INTERNATIONAL JOURNAL ON MANAGEMENT AND EDUCATION HUMAN DEVELOPMENT

J. Management & Education Human Development

ISSN: ISSN: 2775 - 7765
web link: http://www.ijmehd.com

Living Arrangements and Its Association to The Quality of Life and Functional Status of Older Person

[1]Dwiasti Effendi Putri, [2]Teresita I. Barcelo

[1]STIKES Tri Mandiri Sakti Bengkulu, Indonesia
[2]Centro Escolar University, Philippines

Received: 21/08/2021 Accepted: 21/09/2021 Published: 21/11/2021

Representative e-Mail: dwieffendiputri@gmail.com

ABSTRACT

By 2050, the proportion of Indonesians aged 60 and up is expected to rise from 8.03 percent in 2014 to 25 percent. According to statistics from 2010, Indonesia ranks fifth in the world in terms of the number of elderly people. The growing number of senior people in Indonesia is a challenge to health care providers who want to promote active ageing and more wellness programs to improve the elderly's quality of life. However, other studies have found that the majority of older people are inactive. These issues may cause elderly people's physical and mental health to deteriorate, lowering their quality of life. The purpose of this study was to see if there was a link between living arrangements and a specific demographic profile and the functional status and quality of life of older people living in public nursing homes vs those living with their own families.

The study employed a cross-sectional correlational research design. A total of 162 people took part in the study and completed both the WHO-QOL BREF and the Katz Index of Activities of Daily Living questionnaires. For this investigation, the partial least square structural equation model (PLS-SEM) was used as the statistical treatment.

According to the findings, elderly people who live in the community have a better functional level than those who live in nursing homes. When compared to institutionalized older people, community living older people had a superior overall quality of life. The environmental domains of community-dwelling older people were found to be good. Institutionalized older people, on the other hand, had better physical health than those who lived in the community. Both institutionalized and community-dwelling older people had poor social and psychological relationships.

Furthermore, the relationship between living arrangements and demographic profile and older people's functional state and quality of life differed among QoL dimensions. The relationship between age and functional status was significant (β = -0.31, P.05). Physical health (β = -0.15, P.05), psychological (β =0.15, P.05), and environmental domains (β =0.23, P.05) were all linked to marital status. Gender, on the other hand, was only related to the realm of social connections (β = -0.14, P.05). Physical health (β = 0.20, P.05) and psychological domains (β = -0.22, P.05) were both linked to functional status. Finally, among the participants, living arrangements were linked with functional status (β =0.15, P 0.05), psychological (β = -0.45, P 0.05), and environmental (β = -0.64, P 0.05) dimensions of quality of life.

Keywords: *Functional Status, Living Arrangements, Older Persons, Quality of Life*

I. INTRODUCTION

Many developed and developing countries, both developed and developing, have gained longevity in the twenty-first century, which is causing tremendous concern due to an aging population. According to Smith and Majmundar (2012), Indonesians are living longer than they did hundreds of years ago, with life expectancies of around 80 years. According to the Indonesian Central Bureau of Statistics (BPS, 2014), the number of older persons is increasing; Indonesia now has the world's fifth highest population of senior people. In 2020, Indonesia's aging population is expected to account for 11.4 percent of the overall population.

Indonesia's growing elderly population poses a huge challenge to the country's health-care infrastructure and experts. The growing threat of noncommunicable diseases such as cardiovascular disease, diabetes, and cancer must be addressed by health care professionals and health systems, particularly among vulnerable groups such as the elderly. Other fundamental factors, such as changing family structure, job, and retirement patterns, cause significant

economic problems, notably for social insurance and security systems. Indonesia has the greatest number of elderly people who live on a low income and have little retirement income security (Ananta & Arifin, 2009). Only a small number of Indonesians who work in the formal sector are covered by pensions and social insurance, leaving the majority of the elderly unprotected (Ng, Hakimi & Wilopo, 2010). Because of the threat of noncommunicable illness, a lack of financial support for accessing health care has resulted in a lack of social safety and stability, making older people more vulnerable to poor health and quality of life. According to Nasir (2015), roughly 2.9 million elderly people in Indonesia are neglected and have limited access to health care and social services. As a result, improving the quality of life of the elderly has become a global policy priority (WHO, 2014). Maintaining independence, controlling chronic illnesses in older people by extending affordable health care to them, and taking into account changes in their physical function and socio-environmental circumstances are all strategies that areneeded.

