipto Mangunkusumo w Dżakarcie. Do pomiaru jakości życia zastosowano indonezyjską wersję wskaźnika EQ-5D, którego punkt odcięcia wynosi 0,692. Zastosowano też narzędzia oceny geriatrycznej. Wyniki badań wskazują na umiarkowany stopień korelacji pomiędzy wykonywaniem regularnych badań lekarskich a wysoką jakością życia osób starszych. Podobnie jest w przypadku takich czynników jak wdzięczność, interakcje społeczne, współpraca czy uczestnictwo w różnego rodzaju aktywnościach. Do znaczących czynników określających jakość życia zaliczyć należy wysoką funkcjonalność w zakresie poznawczym badanych osób, ich wysoką pozycję zawodową, liczbę przebytych chorób, wysoką sieć relacji społecznych, angażowanie się w aktywność fizyczną, a także to, czy doświadczyli oni upadku, które są główną przyczyną urazów osób starszych. Wskazano także na potrzebę włączenia w przyszłych badaniach czynników związanych z zabezpieczeniem społecznym, zwłaszcza emerytur, które mogą mieć znaczący wpływ na jakość życia osób starszych.

Słowa kluczowe: jakość życia, osoby starsze, uczestnictwo, bezpieczeństwo, aktywne starzenie się

Introduction

The aging of the global population is currently a global concern. Many countries now have an aging population structure due to decreased fertility and death rates (Blackburn & Dulmus, 2007; Nugroho, 2007; World Health Organization, 2007; Sowers & Rowe, 2009). Ten percent of people are older than sixty. This percentage will increase to one in five by 2050. Every second, somewhere in the world, someone becomes sixty. That amounts to 58 million people a year. According to reports from the United Nations (2009), Verena (2009), and the World Health Organization (2007), the bulk of these people (80%) live in developing countries. Furthermore, Indonesia has seen an increase in people 60 and older.

Because the proportion of the population that is elderly has increased to 7.18% since 2000 and is predicted to climb to 9.77% in 2010 and 11.34% in 2020 (National Social Economic Survey/ SUSENAS 2004), Indonesia has adopted an older structure (Komnas Lansia, 2006; Nugroho, 2007). It is

predicted to be 13% in 2025 and 25% in 2050. Second, the number of senior people in Indonesia will increase by 414% between 1990 and 2025, according to international demographic figures published by the US Bureau of Census (1993). According to Departemen Kesehatan Republik Indonesia (1998) and Departemen Sosial (2002), this is the most immense growth in history.

The prolongation of life expectancy is one of humanity's most outstanding achievements. Older adults contribute significantly to our societies' structural makeup and offer invaluable resources. In addition, the aging population presents significant challenges due to its increased social and economic needs (Departemen Kesehatan, 1998). Examining active aging components is crucial to improving middle-aged and older people's Health-Related Quality of Life (HRQoL) (Eum & Kim, 2021).

Organizations like the World Health Organization (WHO) are pushing policies that optimize security, participation, and health to enhance senior citizens' quality of life (Garcia et al., 2018). This is done to promote active aging. The WHO recommends health, participation, and security as the three main pillars of active aging (Wongsala et al., 2021). It provides a policy framework for senior citizens to realize their potential for well-being, which could lengthen their lives (Hijas-Gómez et al., 2020).

In the context of an aging population, quality of life (QoL) is an essential factor for the well-being of older adults (Zin et al., 2020). As per the World Health Organization, quality of life (QoL) refers to an individual's awareness of their interests, goals, expectations, and standards to meet, all in compliance with their local cultural systems and values. A person's quality of life (QoL) is impacted by their expectations, mental health, personality, and external events. It is an internal experience shaped by these factors and the subjective experience of someone who has never had it before (World Health Organization, 2007). Evaluating the quality of life rather than only physical health is a better way to reflect the welfare of older adults. From the perspective of wellness and life quality, wellness is the ultimate decision, and life quality is something one should take responsibility for (Darmojo, 2000).

