Caregiver Empowerment through Self Care Assistance in Improving ADL (Activity Daily Living) in Elderly

Alfi Ari Fakhrur Rizal*, Milkhatun, Siti Khoiroh Muflihatin and Ni Wayan Wiwin Asthiningsih
Universitas Muhammadiyah Kalimantan Timur, Jalan. Ir. H. Juanda No. 15, Samarinda, Kalimantan Timur,Indonesia 75243

Keywords: Care Giver, Self Care Assistance, Activity Daily Living, Elderly

Abstract: The ADL (Activity Daily Living) of the elderly is one thing that must be concerned seriously by providing excellent services optimally through self-care assistance. Because it is continuously decreased due to the degenerative process as the elderly grow. This study aims to determine the effect of selective-care assistance on the ability of Activity Daily Living for the elderly. The sample in this study is the elderly living in the Tresna Werdha Social Home, with approximately 64 people. The research instrument used is the Barthel index to assess functional abilities for the elderly. The design of this research is a Quasi Experiment without a control group that was analyzed using the Paired T-Test. Based on the results of the Paired T-Test, it is found that the t value was 0.001 and the probability value (Sig.) was 0.05, so H0 is invalid. Thus, it can be concluded that the role of caregiver in self-care assistance can increase ADL (Activity Daily Living) ability for the elderly. It is evidently seen in the average value of ADL for the elderly after Care Giver is given Self Care Assistance training is 18.23. It is higher than the average value before Caregiver was given Self Care Assistance training.

1 INTRODUCTION

Self-care assistance is of paramount importance in the service to the elderly in nursing homes. At present, the number of elderly nurses or caregivers in nursing homes is minimal, which is a problem for the implementation of self-care assistance. Besides, the number of elderly is increasing, it makes the elderly care services in Indonesia, especially in homes, cannot be optimized. It is also because of the specific needs of each elderly have not been well documented.

Increasing the number of elderly is an indicator of the success of national development, marked by increasing social status and life expectancy for the elderly (UHH). Especially in Indonesia, The number of UHH in 2010-2015 was 70.7 years, and it is predicted that 2015-2025 will increase by one year every five years (Badan Pusat Statistik, 2011). However, the increase in UHH is followed by the rise in the number of elderly in Southeast Asia. Starting by only 7.2% in 2012 and 7.8% in 2013, and it was increased by 8% in 2015 and it is estimated to double its number in 2025 (World Health Organization, 2015).

The similar pattern also happens in Indonesia. The prevalence of the elderly was increased years by year. It was only 7.4% in 2013, and then, it was steadily increased by 7.6% in 2014 and 7.8% in 2015. Specifically, in East Kalimantan, the elderly in East Kalimantan ranked in the top 30 by 4.03% (Badan Pusat Statistik, 2015). One city contributing the increase in the elderly in East Kalimantan is Samarinda City, and it is because of lacking services of health and well-being of the elderly.

The effect of increasing the elderly population will affect the economic and social, health problems, namely an increase in the incidence of chronic diseases, degenerative and various types of cancer are increasing, as well as the mortality rate due to diseases. Disability due to degenerative diseases will not be avoided, thereby reducing the productivity of the elderly (Saifullah & Hastuti, 2013).

The Decrease in productivity of the elderly group is due to a decline in function, and it makes them unable in carrying out daily activities such as eating, toileting, bathing, dressing and other activities in daily living. As the elderly grow up, they are increasingly similar to children. Notably, in the dependence of meeting their basic needs, this is what

causes the elderly went to nursing homes (Reed, 2012) (Wood & Haber) in Saifullah & Hastuti (2013).

Increasing the number of The elderly also tends to be followed by health problems due to the degenerative process of the elderly such as hypertension 57.6%, joint disorders/arthritis 51.9%, and stroke 46.1%. The occurrence of the elderly morbidity will affect efforts to meet basic needs (Zhang et al., 2014).

Meeting basic needs is the most important thing to be done. The basic needs of the elderly that are not appropriately met cause a decrease in the quality of life of the elderly (Alligood, 2011). In line with the study by Darmojo R.B (2006) that explains the elderly who experience impaired ADL fulfilment will experience changes in their quality of life.

The ability of ADL elderly who experience a decrease due to degenerative processes (ageing process) must be taken seriously, including by providing optimal primary services. Therefore self-care assistance is needed, especially is a mentoring for the elderly.