Understanding a human being and their needs is central to the concept of quality of life (Laki, 2012). The environment plays a critical influence in shaping a person's physical and mental capabilities throughout his or her life, particularly when a person approaches late adulthood and through physical, psychological, and emotional changes. Furthermore, while age-related changes cannot be totally avoided, the signs and symptoms can be managed with adequate nutrition, exercise, medical treatment, and a healthy atmosphere. Home, social interactions, neighborhoods, and community are all important contexts. According to the World Health Organization (WHO), an individual's general health and well-being are influenced not only by their genes and personal qualities, but also by their physical and social surroundings. According to Kim (2014), a person's living arrangement is the most immediate social context in which they can receive social support. As a result, living arrangements are critical for older people, as they require sufficient physical and medical care, as well as social and emotional needs, in order to improve their quality of life.

Several studies have found that an elderly person's living situation influences their health and lifespan (Kawachi & Berkman, 2003; Michael, Berkman, Colditz, & Kawachi, 2001). One of the demographic characteristics that influences the quality of life, self-confidence, and perceived health condition of older people is their living situation. Policy concerns on older people's living arrangements stem from the significant impact that living arrangements have on older people's care and welfare, particularly for those with physical limitations or health issues. Although the number of older people living independently (with their spouse, child, or extended family) has increased dramatically, the quality of public services, such as nursing home care for them, in some areas of Indonesia remains underdeveloped by middle-income standards (World Bank Indonesia, 2017). According to a study by Wang et al (2013), the social context of living arrangements based on family households has been demonstrated to be a major social etiology for older people's health. According to Kaplan and Berkman (2015), aging involves more than only health changes. Social issues (such as living arrangements) may have an impact on the risk of sickness and the experiences of the elderly. Furthermore, housing circumstances have a strong link to functional impairment in the elderly.

Although studies on the quality of life of older people in Indonesia have been conducted (Budidharma et al 2017; Indriani 2012; Minh et al 2013; Nawi Ng et al 2010; Putra et al 2014; Putri et al 2015; Yuliati et al 2014), little is known about the living arrangements and their relationship to functional status that contribute to a higher or lower level of quality of life in older people. Previous research has focused on psychological well-being and quality of life, as well as the socio-cultural aspects of aging, changes in family structure, and the support available to older people (Kooshiar et al 2012; Kumar et al 2014; Kowel et al 2016; Rohmah et al 2012).

Indonesia still has gaps in its service provision for the elderly, particularly in terms of health promotion and social services. There is a growing need for health care experts, health care facility providers, and government bodies to focus on refining policy based on current needs of older people, particularly in terms of personal, social, and cultural issues that influence their quality of life. There is also a need to increase the proximity of nursing homes and their programs in order to contribute to the creation of a more pleasant atmosphere and promote the welfare of Indonesia's elderly (Nuraeni, 2012).

II. METHODOLOGY

The study employed a cross-sectional correlational design. Rather than inferring a cause-and-effect link, the goal was to investigate the association between variables as they naturally arise without intervention. A nursing home owned by the government has a total population of 200 elderly residents. In the community, there are 250 elderly people who have enrolled at the Community Health Center. Using G*Power 3.1: Tests for Correlation and Regression Analysis and a known total population of 450 older people, the researcher calculated statistical power analysis and total sample size for this study. As a result, the overall sample size for this study is recommended to be between 150 and 200 respondents. A total of 162 people were eligible to take part in the study, with 80 coming from a nursing home and 82 from the community. A total of 162 people took part in the study and completed both the WHO-QOL BREF and the Katz Index of Activities of Daily Living questionnaires. For this investigation, the partial least square structural equation model (PLS- SEM) was used as the statistical treatment. The research was carried out in East Jakarta, Indonesia.