In the context of the circumstances mentioned above, one must explore the World Health Organization's (WHO) pillars of active aging and their relationship to the health of Indonesia's older population. Such research is required to enhance the general quality of life for the Indonesian community and advance older adults' welfare. The research question is how to adequately consider active aging factors when trying to improve older people's quality of life.

Literature review

Service providers and care professionals must acknowledge the strong interdependence of the QoL domains, implying that modifications in one area are likely to impact others. Caretakers and service providers need to determine which domains are applicable in a given circumstance, ideally by activating particular domains with flexible measurement tools (van Leeuwen et al., 2019).

According to van Leeuwen et al. (2019), older adults place a high value on feeling well and unrestricted by their physical condition, being able to manage independently, maintaining their dignity and not feeling like a burden, engaging in activities that make them feel valuable, joyful, and involved, having close relationships that support them and allow them to make a difference in the lives of others, finding the positive side of life, feeling at peace, feeling connected to and experiencing faith, and developing their faith through rituals, inner reflection, and feeling secure at home. They additionally appreciate not being constrained by their financial situation.

Regarding “health,” physically healthy people were defined as having fewer physical ailments, the ability to live independently, and fewer obstacles to a happy, fulfilling life, such as restrictions on their range of motion and physical discomfort. Older adults needed to be respected and included in worthwhile activities. Achieving a balance between being burdensome parents and upholding their dignity by getting care from their children was one of the essential components of security (Wongsala et al., 2021). It was accepted when a chronic illness was under control or did not interfere with well-being. Preserving one’s functional autonomy is the initial phase of proactive aging, enhancing the quality of life for older adult individuals. Good physical health is indicated by mobility, and mental health is indicated by the ability to adapt to age-related roles (Wongsala et al., 2021).

Survival chances may be impacted by the variables loading on the biomedical component of the health pillar (e.g., cognitive function, health conditions, or pain). A thorough and multifaceted evaluation of the health pillar of active aging is essential to evaluate survival. The other pillars are interconnected to achieve active aging (Hijas-Gómez et al., 2020).

Intervention programs, which are primarily focused on promoting factors that go into the “Physical health” component, such as social interaction, cognitive stimulation, changing unhealthy behaviors, clinical pain treatment, self-care literacy, and the creation of barrier-free environments, may be essential to lowering the risk of chronic illness and disabilities, encouraging active aging, and increasing survival rates (Hijas-Gómez et al., 2020).

Furthermore, the economic and material security policy for older people should follow the “moderate” principle rather than the “optimal” principle. Public health policy can further concentrate on the optimal process of older people’s health, further extend their healthy life expectancy, and enhance their ability to self-care and function. Moreover, greater importance should be placed on creating non-material supportive environments that encompass physical, spiritual, cultural, social, and legal security; third, older adults who are still relatively young constitute a critical group for promoting participation and exploring the value of human resources; and fourth, financial incentives and material security are primarily valuable for encouraging the involvement of older women, while the “participation” of older men should primarily focus on preserving or improving their physical function and health status (Yang et al., 2020).

Three main areas of interest have been highlighted to emphasize the importance of research on active and healthy aging. Firstly, there are studies on behaviors promoting longevity and maintaining high biophysical functionality in old age. Secondly, studies address older adults’ social, economic, cultural, and social needs. Thirdly, there is a broad focus on the living environment of older people. (Garcia et al., 2018).

Research method

The research design is cross-sectional in the form of case studies and evaluations in three care settings. Then, an analysis of the relationship between caregiving and contextual factors and the quality of life of older adults was carried out. Data obtained through:

- CGA clinical interview and examination
- Research implementation is carried out through data collection to determine older people’s quality of life, socio-demographics, and health status.

Data collection from the older adults is carried out by:

- Using interviews and clinical examinations using the comprehensive geriatric assessment (CGA) instrument used in the Hospital Geriatrics Division. Cipto Mangunkusumo (RSCM).

