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Research Article

The Determinants of Active Aging for Improving Elderly Abilities

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ABSTRACT

An elderly group is a vulnerable group due to the aging process. The declining health conditions of the elderly have an impact on the increasing dependence of the elderly on family and society. The state of the elderly is healthy holistically and actively affects the productive elderly. Increasing productivity among the elderly is significant in reducing dependence on others. One of the efforts to increase productivity among the elderly is the empowerment process. This research consists of two stages, (1) analytical observational method and (2) Focus Group Discussion, researchers will follow up on the research by Productive Elderly Indicator Measuring Tool based on an android application. The results of the study showed that there was a significant effect of holistic health conditions on increasing ability with a coefficient value of 0.268 with a significance of 0.003 (p-value <0.05). A positive coefficient means that the more holistic health conditions, the greater the ability of the elderly. There is a significant effect of the active determinant on increasing ability with a coefficient value of 0.449 with a significance of 0.000 (p-value <0.05). The positive coefficient means that the more active determinants are, the greater the ability of the elderly. There is a significant effect of increasing the ability of productive elderly with a coefficient value of 0.720 with a significance of 0.000 (p-value <0.05). The positive coefficient means that the increasing ability of the elderly will increase productivity elderly.

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INTRODUCTION

The elderly people increasing is due to the progress and improvement of the community's economy, the improvement of the environment, and the advancement of science, especially due to advances in medical and health sciences, to increase life expectancy. Social activities have a significant relationship with the level of physical fitness of the elderly which of course can affect the quality of life of the elderly.¹⁻² The age factor of the elderly has a relationship with their quality of life in the elderly. The quality of life of the elderly will get worse with age. With increasing age, there will be changes in the way of life such as feeling lonely and aware of death, living alone, changes in economic terms, chronic illness, weaker physical strength, mental changes, reduced psychomotor skills, psychosocial changes, namely retirement, and will lose resources. income, loss of spouse and friends, and loss of work and reduced activity³⁻⁵

Social interaction can also affect the psychological condition of the elderly. The better the social interaction, the better the psychological condition of the elderly, and of course this will affect the quality of life of the elderly declining health conditions will cause activity limitations will cause complaints of poor quality of life.

Active elderly are influenced by several factors, namely internal and external factors in the elderly. Some of the factors that affect the elderly can be intervened and some cannot be intervened or changed. Factors that cannot be changed include age and gender. Factors that may be changed but are very difficult are related to beliefs and beliefs, such as culture and social environment. Other factors that can be changed are behavior, economy, physical environment, social services, and health⁶⁻⁸.

Poor social support is closely related to increased mortality, morbidity, depression in the elderly, and the welfare of the elderly. The elderly who do not receive sufficient social support are 1.5 times more likely to experience death in the

next three years, compared to the elderly who receive sufficient social support⁹. Elderly with all the limitations of Bio, Psycho, Socio, Spiritual, and Cultural due to the decline in all body and mental systems. There are differences in the quality of life of the elderly caused by these conditions in the elderly in rural and urban areas. The elderly who are active and able to behave positively are energetic elderly.

METHODOLOGY

This research consists of two stages. This type of research is the first stage using the analytical observational method. This study explains the influence between variables, especially the variables that affect the Personal Ability of the Elderly based on Active Aging Determinants and Holistic Care Concepts in East Java and Yogyakarta. The second stage was to conduct FGD with the elderly in East Java and Yogyakarta by the results of the research variable test phase 1, then expert discussions to determine indicators for the empowerment of health services at the community level and the ability of the elderly (individual or group). Then continued IT Programming with Android Productive Elderly Indicator Measuring Tool. This research has received ethical approval from the Research Ethics Committee, Institute of Health Science Strada Indonesia No.2956/KEPK/V/2022.