III. DISCUSSION

3.1 The Features of Older persons in Indonesia

According to Indonesia Republic Act No. 13/1998 about social welfare of older persons, an older person/ senior citizen is classified as someone who is 60 years old and above. At this age, the impairment in the functional ability occurs biologically which initiates a decrease in the durability of physical status, stamina, and most of the time a reduce in the sensory function of vision and hearing. This is caused by the occurrence of change in the structure and function of cells, tissues, and organ system in the body (Papalia & Feldman 2009).

Older people were divided into four groups by Sanchez (2008): (1) Active Senior Citizen – can conduct basic ADL and would require assistive devices; (2) Senior Citizen at Risk – can perform basic ADL but would require assistive devices. They are still healthy, but their physical activities are limited, and they like to stay at home; (3) Inactive Senior Citizen – they would require continuous medication and would be completely reliant on others for their ADL for an extended period of time; and (4) High Risk Senior Citizen – they would require specialist high-cost medication to relieve pain from a life-threatening ailment. They are completely reliant on their everyday tasks (ADL). In many developing countries, however, the definition and category of old age have been drawn numerous times in response to government-set retirement ages (WHO,2002). According to Little (2012), there are three categories of older people: (1) the Young-old (about 65-74 years old), (2) the Middle-old (75-84 years old), and (3) the Old-old (beyond 85 years old) (over 85 years). Susilowati and Istanah (2012) discovered that female respondents (53.3 percent) outnumber male respondents in a study on quality of life and cognitive function of older people in Yogyakarta, Indonesia (46.7 percent). The majority of the responders are between the ages of 60 and 74. (84.1 percent).

According to the Indonesia Population Census 2010 and the Indonesia Population Projections 2010-2035, Indonesia's older population starts to grow and then climbs up into older cohorts in succeeding years. It is bolstered by a rise in the proportion of the "younger" old (60-69), with the proportion of those aged 60-64 peaked in 2020 and those aged 65-69 peaked in 2025. As a result, the number of people aged 70 and up will continue to rise. According to Adioetomo and Mujahid (2014), the proportion of senior people living alone in Indonesia increases with age and is higher among females. With the aging of the population, the proportion of older people who are left to live alone is certain to rise. And, as the feminization of aging continues, there will be more older women than older men who will require care and attention. On the contrary, Physical dependence in older people increases after the age of 80, according to Bolina and Tavares (2016), because the elderly may have difficulty using health services and doing daily duties, which is compounded by the absence of a family member.

3.2 Dynamics of Living Arrangement of Indonesian Older Persons

An elderly person's living situation has a significant impact on their health (Wang et. al 2015; Zang, 2015). Because living arrangements are linked to a person's current health behavior, supply and consumption of economic resources, and demands on individual responsibilities, they can have a substantial impact on physical and mental health in old age (Kim, 2014).

According to the 2010 Indonesian Census, 54.8 percent of older people lived with their single or married children in one of two basic living arrangements. There were 18.3 percent who lived in a two-generational household (parent and kid type „family' household) and 36.5 percent who lived in a multi-generational household (or three generations under one roof with no one else present) with their children and grandchildren (Adioetomo & Mujahid, 2014). According to the Census data on living arrangements, the traditional value of the family still exists and would benefit elderly people in terms of family support. Other considerations in the case of urban families could bolster this arrangement.