The CGA instrument includes examinations of:

- Nutritional status with BMI assessment. Body height is measured through knee height, then converted using the Gibson formula, RS 1993.
- Depression Screening (GDS 15).
- Cognitive status with Mini Mental Status Assessment (MMSE).
- Functional status with Barthel ADL Index.
- Memory with short mental test (AMT).

Interviews and clinical examinations take 1 hour per person by a doctor in a separate special room. If the respondent feels tired, they are invited to take a break and continue after the fatigue has disappeared.

- Measurement of health-related quality of life using the EQ-5D instrument with the Indonesian version of the index validated by Soejono CH (2008). The first descriptive part of the EQ-5D system contains questions about health covering 5 dimensions with 3 levels of categories, namely a value of 1 for no problems, a value of 2 for a few problems, and a value of 3 for severe problems. Each dimension has an influence on health-related quality of life with different values. The highest value is 1,000 with a score of 11111, meaning mobility = 1, self-care = 1, usual activities = 1, pain/discomfort = 1, anxiety/depression/sadness = 1. The lowest value is -0.594, with a score of 33333, meaning mobility = 3, self-care = 3, usual activities = 3, pain/discomfort = 3, anxiety/depression/sadness = 3. The dimensions that most influence the quality of life in the early stages are: 1). discomfort/pain, reduction in score from score one to score two = 0.123.
- Self-care, reduction in value from score one to score two = 0.104.
- Feelings of anxiety/sadness/depression decrease in value from score one to score two = 0.071.
- Mobility, reduction in value from score one to score two = 0.069.
- Activities that are usually carried out are reducing the value from score one to score two = 0.036. The worst health stages are: 1). discomfort/pain, reduction in score from score one to score three = 0.386, 2). mobility, reduction in value from score one to score three = 0.314, 3). feeling anxious/sad/depressed, reducing the score from a score of one to a score of three = 0.236, 4). self-care, reduction in value from score one to score three = 0.214, 5). activities usually carried out, reduction in value from score one to score three = 0.94. The cut-off for high and low quality of life is 0.692.

The justification for taking the value 0.692 as the limit for high and low quality of life is:

- Does not have a score of 3. The highest value that has a score of 3 without a score of 2 is 0.556 for 11311, and the lowest value from a combination of one score of 3 is the combination 11131=0.264.
- The value is smaller than the lowest value from a combination of 3 scores of 1. A combination of 3 scores of 1 without a score of 3, the lowest value is 0.725 for a combination of 11122. This means that the respondent already has 60% of the dimensions with no problems and 40% of the dimensions with few problems.

- The dimension of discomfort/pain must have a score of 1. The highest and lowest values are for 2 combinations of score 1, one of which is discomfort/pain, namely for 21212=0.743 and 12212=0.692. This means that respondents have 40% of the no problem dimension, including the discomfort/pain dimension, and 60% of the slight problem dimension.
- Assessment of psychosocial stressors using the Holmes and Rahe stress adaptation scale. The total scores obtained are grouped into a. > 300 = big risk of getting sick, b. 150-299 = moderate risk c. < 150 = mild risk.
- Interviews about care include the facilities and routine activities provided along with their use, leisure activities, respect for older adults, experiences of falls, and acts of violence.

Data analysis:

- For respondent characteristics, descriptive statistics are used.
- For the relationship between parenting components and the impact of parenting on quality of life, one by one using bivariate analysis. The Somers'd asymmetric measure is used for ordinal variables to find the correlation value and its significance.

Location

Older adults and caregivers from two nursing homes – Panti Sasana Tresna Wredha Karya Bhakti (STWKB), Cibubur, and Panti Budi Mulya 1 Cipayang Jakarta Timur – as well as Homecare Yayasan Yaspi RW I Kampung Cantayan Desa Cicantayan Kecamatan Cantayan Kabupaten Sukabumi – served as study participants. Age 60 and above, willingness to participate, good communication skills, and having received care for at least three months were the inclusion criteria for elderly person subjects. A Barthel ADL score of less than five was the exclusion criterion. The inclusion criteria for the caregiver subject were as follows: they had to be at least 19 years old, have been providing care for older adults for at least three months, be willing to serve as an informant, be able to communicate effectively, have completed elementary school, and not have any cognitive impairments. The exclusion criteria included having a severe illness.