RESULTS AND DISCUSSION

The results showed that the social aspects of active elderly determinants towards increasing the ability of the elderly were mostly in good condition (68.6%). Aging is socially limited to parental roles which are culturally conditioned and can change with changing habits. Social aging refers to how humans perceive the aging process and how society sees it¹⁰. The results of this study are relevant to the findings of other studies that social aspects: poor family and friendship interactions¹¹, have a significant effect on increasing the status of active elderly¹²⁻¹⁴.

Peer social control influences health behavior especially in the male group, through three different mechanisms: shared activity, being inspired, and being a positive role model for others. Friends and co-workers can play an important role in promoting various health behaviors among adult men in their daily lives. Encouraging men to socialize and discuss health, and making healthy men role models are effective ways to influence the adoption of health behaviors among certain populations¹⁵.

The results showed that the habit aspect of the active determinant of the elderly towards increasing the ability of the elderly was mostly in good condition (51.4%). Healthy aging is the ability to maintain independence, purpose, vitality, and quality of life into old age despite health problems. The habit of exercising or physical activity is an important component of healthy aging, preventing or reducing falls, pain, sarcopenia, osteoporosis, and cognitive impairment¹⁶⁻¹⁸. A balanced exercise program includes components of daily aerobics, strength, balance, and flexibility¹⁹. Most of the elderly do not meet the recommended length of time to do physical exercise every week. Counseling provided by health workers can help the elderly improve their exercise habits, as well as take advantage of community-based exercise opportunities²⁰⁻²⁴.

The results showed that the physical aspects of active elderly determinants towards increasing the ability of the elderly were mostly in sufficient and good condition (80.8%). Physical activity is one of the indicators of active elderly that contributes to the slowing down of the frailty process in the elderly²⁵⁻²⁶. Several studies have shown that regular physical activity ranging from low-intensity walking, vigorous exercise, and resistance training has been shown to be safe for healthy and frail older people²⁶⁻²⁸. Physical activity reduces the risk of major cardiovascular and metabolic diseases, obesity, falls, cognitive impairment, osteoporosis, and muscle weakness²⁹⁻³⁰. However, participation in physical activity is still low among the elderly, especially in economically disadvantaged groups. The elderly can be encouraged to increase their activities if influenced by doctors, family or friends, easy costs and high enjoyment, facilitate group-based activities and increase self-efficacy for exercise³¹⁻³³.

The results showed that the personality aspects of the determinants of the active elderly towards increasing the ability of the elderly were mostly in good condition (63.2%). The personality trait that is often associated with health-related quality of life (HRQoL) is neuroticism. Neurotic personality or neuroticism refers to a person who has a tendency towards negative emotions, such as anger, anxiety, self-consciousness, irritability, emotional instability, and depression³⁴. Neuroticism has enormous health implications³⁵. Neuroticism is comparable to various physical ailments, such as heart problems, impaired immune function, asthma, atopic eczema, irritable bowel syndrome, and even an increased risk of death. Neuroticism's relationship to physical problems is both direct and indirect. Neuroticism has also been associated with decreased quality of life, including feelings of ill will, excessive worry, job failure, and marital dissatisfaction. High levels of neuroticism will contribute to poor performance due to emotional situations, fatigue, and distraction³⁶. The results of the study are relevant to the findings of other studies that the personal/behavioral aspects of low self-esteem and living alone have a significant effect on increasing the status of active elderly³⁷.

The results showed that the economic aspect of the determinants of the active elderly towards increasing the ability of the elderly was mostly in poor condition (66.8%). Active seniors are considered to have the ability to manage personal wealth as one of the core determinants of well-being, despite limited financial capabilities³⁸⁻⁴⁰. The results of the study are relevant to the findings of other studies that the economic aspect: economic accessibility has a significant effect on increasing the status of the active elderly⁴¹.

The results showed that the service aspect on the determinants of the active elderly towards increasing the ability of the elderly was mostly in good condition (67.7%). Health and social services that need to be developed to increase the coverage of active elderly people are to develop integrated multidisciplinary services, consisting of geriatricians, rehabilitation specialists, dentists, psychologists, social workers, nurses, podiatrists, nutritionists, and information technology educators. The

initial assessment consists of 2 (two) core services, namely: comprehensive geriatric assessment (CGA) and active aging⁴². The participation of older adults in active aging programs can improve their quality of life-related to health and work function. It is important to identify potential barriers and implement strategies to increase recruitment and retention rates during interventions⁴³.