UPTD PSTW Nirwana Puri Samarinda has an area of 20,850 M2, equipped with facilities and infrastructure which has a total of 37 buildings including 15 existing guesthouses containing elderly in every guesthouse. As follows: Frangipani guesthouses with 7 elderly, Seroja guesthouse with 7 elderly, Tulip guesthouse with 7 elderly, flamboyant guesthouse with 6 elderly, Seruni guesthouse with 8 elderly, orchid guesthouse with 6 elderly, Lotus guesthouse with 7 elderly, Bougenvil guesthouse with 6 elderly, Sakura guesthouse with 10 elderly, Wijaya Kusuma guesthouse with 6 elderly, Jasmine guesthouse with 7 elderly, Brigenvil guesthouse with 6 elderly, Sri guesthouse fortune with 7 elderly, dahlia guesthouse with 5 elderly, Kenanga guesthouse with 5 elderly, and rose house with 8 elderly. This place has a capacity of 110 elderly. In its implementation, the UPTD PSTW Nirwana Puri runs under the regulation of the Indonesian government, including Law No. 13 of 1998 concerning the welfare of the elderly and Law No. 11 of 2009 concerning social and other rules.

Drawing result from the preliminary study that in Tresna Werdha Nirwana Puri Samarinda Social Home, there were 110 elderly with varying degrees of dependency, from independent elderly to total dependency. The 110 of elderly are in 15 guesthouses, where there is only one caregiver for each guest 15, and there is an exclusive guesthouse for total care.

2 METHODS

This study uses a quasi-experimental design with a pre-post test approach without control. Researchers will intervene in one group without comparison. Treatment interventions were assessed by comparing pre-test and post-test scores (Dharma, 2011).

The sample in this study is a group of elderly living in the community at the Tresna Werdha Nirwana Puri Samarinda Social Home. Amounted as many as 64 elderly taken as the sample and the sample criteria are as follows; willing to be respondents, able to speak Indonesian, do not experience mental disorders, do not experience hearing loss and dementia.

The instrument in the ADL assessment is to determine the level of dependency or the amount of assistance needed in daily life. By using the Barthel Index which functions to measure functional independence in terms of self-care and mobility and can also be used as a criterion in assessing functional ability for elderly people who experience impaired balance using 10 indicators namely Feeding, Bathing, Self-Care (Grooming), Dressing (Dressing), Urinating (Bowel), Defecating (Bladder), Toilet use, Transfer, Mobility and Up and downstairs. The interpretation of the results of the Barthel index is 20 (Mandiri), 12-19 (Light Dependency), 9-11 (Medium Dependence), 5-8 (Heavy Dependence) and 0-4 (Total Dependence). Barthel ADL questionnaire is a reliable and valid measuring instrument and can be used to measure the basic functional status of Indonesia's elderly because it has a Cronbach value of 0.938 and the validity of Barthel ADL construction is tested with the Spearman correlation coefficient and looks at the rho (r) value of each item. The results obtained by all items were significantly related to the total value (p <0.001). All items have a value of r> 0.3 (Agung, 2006). Bivariate analysis using paired t-test with alternative tests using Wilcoxon.

3 RESULTS AND DISCUSSION

Table 1 shows that the most elderly age is the elderly age (60-74 years) with the number of respondents as many as 34 elderly (53.13%).

Table 2 shows that the age of the elderly with male sex is 38 elderly (59.38%) and female gender is 35 children (40.63%).

Table 3 above shows the majority of respondents has elementary school as their final education level

with 28 people (43.08%) and at least one of them is Bachelor degree (1.54%).

The results of the study of respondents by 64 elderly obtained the frequency distribution of the ability of Activity Daily Living (ADL) pre-test can be seen in the following table.

Test the normality of the data using the Kolmogorov-Smirnov One-Sample Analysis test, which compares the probability (p) obtained with a significance level (α) of 0.05. If p> α, then the data is normally distributed or vice versa. The result of normality data depicts that the data are normally distributed by a significant value (p-value) on the Activity Daily Living (ADL) of the elderly before and after the Self Care Assistance, namely 0.556 and 0.12, respectively (p>0.05). In detail, the normality test can be seen in the table below.

After the data normality test is done, then the statistical testing is done by Paired Sample T-Test, which is a parametric test to determine the effect of the independent variables on the dependent variable. In this study, the independent variables are Self care Assistance, and the dependent variable is the ability of Activity Daily Living (ADL). The following are the results of the Paired Sample T-Test.

The results of the data analysis in table 7 above shows the effects that an increase in the average ability of ADL for the elderly after self-care assistance was 18.23 compared to before self-care assistance was 11.55. The p-value is 0,000, which states that there is an effect of self-care assistance on the ability of ADL in the elderly.

Table 1: Frequency distribution of the elderly.

Age	Frequency	Percentage (%)
Middle Age (49-59 Y.O)	3	4.62
Elderly (60-74 Y.O)	34	52.31
Old (75-90 Y.O)	26	40.00
Very Old (> 90 Y.O)	1	1.54
Total	64	100

Table 2: Frequency distribution of the sex of the elderly.