Result

The findings of this research were based on a thorough analysis that had been carried out using both quantitative methods, as described in the sections below:

Socio-demography

The distribution of subject characteristics in the three study locations can be seen in Table 1.

Table 1. Older adults characteristics

Variable	P. Cibubur n=35	P. Cipayang n=39	Cicantayan Home Care n=73	Total n=147
	%	%	%	%
Sex:				
Male	22,9	23,1	27,4	25,2
Female	77,1	76,9	72,6	74,8
Age:				
60-69 years	25,7	43,6	39,7	37,4
70-79 years	25,7	30,8	43,8	36,1
80 and above	48,6	25,6	16,4	26,5
Ethnic:				
Jawa	37,1	46,2	0,0	21,0
Sunda	5,7	23,1	100,0	57,1
Batak	5,7	0,0	0,0	1,4
Minang	22,9	2,6	0,0	6,1
Cina	2,9	2,6	0,0	1,4
Others	25,7	25,5	0,0	12,9
Job status:				
Not work	91,4	97,9	68,5	81,6
Work	8,6	1,4	31,5	18,4
Marital status:				
Not married	17,7	7,7	0	6,1
married	20	17	38,4	30,0
divorced	11,4	7,7	1,4	5,4
Widower/widower	51,4	66,7	60,3	59,9
Religion:				
Islam	77,1	87,2	100	91,1
Christian	20	10,3	0	7,5
Catholic	2,9	2,6	0	1,4
Education:				
Low	14,3	76,9	98,6	72,8
Middle	40,0	20,5	1,4	15,6
High	45,7	2,6	0,,0	11,6
Economic status:				
Low	0,0	97,4	91,8	71,4
High	100,0	2,6	8,2	28,6

The number of elderly subjects studied was 147 people, dominated by women. The subjects' ages ranged from 60 to 100 years, with a median of 72 years. The age groups at the three research sites are different, Panti Cibubur has the most older adults aged >80 years, while Panti Cipayung is in the 60–69 year age group, and Home Care Cicantayan is in the 70–79 year age group. The older people at Panti Cibubur come from various ethnic groups. At the same time, older adults at Panti Cipayung are dominated by Javanese and Sundanese, and Home Care Cicantayan all come from Sundanese. More than 90% of older people at Panti Cibubur and Panti Cipayung do not work, while at Home Care Cicantayan, 31.5% of the older adults still work primarily as farmers. The majority of respondents' religion is Muslim. The rest are Protestant, Christian, and Catholic. The educational background of most of the older adults has low education, which is dominated by almost all of the Cicantayan Home Care elderly. All the subjects at Panti Cibubur had high economic status, and conversely, almost all older people at Panti Cipayung and Home Care Cicantayan had low economic status.

Table 2. Relationship between Health and QoL

Variable	QoL						Statistic	
	Low		High		Total		d	p
	N	%	N	%	n	%		
Health status:								
Nutrition intake								
balance nutrition	0	0,0	19	100,0	19	12,9	-0,234	0,000
unbalance nutrition	30	23,4	98	76,6	128	87,1		
Exercise habits:								
No	11	21,2	41	78,8	52	35,4	0,012	0,869
Yes	19	20	76	80,0	95	64,6		
Smoking behavior:								
Yes	7	21,9	25	78,1	32	21,8	0,019	0,819
No	23	20,0	92	80,0	115	78,2		
Health check-up:								
No	10	43,5	13	56,6	23	15,6	0,273	0,019
Yes	20	16,1	104	85,9	124	84,4		

Nevertheless, of the four physical dimension components evaluated, regular health check-up behavior significantly correlated with health and quality of life. Behavioral variables allow us to improve health status predictions by 30%, and the study's findings confirm the Ministry of Health's assertion that behavior is an essential factor for intervention (Rautio & Heikkinen, 2001; Handayani, 2006).