CONCLUSION

The determinants of Active Aging Determinants in social, habitual, physical, personal, economic, social, and health aspects are related to increasing the ability of the elderly. Improving the ability of the elderly consists of aspects of physical health, mental health, healthy social relationships, healthy spiritual activities, and healthy applying the prevailing culture.

REFERENCES

- Gillette, D. B., Petrescu-Prahova, M., Herting, J. R., & Belza, B. (2015). A Pilot Study of Determinants of Ongoing Participation in EnhanceFitness: A Community-Based Group Exercise Program for Older Adults. *Journal of Geriatric Physical Therapy* (2001), 38(4), 194–201. <https://doi.org/10.1519/JPT.0000000000000041>
- Spiteri, K., Broom, D., Bekhet, A. H., de Caro, J. X., Laventure, B., & Grafton, K. (2019). Barriers and Motivators of Physical Activity Participation in Middle-aged and Older-adults—A Systematic Review. *Journal of Aging and Physical Activity*, 27(4), 929–944. <https://doi.org/10.1123/japa.2018-0343>
- Huang, X., Yang, H., Wang, H. H. X., Qiu, Y., Lai, X., Zhou, Z., Li, F., Zhang, L., Wang, J., & Lei, J. (2015). The Association Between Physical Activity, Mental Status, and Social and Family Support with Five Major Non-Communicable Chronic Diseases Among Elderly People: A Cross-Sectional Study of a Rural Population in Southern China. *International Journal of Environmental Research and Public Health*, 12(10), 13209–13223. <https://doi.org/10.3390/ijerph121013209>
- Ran, L., Kong, H., Du, M., He, J., Zhong, Q., Ran, Y., Si, Y., Zhang, J., Yao, C., Luo, H., & Ye, Q. (2019). Comparison of health-related quality of life between the Han and Yi ethnicity elderly in the Yi autonomous areas of Yunnan Province. *BMC Geriatrics*, 19(1), 326. <https://doi.org/10.1186/s12877-019-1257-1>
- Zhang, Y., Chen, G., He, Y., Jiang, X., & Xue, C. (2022). Social Interaction in Public Spaces and Well-Being among Elderly Women: Towards Age-Friendly Urban Environments. *International Journal of Environmental Research and Public Health*, 19(2), 746. <https://doi.org/10.3390/ijerph19020746>
- de Labra, C., Guimaraes-Pinheiro, C., Maseda, A., Lorenzo, T., & Millán-Calenti, J. C. (2015). Effects of physical exercise interventions in frail older adults: A systematic review of randomized controlled trials. *BMC Geriatrics*, 15, 154. <https://doi.org/10.1186/s12877-015-0155-4>
- Domènech-Abella, J., Lara, E., Rubio-Valera, M., Olaya, B., Moneta, M. V., Rico-Uribe, L. A., Ayuso-Mateos, J. L., Mundó, J., & Haro, J. M. (2017). Loneliness and depression in the elderly: The role of social network. *Social Psychiatry and Psychiatric Epidemiology*, 52(4), 381–390. <https://doi.org/10.1007/s00127-017-1339-3>
- Sunarti, S., Subagyo, K. A. H., Haryanti, T., Rudijanto, A., Ratnawati, R., Soeharto, S., & Maryunani, M. (2021). The Effect of Physical Activity on Social Isolation in Elderly. *Acta Medica Indonesiana*, 53(4), 423–431. PMID: 35027489. <https://www.actamedindones.org/index.php/ijim/article/view/1823/pdf>
- De Felice, S., Vigliocco, G., & Hamilton, A. F. de C. (2021). Social interaction is a catalyst for adult human learning in online contexts. *Current Biology: CB*, 31(21), 4853–4859.e3. <https://doi.org/10.1016/j.cub.2021.08.045>
- Åberg, A. C., Sidenvall, B., Hepworth, M., O'Reilly, K., & Lithell, H. (2005). On loss of activity and independence, adaptation improves life satisfaction in old age – a qualitative study of patients' perceptions. *Quality of Life Research*, 14(4), 1111–1125. <https://doi.org/10.1007/s11136-004-2579-8>
- Bowling, A., & Dieppe, P. (2005). What is successful ageing and who should define it? *BMJ*, 331(7531), 1548–1551. <https://doi.org/10.1136/bmj.331.7531.1548>