Indonesian senior citizens play a vital role in their families and society. In traditional Javanese society, older parents frequently live with one of their youngest children, usually a daughter (extended family), who agrees to care for them until they die. According to Ng, Hakimi, and Wilopo (2010), living circumstances have an impact on older people's care plans, and those who live alone have a much lower quality of life and a worse health status. In their study, Mroczek and Spiro (2005) discovered that married status is linked to functional ability and a greater level of life satisfaction. Furthermore, respondents who lived with simply their spouse or with children had better life satisfaction, according to Kooshiar, Yahya, and Hamid (2012). In addition, Irwan (2014) discovered that in Indonesia, the family network is a crucial source of support, but this study did not look into whether the family had been a good support for health care practice. In contrast, the study by Moyle et al. (2014) and O`Rounke et al. (2015) found that having higher quality of relationships and pleasant social interaction with family, friends, and care staff contributed to a higher degree of QoL for older adults. Harrison, Fisher, and Lawson (2010) discovered that seniors who live in senior housing engage in less physical activity and have poorer health than their younger counterparts. Xiao et al. (2015) found that residing in nursing homes does not directly cause bad health-related quality of life (QoL) in older persons, but rather poor activities of daily living (ADLs); thus, more severe depression among nursing home residents leads to poor health-related quality of life (QoL). The impact of housing or surroundings on physical activity and health status while correcting for chronic diseases and other factors was the focus of this study (age, gender, education). According to Nuryanti (2012), living arrangements have resulted in the emergence of problems in the physical environment, social, economic, psychological, and spiritual elements of older people, all of which may have an impact on their health.

The majority of Indonesian senior citizens believe that living with their offspring is the greatest option for them

as they age. It could be linked to the need for physical assistance, which leads to many people living with their family rather than in single-person houses. In addition, according to Ahuva's (2014) study, living arrangements have a crucial influence in determining the QoL of older persons in Wilson and Clearly's model. Living in a familiar neighborhood gives a sense of autonomy, control, and social belonging and adds to positive well-being. Kooshiar, Yahya and Hamid (2012) argue that style of living arrangement directly and indirectly play a key role in predicting QoL for older individuals in Malaysia through social functions. Wolf-osterman, Worch, and Meyer (2014) discovered that a homelike setting can increase older people's quality of life. Older people who lived with their children, on the other hand, were found to have a higher level of functional limitation (Kim, 2014). The fascinating result revealed that elderly people who live with their children, as well as those who have poor perceived health and chronic conditions, are all effective factors in physical dependency (Hacihasanoglu et al., 2012). The elderly who lives in isolated living arrangements are not necessarily in worse health than those who live with their own family (Teerawichitcainan et al., 2015).

3.3 Older people's quality of life and functional status

The WHO Quality of Life Group came up with a concept that is commonly utilized in theoretical frameworks. WHO defines quality of life as an individual's sense of their place in life in relation to their objectives, aspirations, standards, and concerns, as well as the culture and value systems in which they live. It is a wide notion that encompasses a person's thoughts and relationship to important characteristics in the environment in a sophisticated way. The importance of one's perception linked with an older person's pleasure with his or her life is underlined, which is influenced by the amount of his or her economic and social demands (Callagui, 2015).

According to Hilari, Klipi, and Constantinidou (2015), health status, participation, independence, dependence, communication, personal variables, and environmental factors are all elements that influence quality of life. (1) One of the most important aspects of preserving one's quality of life is one's health. Psychological health, such as positive or negative feelings, has also been highlighted as a factor in determining quality of life. (2) Levels of independence or dependency in a variety of areas of life, such as independent mobility, involvement in everyday activities, decision-making, and personal independence on a larger scale (e.g., freedom from oppression), are also major predictors of quality of life. (3) Individuals can have a sense of belonging to their family, community, and society by participating in relationships, life roles, and activities. (4) The ability to communicate fundamental needs and wishes, as well as high-level communication activities (such as sharing thoughts and feelings), is regarded to affect one's quality of life. Personal elements, such as personal beliefs, cultural and spirituality or religion, and life objectives, can all affect one's quality of life. Aside from financial resources, access to health care, the safety and security of social services, and the physical surroundings have all been recognized as variables that can affect one's quality of life.