Sex	Frequency	Percentage (%)
Male	38	58.46
Female	26	40.00
Total	64	100

Table 3: Frequency distribution of elderly's level of education.

Level of Education	Frequency	Percentage (%)
Not going to School	15	23.08
Elementary	28	43.08
Secondary	13	20.00
High School	7	10.77
University	1	1.54
Total	64	100

Elderly is a natural process that is inevitable. Physical conditions that are experiencing many setbacks cause the elderly tend to need help in terms of meeting their daily needs (Rohaedi, Putri, & Kharimah, 2016).

Respondents who experienced a decrease in ADL are mostly male, as many as 38 people (58.46%), the age range of the majority was 60-74 years old, 34 people (52.31%), and the education level of the elderly are mostly elementary school with 28 people (43.08%). Many factors affect the ability of Activity Daily Living (ADL) in the elderly, namely age, sex, level of education, health conditions, and sports (Darsini & Arifin, 2017). In this study, the age of the respondents into the category of elderly are around 60-74 years. According to WHO, age is very influential on a person's ability to perform daily activities. So the older the age, the more person's ability will decrease. This study is in line with research conducted by Storeng, Sund, & Krokstad (2018) where most of the elderly who experience a setback in the ability of Activity Daily Living (ADL) are in the age range of 60-69 years. Other research in line was conducted by Wulandari (2014) said that most of the elderly were aged 60-74 years (54.45%). The higher age a person is, the more at risk of experiencing health problems. Because the elderly will undergo changes due to the ageing process both in terms of physical, mental, economic, psychosocial, cognitive, and spiritual.

The social home or nursing home is a joint institution of the elderly who is physically and healthy independent, where the daily needs of the residents are usually provided by the caretaker (Wulandari, 2014). Decreased productivity of this elderly group occurs due to a decrease in function. So, it will cause the elderly group to experience a degradation in carrying out daily activities such as eating, going to the bathroom, clothing, and others in Activity Daily Living (ADL).

Table 4: Pre-Test Activity Daily Living (ADL) Frequency Distribution for the elderly.

Activity Daily Living (ADL)	Frequency	Frequency
Light Dependency	34	52.21
Medium Dependency	17	26.15
High Dependency	12	18.46
Total Dependency	1	1.54
Total	64	100

Table 6: Normality Test Results.

Activity Daily Living (ADL) Dependency	Sig.	P	Information
Pre Test	0.566	> 0.05	Data is normally distributed
Post Test	0.12	> 0.05	Data is normally distributed

Table 7: Results of the Analysis of the Effect of Self Care Assistance on the Activity of Daily Living Elderly.

Activity Daily Living (ADL)on Elderly	Mean	SD	SE	P-value
Pre Test	11.55	3.58	0.45	
Post Test	18.23	2.76	0.34	0.000

According to the results of the study, it was found that before self-care assistance was conducted, elderly people who had mild dependence were 34 people (52.21%), moderate dependence there were 17 people (26.15%), severe dependence there were 12 people (18.46%), and a total dependency of 1 person (1.54%) where all the needs of the elderly need daily assistance. After self-care assistance, there were 29 people (44.62%) who had an independent ADL, 33 people (50.77%) mild dependence, and two people (3.08%) moderate dependence.

The role of nurses in independent elderly can motivate the elderly to continue to maintain independence. In case of elderly with mild and moderate dependence, the role of the nurse can help meet the daily needs of the elderly but only in activities that still need help and in activities that can still be carried out independently by the elderly. For the elderly with total dependence, the role of the nurse can help the elderly to meet all their daily needs in accordance with the criteria contained in Barthel ADL.

In general, the elderly will experience a decline in biological, physiological, and psychosocial functions. Such conditions will affect the dependence of the elderly on physical activity in daily life (Herman & Akhriani, 2018). The degree of independence of the elderly can be the basis for the nurse's role in determining the care or intervention that will be carried out on the elderly (Rohaedi et al., 2016).

The mean (average) ability of Activity Daily Living (ADL) for respondents in UPTD PSTW Nirwana Puri Samarinda before self-care assistance was 11.55. After self-care assistance for the elderly, there was an increase in Activity Daily Living (ADL) by 18.23. From the results of this study, it can be said that there was an increase of 6.68 before and after self-care assistance was conducted on the Activity Daily Living (ADL) of the elderly.

The increased ability of Activity Daily Living (ADL) to respondents after being given self-care assistance can be caused by the motivation given by caregivers/assistants so that the elderly are more enthusiastic and have enthusiasm in the implementation of self-care. Self-care assistance is a nursing intervention carried out by helping to fulfil daily activities, accompanying their daily activities, and motivating their activities independently (Saifullah & Hastuti, 2013). Implementation of assistance for self-care is in the form of helping ADL, preparing personal hygiene facilities and infrastructure, and coordinating with other officers for environmental hygiene. Besides, the elderly are also advised to carry out tasks that focus on each individual, such as personal hygiene and are carried out routinely.