- Naah, F. L., Njong, A. M., & Kimengsi, J. N. (2020). Determinants of Active and Healthy Ageing in Sub-Saharan Africa: Evidence from Cameroon. *International Journal of Environmental Research and Public Health*, 17(9), 3038. <https://doi.org/10.3390/ijerph17093038>
- Plouffe, L., & Kalache, A. (2010). Towards global age-friendly cities: Determining urban features that promote active aging. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 87(5), 733–739. <https://doi.org/10.1007/s11524-010-9466-0>
- Silva, W. A. A. da, Barbosa, K. T. F., Oliveira, F. M. R. L. de, Brito, F. M. de, Ramos, S. S. N. de L., Fernandes, A. M., Oliveira, S. M. de, Fontana, N., Lacerda, H. J. M. de, Soares, L. C. de, Nunes, T. B., & Fernandes, M. das G. M. (2016). Personal and Behavioral Determinants of Active Aging. *International Archives of Medicine*, 9. <https://doi.org/10.3823/1943>
- Eckstrom, E., Neukam, S., Kalin, L., & Wright, J. (2020). Physical Activity and Healthy Aging. *Clinics in Geriatric Medicine*, 36(4), 671–683. <https://doi.org/10.1016/j.cger.2020.06.009>
- Fiorito, G., McCrory, C., Robinson, O., Carmeli, C., Ochoa-Rosales, C., Zhang, Y., Colicino, E., Dugué, P.-A., Artaud, F., McKay, G. J., Jeong, A., Mishra, P. P., Nøst, T. H., Krogh, V., Panico, S., Sacerdote, C., Tumino, R., Palli, D., Matullo, G., ... Lifepath consortium. (2019). Socioeconomic position, lifestyle habits and biomarkers of epigenetic aging: A multi-cohort analysis. *Aging*, 11(7), 2045–2070. <https://doi.org/10.18632/aging.101900>
- Izquierdo, M., Merchant, R. A., Morley, J. E., Anker, S. D., Arahmian, I., Arai, H., Aubertin-Leheudre, M., Bernabei, R., Cadore, E. L., Cesari, M., Chen, L.-K., de Souto Barreto, P., Duque, G., Ferrucci, L., Fielding, R. A., García-Hermoso, A., Gutiérrez-Robledo, L. M., Harridge, S. D. R., Kirk, B., ... Fiatarone Singh, M. (2021). International Exercise Recommendations in Older Adults (ICFSR): Expert Consensus Guidelines. *The Journal of Nutrition, Health & Aging*, 25(7), 824–853. <https://doi.org/10.1007/s12603-021-1665-8>
- Gianoudis, J., Bailey, C. A., Sanders, K. M., Nowson, C. A., Hill, K., Ebeling, P. R., & Daly, R. M. (2012). Osteo-cise: Strong bones for life: protocol for a community-based randomised controlled trial of a multi-modal exercise and osteoporosis education program for older adults at risk of falls and fractures. *BMC Musculoskeletal Disorders*, 13, 78. <https://doi.org/10.1186/1471-2474-13-78>
- Gillette, D. B., Petrescu-Prahova, M., Herting, J. R., & Belza, B. (2015). A Pilot Study of Determinants of Ongoing Participation in EnhanceFitness: A Community-Based Group Exercise Program for Older Adults. *Journal of Geriatric Physical Therapy* (2001), 38(4), 194–201. <https://doi.org/10.1519/JPT.0000000000000041>
- Granacher, U., Gollhofer, A., Hortobágyi, T., Kressig, R. W., & Muehlbauer, T. (2013). The importance of trunk muscle strength for balance, functional performance, and fall prevention in seniors: A systematic review. *Sports Medicine (Auckland, N.Z.)*, 43(7), 627–641. <https://doi.org/10.1007/s40279-013-0041-1>
- Lacroix, A., Kressig, R. W., Muehlbauer, T., Gschwind, Y. J., Pfenninger, B., Bruegger, O., & Granacher, U. (2016). Effects of a Supervised versus an Unsupervised Combined Balance and Strength Training Program on Balance and Muscle Power in Healthy Older Adults: A Randomized Controlled Trial. *Gerontology*, 62(3), 275–288. <https://doi.org/10.1159/000442087>
- Ryan, J., Wrighlesworth, J., Loong, J., Fransquet, P. D., & Woods, R. L. (2020). A Systematic Review and Meta-analysis of Environmental, Lifestyle, and Health Factors Associated With DNA Methylation Age. *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, 75(3), 481–494. <https://doi.org/10.1093/gerona/glz099>
- Rogers, N. T., Marshall, A., Roberts, C. H., Demakakos, P., Steptoe, A., & Scholes, S. (2017). Physical activity and trajectories of frailty among older adults: Evidence from the English Longitudinal Study of