There are subjective and objective aspects to life quality. The term "quality of life" relates to how an individual perceives his or her current life circumstances, as well as the amount to which he or she is satisfied or dissatisfied with the accomplishments he or she has made, which include overall health and functional competence. Physical activities, such as everyday physical activities (e.g., aerobic, exercise) and leisure activities, have a favorable effect on older people's QoL, according to Bereens, Zwakhalen, and Verbeek (2014). (e.g., parlor games or excursion). Nikmat et al. (2015) and Turan et al. (2012), on the other hand, referenced multiple research that showed that older persons who live at home had better ADLs and instrumental ADLs than those who live in nursing facilities. It was discovered that elderly people residing in nursing homes have reduced physical and functional mobility than those living in their own homes (Yumi, Simsek, & Sertel, 2011). It's because older people who live at home are more likely to get care from their own family, and the role of the family influences older people's compliance with ADLs and quality of life (Nur, 2015).

Physical activity declines with aging are frequently attributed to diminished functional abilities and health status. Normal aging processes, the effects of chronic diseases, and a range of societal variables connected to retirement, housing, income, and so on are all possible explanations for the drop-in physical activity (Harrison et al., 2010). Furthermore, Rejeski and Mihalko (2001) found that one's degree of activity was associated to one's reported health and life satisfaction. The study discovered that older adults with a lower functional status had a lower quality of life than those with a higher functional level. According to Palgi, Shira, and Zaslavsky (2015), a higher quality of life slows the progression of functional deterioration in late adulthood. The study also found that functional status has an impact on quality of life.

Age is the most important influencing factor impacting activity of daily living (ADLs) in the future, according to the choice three model (Zhang, Li, & Liu., 2016). Aside from age, other crucial considerations for their ADLs are how often they undertake housework or social activities, and where they live. Physical activity is provided by housework and social activities; so, partaking in such activities can provide older people with a pleasurable and happy existence, which aids in their psychological well-being.

Similar research found that improving one's physical fitness and participating in exercise programs increased an older person's quality of life (Pernambuco et al., 2012; Heydarnejad et al., 2010). Participating in suitable physical activities and leading a healthy lifestyle can help older people avoid or delay the onset of diseases and functional decline, improving their quality of life.

IV. CONCLUSIONS

Based on the results, community-dwelling older persons had better functional status compared to those older persons living in the nursing home. Community dwelling older persons had higher quality of life (overall) compared to those institutionalized older persons. Community dwelling older persons were found to have good environment domains. On the other hand, institutionalized older persons had better physical health domain compared to those shared living in the community. Both older persons whether lived in the institution or shared living had poor social relationships and psychological domains. Furthermore, the relationship between living arrangements and a certain demographic profile and older people's functional status and quality of life differed among QoL dimensions. Only functional status was linked to age. Physical health and psychological domains were linked to functional status. Gender was only associated to the social interaction's domain, while marital status was related to physical health, psychological health, and environmental health. Finally, dwelling arrangements were linked to functional, psychological, and environmental quality of life dimensions.

REFERENCES

Adioetomo, S. M., & Mujahid, G. (2014). *UNFPA Indonesia Monograph Series: No.1 Indonesia on the Threshold of Population Ageing*. Jakarta: UNFPA.

Adioetomo, S. M., Howell, F., McPherson, A., & Priebe, J. (2014). Fighting Old-Age Poverty: ASLUT's Role, TNP2K Working Paper 14-2014. Jakarta: TNP2K.

Ahuva, E.Z. (2014). Quality of life of older people in Israel: A comparison between older people living at home who are members of a "supportive community" and nursing home residents. *European Journal of Social Work*, 17, 737-753. DOI:10.1080/13691457.2014.930731.