4 CONCLUSIONS

The role of caregivers/assistants in UPTD PSTW Nirwana Puri Samarinda in conducting self-care assistance can improve the ability of Activity Daily Living (ADL) for the elderly. The mean value (average) of the ability of Activity Daily Living (ADL) before self-care assistance is 11.55 and after self-care assistance for the elderly, there is an increase in Activity Daily Living (ADL) by 18.23. From the results of this study, it can be concluded that there was an increase of 6.68 before and after the self-care assistance of the Activity Daily Living (ADL) of the elderly.

ACKNOWLEDGEMENTS

REFERENCES

Agung, I. (2006). *Uji keandalan dan kesahihan indeks activity of daily living Barthel untuk mengukur status fungsional dasar pada usia lanjut di RSCM*.

Alligood, M. R. (2011). Nursing theory-guided research. *Nursing Science Quarterly*, *24*(3), 195–196. https://doi.org/10.1177/0894318411409427

Badan Pusat Statistik. (2011). Statistik Penduduk Lanjut Usia Provinsi Kalimantan Timur 2010. Retrieved November 3, 2019, from https://www.bps.go.id/publication/2011/03/30/a06a58a269248d3400729baa/statistik-penduduk-lanjut-usia-provinsi-kalimantan-timur-2010-hasil-sensus-penduduk-2010.html

Badan Pusat Statistik. (2015). Statistik Penduduk Lanjut Usia 2014. Retrieved November 8, 2019, from https://www.bps.go.id/publication/2015/11/02/e8375b9b7a8e0d380a1fd1da/statistik-penduduk-lanjut-usia-2014.html

Darmojo R.B. (2006). *Buku Ajar Geriatri* (3rd ed.). Jakarta: Balai Penerbit Fakultas Kedokteran Universitas Indonesia.

Darsini, & Arifin, M. Z. (2017). Pengaruh Senam Lansia Terhadap Kemandirian Activity Daily Living (ADL) Pada Lansia. Retrieved from http://jurnalkeperawatan.lppmdianhusada.ac.id/index.php/jk/article/view/54

Dharma. (2011). *Metodologi Penelitian Keperawatan (Pedoman Melaksanakan dan Menerapkan Hasil Penelitian)*. Jakarta Timur: CV. Trans Info Media.

Herman, R., & Akhriani, H. N. (2018). Determinants Activity of Daily Living (ADL) Elderly Tresna Werdha Nursing Home (PSTW) Special Region of Yogyakarta.

Journal of Ultimate Public Health, *2*(1). Retrieved from http://jump-health.uhamka.ac.id/index.php/jump/article/view/%2319

Reed, J. C. & M. A. (2012). *Nursing Older Adults*. New York: Open University Press.

Rohaedi, S., Putri, S. T., & Kharimah, A. D. (2016). Tingkat Kemandirian Lansia Dalam Activities Daily Livingdi Panti Sosial Tresna Werdha Senja Rawi. *Jurnal Pendidikan Keperawatan Indonesia*, *2*(1), 16. https://doi.org/10.17509/jpki.v2i1.2848

Saifullah, A. D., & Hastuti, Y. D. (2013). PELAKSANAAN SELF-CARE ASSISSTANCE DI PANTI WREDA. *Jurnal Keperawatan Komunitas*. Retrieved from https://jurnal.unimus.ac.id/index.php/JKK/article/view/985

Storeng, S. H., Sund, E. R., & Krokstad, S. (2018). Factors associated with basic and instrumental activities of daily living in elderly participants of a population-based survey: The Nord-Trøndelag Health Study, Norway. *BMJ Open*. https://doi.org/10.1136/bmjopen-2017-018942

World Health Organization. (2015). *World report on Ageing And Health*. Switzerland: WHO Press. Retrieved from www.who.int

Wulandari, R. (2014). Description Of Independence Level Elders to Fulfill ADL(Activity Daily Living. *Jurnal Ners Dan Kebidanan (Journal of Ners and Midwifery)*, *1*(2), 155–159. https://doi.org/10.26699/jnk.v1i2.art.p155-159

Zhang, L., Weng, C., Liu, M., Wang, Q., Liu, L., & He, Y. (2014). Effect of whole-body vibration exercise on mobility, balance ability and general health status in frail elderly patients: A pilot randomized controlled trial. *Clinical Rehabilitation*, *28*(1), 59–68. https://doi.org/10.1177/0269215513492162