Meanwhile, exercise habits constitute significant behaviors that support health and are associated with quality of life, although statistically, they have a weak correlation (Blackburn & Dulmus, 2007). This can be explained by the fact that the older adults at the Cipayung Panti are the ones who exercise regularly. However, they also tend to have more illnesses, a higher percentage of depression, and a higher risk of dementia, which masks the impact of exercise on quality of life. The older adults of Cicantayan Home Care exercise at the lowest rate. Even though they do not regularly exercise, the senior citizens at Home Care Cicantayan engage in many physical activities and get involved with social and family events, and some remain employed. Table 3 illustrates the relationships between caregiving in various aspects of the safety and participation pillars from the idea of active aging and quality of life.

Table 3. Relationship of Participation, Security, and 6 Wellness Dimensions with Quality of Life

Variable	Quality of Life						Statistics	
	Low		High		Total		d	P
	N	%	N	%	N	%		
Participation/role								
Yes	0	0,00	7	100,0	7	4,8	0,214	0,010
No	30	22,4	110	78,6	140	95,2		
Visits from friends/Visiting friends								
No	23	28,9	59	72,0	82	55,8	0,173	0,006
Yes	7	10,8	58	89,2	65	44,2		
Visits from family/Visiting family								
No	20	31,7	43	68,3	63	42,9	0,198	0,004
Yes	10	11,9	74	88,1	84	57,1		
Experience exchange: There is no real activity yet								
Teaching and learning activities: There are no real activities yet								
Integrate with the environment (community work, set up events / help in disasters, etc.)								
The risk of fall:								
Ever	19	33,9	37	66,1	56	38,1	0,072	0,003
Never	11	12,1	80	87,9	91	61,9		
Experiencing Violence:								
Ever	5	33,3	10	66,7	15	10,2	0,144	0,269
Never	25	18,9	107	81,1	132	89,8		

Participation

Involvement or connection is the most simple definition of participation. A comprehensive comprehension of the various types, such as an individual's physical, mental, or emotional attachment to a policy or activity, can be found in some literature. According to the different definitions used in this study, older adults' participation is defined as their active or passive involvement, either individually or in groups, that contributes positively to the development of a goal. Enhancing one's quality of life is the objective here. One of the cornerstones of active aging is participation.

Assessing older adults' participation in actual life events involves looking at their roles and responsibilities inside and outside their surroundings. Just 8.2% (6 from 73 persons) of the older people in Cicantayan and 2.9% (1 from 35) of older adults in the Cibubur orphanage participated in community life. Just 6.8% of Cicantayan seniors fulfilled their religious duties, compared to 2.9% of Cibubur seniors in the cultural sector; 4.1% of Cicantayan seniors held administrative roles, and only 2.7% of Cicantayan seniors served as resource persons. Older people's role in society, whether inside or outside of institutions, could be more developed. There is still a place for Elderly Home Care Cicantayan inside and outside the group.

Security

One of the foundations of active aging is security. In this study, security is defined as being respected by friends, family, and the community and by unpleasant or violent behaviors and falls that older people suffer. The findings indicate that:

1. Respect

The activities of friends visiting the elderly residing in the institution and the community, as well as the attention and care provided by the community to the elderly, demonstrated the respect shown to the elderly in this study. Visiting older adults is one-way family and friends can show them respect. The frequency of visits was five times per month for approximately 67 to 98%; the Cipayung residents received only 1–2 visits per month from approximately 11 to 28%; and the Cibubur nursing homes received only 1-2 visits from approximately 7.8%. About 65.7% of the community in Cibubur, 84.6% in Cipayung, and 92.8% in Cantayan indicated in the form of visits.

2. Acts of violence

Just 14.3% of people in Cibubur and 25.6% of people in Cipayung committed violent acts; in Cipayung, only about 25% of people were yelled at. In Cibubur, the

likelihood of being insulted was higher (11.4%). Other institution residents dominated the action. Approximately 60% of the aid search was limited to Cibubur. They are reluctant to ask for assistance.