Ananta, Aris and Evi Nurvidya Arifin (2009). "Older Persons in Southeast Asia: From Liability to Asset". *In Older Persons in Southeast Asia: An Emerging Asset. Edited by Evi Nurvidya Arifin and Aris Ananta*. Singapore: Institute of Southeast Asian Studies.

Beerens, H., Zwakhalen, S., Verbeek, H., Ruwaard, D., Hamers, J., Ambergen, A., & Vellas, B.(2014).Change in quality of life of people with dementia recently admitted to long-term care facilities. *Journal Of Advanced Nursing*, 71(6): 1435-1447.

Bolina, A. F., & Tavares, D. M. S., (2016). Living arrangements of the elderly and the sociodemographic and health determinants: a longitudinal study. DOI: http://dx.doi.org/10.1590/1518-8345.0668.2737.

Hacihasnoglu,R., Yildrim, A. & Karakurt, P. (2012). Loneliness in elderly individuals, level of independence in activities of daily living (ADL) and influential factors.*Arch Gerontology Geriatrics.* 54(1):61-6. doi: 10.1016/j.archger.2011.03.011.

Harrison,E.L., Fisher,K.L., Lawson,J.,Chad,K., Sheppar,M., Bruce, A.R., Ashworth,N.L., & Bruner, B.G. (2010). Exploring the Role of Housing Type on Physical Activity and Health Status in Community-Dwelling Older Adults, Activities, Adaptation & Aging, 34:2, 98-114, DOI: 10.1080/01924781003773807

Heydarnejad, S & Dehkordi,A. (2010). The effect of an exercise programon the health-quality of life in older adults.*Danish Medical Bulletin.*

Hilari, Katrina., Klippi, Anu., Constantinidou, F., Worral, L. (2015). Quality of life in aphasia: an international perspective. DOI: 10.1159/000434748.

Irwan, A, M., & Balabagno, A, O., (2014). Factors Related to self-care Among Older Persons of Makassarese Tribe, Indonesia.*Philippine Journal of Nursing Vol. 84, No. 2.*

Kaplan,D. & Berkman, B. (2015). Social Work in Health and Aging. Secon Edition; Oxford. ISBN: 9780199336951.

Kawachi, I., & Berkman, L. F. (Eds.). (2003). Neighborhoods and health. New York: Oxford University Press. Kim, B. R. 2014.Health and Living Arrangements among Older Adults in Diverse Social and Cultural

Contexts.*University of Michigan.*

Kooshiar H, Yahaya N, Hamid TA, Abu Samah A, Sedaghat Jou V. (2012). Living Arrangement and Life Satisfaction in Older Malaysians: The Mediating Role of Social Support Function. *PLoS ONE* 7(8): e43125. doi: 10.1371/journal.pone.0043125

Kowel, R., Wungouw, H. & Doda, V. June, (2016).Pengaruh Senam Lansia Terhadap Derajat Depressi pada Lansia di Panti Werda.*Journal e-Biomedik. Volum 4, Universita Sam Ratulangi.*

Lakić A. (2012). Quality of life in childhood and adolescence: from concept to practice. 69(3): 257−9. Little, William. (2012). *Introduction to Sociology*.Creative Common Attribution Lisence.

Moyle, W., Murfield, J., Venturto, L., Griffiths, S., Grimbeek, P., McAllister, M. & Marshall, J. (2014) Dementia and its influence on quality of life and what it means to be valued: Family members' perceptions. Dementia: The *International Journal of Social Research and Practice*, 13(3): 412-425.

Mroczek, D., & Spiro, A. (2005). Change in life satisfaction during adulthood; findings from the veterans affairs normative aging study.*Journal of personality and Social Psychology, 88, No.1, 189-202.*

Nasir, S. (2015). *The Jakarta Post News.*Retrieved on October 2016 from: http://www.thejakartapost.com/news/2015/08/15/indonesia-70-prepare-aging-population.html.