- Ageing. *PloS One*, 12(2), e0170878. <https://doi.org/10.1371/journal.pone.0170878>
24. El, C., L, R.-M., A, S., & M, I. (2013). Effects of different exercise interventions on risk of falls, gait ability, and balance in physically frail older adults: A systematic review. *Rejuvenation Research*, 16(2). <https://doi.org/10.1089/rej.2012.1397>
25. Grov, E. K., Fosså, S. D., Bremnes, R. M., Dahl, O., Klepp, O., Wist, E., & Dahl, A. A. (2009). The personality trait of neuroticism is strongly associated with long-term morbidity in testicular cancer survivors. *Acta Oncologica (Stockholm, Sweden)*, 48(6), 842–849. <https://doi.org/10.1080/02841860902795232>
26. McPhee, J. S., French, D. P., Jackson, D., Nazroo, J., Pendleton, N., & Degens, H. (2016). Physical activity in older age: Perspectives for healthy ageing and frailty. *Biogerontology*, 17(3), 567–580. <https://doi.org/10.1007/s10522-016-9641-0>
27. Soll-Morka, A., & Kurpas, D. (2022). The Degree of Meeting the Needs of Older People with Frailty Syndrome in the Residential Environment in Relation to Interventions-Experimental Study. *International Journal of Environmental Research and Public Health*, 19(18), 11682. <https://doi.org/10.3390/ijerph191811682>
28. Castell, M. V., Gutiérrez-Misis, A., Sánchez-Martínez, M., Prieto, M. A., Moreno, B., Nuñez, S., Triano, R., de Antonio, M. P., Mateo, C., Cano, M. D., Garrido, A., Julian, R., Polentinos, E., Rodriguez-Barrientos, R., Otero Puime, A., & MEFAP Group. (2019). Effectiveness of an intervention in multicomponent exercise in primary care to improve frailty parameters in patients over 70 years of age (MEFAP-project), a randomised clinical trial: Rationale and study design. *BMC Geriatrics*, 19(1), 25. <https://doi.org/10.1186/s12877-018-1024-8>
29. López-Torres Hidalgo, J. & Dep-Exercise Group. (2019). Effectiveness of physical exercise in the treatment of depression in older adults as an alternative to antidepressant drugs in primary care. *BMC Psychiatry*, 19(1), 21. <https://doi.org/10.1186/s12888-018-1982-6>
30. Yarmohammadi, S., MozafarSaadati, H., Ghaffari, M., & Ramezankhani, A. (2019). A systematic review of barriers and motivators to physical activity in elderly adults in Iran and worldwide. *Epidemiology and Health*, 41, e2019049. <https://doi.org/10.4178/epih.e2019049>
31. Chapman, B., Duberstein, P., & Lyness, J. M. (2007). Personality traits, education, and health-related quality of life among older adult primary care patients. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 62(6), P343-352. <https://doi.org/10.1093/geronb/62.6.p343>
32. Widiger, T. A., & Oltmanns, J. R. (2017). Neuroticism is a fundamental domain of personality with enormous public health implications. *World Psychiatry*, 16(2), 144–145. <https://doi.org/10.1002/wps.20411>