3. Falling to the floor

There have been falls among the seniors in all three locations; the older adults at Cibubur Panti have the highest percentage of cases (48.6%), followed by Cipayung Home (35.9%) and Home Care Cantayan (34%). The most common causes of falls among older people are slick floors, tripping, and vertigo.

As a result, table 3 suggests a significant correlation between quality of life and the physical-participation and social-participation domains – having friends and family visit during free time. The potential of falling is also strongly associated with life satisfaction. Somers' test is used for unequal ordinal variables.

Discussion

Social participation, which enables senior citizens to engage in community activities like visiting and receiving visits from friends and family, strongly correlates with quality of life. Older adults' feelings, beliefs, and appreciation for their activities have all been found to affect their quality of life and overall health (Ayceman, 2010). The elderly Cicantayan would visit or receive visits from friends and/or relatives. While friends offer emotional support, families typically provide care for one's physical and emotional needs. The QOL scores for the environmental, social relationship, and physical health domains increased with social interaction with neighbors. Participating in group activities raised QOL scores in the environment, psychological health, and physical health, while living in peri-urban areas was linked to lower QOL scores (Zin et al., 2020).

The experience of falling is one of the components in the security component of the assessment of elderly caregiving. Falling is an incident where physical safety caregiving is put to use. According to the study's results, people who have fallen on the floor tend to lead less satisfying lives than people who have never fallen. One of the leading health issues affecting older people's quality of life is falling and its aftermath (Rubenstein, 2000; Ozcan et al., 2005; World Health Organization, 2007). Loss of independent function is the most apparent effect of falling. Twenty-five percent of people who suffer a single hip joint fracture need nursing care for the rest of their lives. Approximately half of those hurt in falls need to receive hospice care. Most people who fall and do not sustain significant injuries frequently have psychological effects. About 25% of the community's residents fear participating in various activities out of concern that

they will trip and fall. The majority of the expenses incurred for injuries sustained by elderly individuals 65 years of age or older during their lifetime are related to falls, and the cost of caring for and treating falls is not insignificant (Tremblay Jr. & Barber, 2010).

The overwhelming majority of risk factors that impact falls are avoidable, particularly the extrinsic factors intimately associated with providing care (Johnston, 2001; Tremblay Jr. & Barber, 2010). Family life must involve the control of walking aids that are not the proper size, weight, or technique of use; hazardous environments (slippery, wet, or uneven floors; poorly adhered carpets; quickly shifted objects or floor mats; weak or rocking handrail locations; low beds or latrines; poor lighting or glare). Therefore, it is crucial to take steps to prevent falls. Postural instability, or the body's incapacity to keep its center of mass within the bounds of stability established by the base of support, is an inherent factor contributing to falls. There are spaces known as stability margins where a body can remain in one position without shifting from its support base. These boundaries could alter based on the task, personal biomechanics, and external factors (Rahmanto, 2008).

In line with the WHO's Active Aging, it is estimated that the exogenous latent factors "security" and "health" directly influence the endogenous latent factor "participation" and indirectly alter it by acting as a mediator between "willingness" and itself. The structural equation model indicates that security has a significant negative effect on participation, and health has a significant positive effect. Furthermore, security and health had a significant positive impact on older people's willingness to participate. The optimization of health and balancing security levels can be more advantageous for increasing older adults' participation (Yang et al., 2020).

Conclusions

It was discovered that the older adults' quality of life is moderately correlated with their habits of taking care of their health, being appreciative, participating in social activities and friendships, and being active at work. Future research on social security is advised because it is the primary source of retirement security and substantially impacts the well-being of retired older adults. Investigating the national pension system in greater detail would also be helpful. Caregivers should be included in advancing geriatric knowledge in the holistic management of geriatric services. It is also necessary to develop gerontic care in the form of integrated nursing care that involves caregivers and social gerontology related to elderly empowerment.

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