Ng, Nawi., Hakimi, M., Byass, P., & Wilopo, S. (2010). Health and Quality of Life among Older rural people in Pruwerojo Distric, Indonesia.In-depth WHO SAGE.Global Health Action Supplement.DOI: 10.3402/gha. v3i0.2125

Nikmat, A., Hawthorne, G. & Al-Mashoor, S. (2015). The comparison of quality of life among people with mild dementia in nursing home and home care—a preliminary report. Dementia: *The International Journal of Social Research and Practice,* 14(1): 114-125.

Nur, Irmawati. (2015). Pengaruh Peran Keluarga dalam Pemenuhan Activities Daily Living terhadap hidup Lansia. Jurnal Keperawatan, *Universitas negri Gorontalo.*

Nuryanti T. (2012). Hubungan Perubahan Peran Diri dengan Tingkat Depresi pada Lansia yang Tinggal di UPT PSLU Pasuruan. Retrieved from :http://journal.unair.ac.id/fTitikN.pdf.

Palgi, Y., Shira, A., & Zaslavsky, O. (2015). Quality of life attenuates age-related decline in functional status of older adults. *Springer International Publisher*. DOI: 10.1007/S11136-015-0918-6.

Papalia, D. E., Olds, S. W., Feldman, R. D. (2009).Human Development 11th Edition.*New York: McGraw*

Pernambuco, C. S, Bernardo, M.R., Bezerra, J. C.P. (2012).Quality of life, elderly and physical activity.*Health Vol.4, No.2,* 88-93 (2012).http://dx.doi.org/10.4236/health.2012.42014

Putra, I, P. Agrina.,& Utami, G. T. (2014). Perbandingan Hidup Lansia di Panti Sosial Tresna Werda dengan Lansia Keluarga.*JOMPSIK Vol. 1 No.2.* Universitas Riau.

Rijeski, J. W. & Mihalko, S.L. (2001). Physical Activity and Quality of Life in Older adults. *Journal of Gerontology*, SGA, 23-25.

Rohmah, A., Purwaningsih, & Bariyah, K. Juli. (2012). Kualitas Hidup Lansia. Jurnal Keperawatan, ISSN 2068-3071. *Universitas Airlangga*.

Sanchez, Nicamil K. (2008). The Filipino Citizen: At A Glance. *Sociology of Aging.*

Smith, J. & Majmundar, M. (2012). Aging in Asia: Findings from New & Emerging Data Initiatives. National Research Council. Washington, D.C.

Statistik Penduduk Lanjut Usia. Badan Pusat Statistik (BPS). 2014.

Susilowati, F. & Istanah, U. (2012). Fungsi Kognitif menentukan Quality of Life pada Lansia.*Media Ilmu Kesehatan. Vol. 2*.

Teerawichichainan, B., Pothisiri, W., & Long, T, G. (2015). How do living arrangements and intergerational support matter for psychological health of elderly parents? Evidence from Myanmar, Vietnam, and Thailand. Social Science & Medicine. http://dx.doi.org/10.1016/j.socscimed.2015.05.019

Wang H, Chen K, Pan Y, Jing F, Liu H (2013) Associations and Impact Factors between Living Arrangements and Functional Disability among Older Chinese Adults. *PLoS ONE* 8(1): e53879. doi:10.1371/journal.pone.0053879

World Health Organization (WHO). (2014). http://www.who.int/ageing/en/.

Yuliati, B., Baroya, N., & Ririanty, M. January, (2014).Perbedaan Kualitas Hidup Lansia yang tinggal di Komunitas dengan Pelayanan Sosial Lanjut Usia. E-*Jurnal Pustaka Kesehatan. Universitas Jember*.

Zang, L. (2015). Living arrangement and subjective well being among the Chinese elderly.*Open Journal of Social Sciences*, 3. 150-160.

Zhang, Y., Jia, H., Li, Ahiua., Liu, J., & Liy, H. (2016) . Study on prediction of activities of daily living of the aged people based on longitudinal data. *Elsivier Publisher*. DOI; 10.1016/j.procs.2016.07.122.