33. Lahey, B. B. (2009). Public health significance of neuroticism. *The American Psychologist*, 64(4), 241–256. <https://doi.org/10.1037/a0015309>
34. Grov, E. K., & Dahl, A. A. (2021). Is neuroticism relevant for old cancer survivors? A controlled, population-based study (the Norwegian HUNT-3 survey). *Supportive Care in Cancer: Official Journal of the Multinational Association of Supportive Care in Cancer*, 29(7), 3623–3632. <https://doi.org/10.1007/s00520-020-05870-7>
35. Hershey, D. A., Henkens, K., & Van Dalen, H. P. (2010). Aging and financial planning for retirement: Interdisciplinary influences viewed through a cross-cultural lens. *International Journal of Aging & Human Development*, 70(1), 1–38. <https://doi.org/10.2190/AG.70.1.a>
36. Litwin, H., & Sapir, E. V. (2009). Perceived income adequacy among older adults in 12 countries: Findings from the survey of health, ageing, and retirement in Europe. *The Gerontologist*, 49(3), 397–406. <https://doi.org/10.1093/geront/gnp036>
37. Lucifora, C., Cappellari, L., & Cottini, E. (2014). Work, Retirement and Health: An Analysis of the Socio-economic Implications of Active Ageing and their Effects on Health. *Studies in Health Technology and Informatics*, 203, 172–184.
38. Rajola, F., Frigerio, C., & Parrichi, M. (2014). Financial Well-being in Active Ageing. *Studies in Health Technology and Informatics*, 203, 69–77. PMID: 26630513. DOI: 10.3233/978-1-61499-425-1-69
39. Gschwind, Y. J., Kressig, R. W., Lacroix, A., Muehlbauer, T., Pfenninger, B., & Granacher, U. (2013). A best practice fall prevention exercise program to improve balance, strength / power, and psychosocial health in older adults: Study protocol for a randomized controlled trial. *BMC Geriatrics*, 13, 105. <https://doi.org/10.1186/1471-2318-13-105>
40. Lacroix, A., Hortobágyi, T., Beurskens, R., & Granacher, U. (2017). Effects of Supervised vs. Unsupervised Training Programs on Balance and Muscle Strength in Older Adults: A Systematic Review and Meta-Analysis. *Sports Medicine (Auckland, N.Z.)*, 47(11), 2341–2361. <https://doi.org/10.1007/s40279-017-0747-6>
41. Pérez-Cuevas, R., Doubova, S. V., Bazaldúa-Merino, L. A., Reyes-Morales, H., Martínez, D., Karam, R., Gamez, C., & Muñoz-Hernández, O. (2015). A social health services model to promote active ageing in Mexico: Design and evaluation of a pilot programme. *Ageing and Society*, 35(7), 1457–1480. <https://doi.org/10.1017/S0144686X14000361>
42. Spiteri, K., Broom, D., Bekhet, A. H., de Caro, J. X., Laventure, B., & Grafton, K. (2019). Barriers and Motivators of Physical Activity Participation in Middle-aged and Older-adults—A Systematic Review. *Journal of Aging and Physical Activity*, 27(4), 929–944. <https://doi.org/10.1123/japa.2018-0343>
43. World Health Organization. (2002). Active ageing: A policy framework (WHO/NMH/NPH/02.8). World Health Organization. <https://apps.who.int/iris/handle/10665/67215>