

The Influence of Exercise On the Health of the Elderly

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ABSTRACT: The number of health complaints in elderly women is higher than in elderly men. Changes that occur in the elderly tend to experience a decline in the physical, psychological and psychosocial systems. This requires an activity that can reach all aspects that are experiencing a decline, namely by doing elderly exercise. This research aims: To identify the benefits of elderly exercise on the quality of life of the elderly. Research Method: Using a literature review as a search guide for research articles obtained from the internet using the Science Direct site and Google Scholar. Results: Analysis of 10 selected research articles shows that exercise for the elderly can have several benefits, namely: physical benefits can improve physical fitness, body balance, breathing, and reduce blood pressure in hypertensive elderly. The psychological benefits can be improved sleep quality, reduced levels of insomnia, reduced levels of depression, reduced levels of stress, and pain management. Social and environmental benefits. Conclusion: The results of this literature review show that exercise for the elderly can have several benefits, namely: physical benefits, it can improve physical fitness, body balance, breathing, and reduce blood pressure in hypertensive elderly. The psychological benefits can be improved sleep quality, reduced levels of insomnia, reduced levels of depression, reduced levels of stress, and pain management as well as social and environmental benefits. Doing elderly exercise 3 times a week with a minimum duration of 30 minutes and a maximum of 40 minutes with a time of >4 weeks will be more effective in getting many benefits and the quality of life for the elderly will also increase.

KEYWORDS: Elderly Exercise, Quality of Life, Elderly

INTRODUCTION

Elderly is the final stage of the journey in human life from birth until reaching the age of more than 60 years. The elderly as a whole will experience biological decline. Decreased bone mass and muscle mass will cause a decrease in balance which is very risky for falls in the elderly. ^[11] Old age (elderly) is a natural period that every individual experiences through the aging process. Aging in the course of human life is something that is natural for everyone to experience and is usually marked by decline, for example physical decline which is characterized by sagging skin, white hair, teeth starting to become toothless, hearing less clear, vision getting worse, slow movement, and disproportionate body posture.^[3]

The process of aging in general will be marked by a decline in physical function in life. The increase in degenerative diseases and health problems experienced by the elderly is due to a lack of health care. One of the degenerative disorders in the elderly is a decrease in cognitive function. Cognitive impairment is one of the health problems of the elderly which results in a decrease in intellectual function, which is a serious problem during the aging process which will result in a decrease in memory, difficulty in the elderly living independently, and an increased risk of dementia so that the elderly will experience behavioral disorders and a decline in their quality of life. ⁽¹⁹⁾ Physical disorders that affect health, which have an impact on several aspects of life which have a big influence on the quality of life of the elderly. The consequence of impaired cognitive function in the elderly is that mild symptoms are easy to forget and if severe it will cause dementia.^[20]

Health problems that are often experienced by older people are related to physical health, namely being susceptible to various diseases, due to reduced body resistance. The higher the life expectancy of the elderly, the higher the risk factors for health problems in the elderly. In general, the health problems faced by the elderly are related to the elderly's ability to move their body, degeneration of body organs, and a decrease in the elderly's immune system. One of the impacts of a decrease in body organ function includes blood pressure lability, where around 60% of elderly people after the age of 65 will experience increased blood pressure or

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hypertension ^[16]. Each individual has a different understanding of the quality of life in responding to their problems. WHO defines quality of life as an individual's perception of their life in the context of the culture and value system in which they live with existing goals, hopes and standards. The elderly are said to have a quality life if they have optimal functional conditions, so that they can enjoy their old age meaningfully ^[18].

The elderly are an age group of humans who have entered the final stages of their life. The elderly group will experience a process called Aging Process or what is often called the aging process. The elderly are a group of people who experience a gradual process of change over a certain period of time ^[9] With the increase in population and the life expectancy of the elderly, various problems will arise, including health, psychological and socio-economic problems. Most of the problems in the elderly are health problems due to the aging process combined with other problems such as economic problems, loneliness, feeling useless and unproductive. Activities in the elderly tend to decrease as a person gets older. The decline becomes increasingly visible after a person is over 40 years old and will experience 30-50% in old age. One of the predisposing factors for decreased activity is the lack of activity of an elderly person due to limitations in carrying out daily activities ^[12]

The population aging process certainly has an impact on various aspects of life, both social, economic and especially health. The function of the body's organs will decrease, both due to natural factors and disease as we age. Elderly is a process of increasing individual age which is characterized by a decline in cognitive function. ^[5] The elderly population is always increasing in its development. The proportion of the elderly population over 60 years old reaches one million people. around 80% of the elderly come from developing countries and the United Nations (UN) estimates that the world will double from 600 million to 1.2 billion in 2025 and will be two billion in 2050. ^[14] Indonesia is predicted to experience an "elderly population boom" in the first two decades of the 21st century as a result of the baby boom several decades ago. BPS projects that in 2045 Indonesia will have around 63.31 million elderly people or almost 20% of the population. Even UN projections state that the percentage of Indonesian elderly will reach 25% in 2050 or around 74 million elderly. The percentage of elderly will continue to increase over time. "The UN predicts that in 2030 the number of elderly will exceed the number of children under 10 years (1.41 billion versus 1.35 billion).

Projections in 2050 indicate that there will be more people aged 60 years and over compared to teenagers and young people aged 10 years and over to 24 years old, namely around 2.1 billion compared to 2 billion worldwide. ^[2] Everyone will experience growing old because as they get older they will be marked by anatomical and physiological changes, which is an aging process and will cause a decrease in the quality of life so that the status of the elderly is in a healthy, sick condition. Apart from that, poor quality of life can usually be seen in reduced physical health, psychological health, social relationships and environmental aspects. ^[7] The function of organs in the body will decrease due to the aging process. The elderly tend to experience decline in physical, psychological and psychosocial systems experienced by the elderly related to limitations in work activities, and cognitive changes. A decline in this psychological system can affect decreased memory, increased alertness, reduced sexual desire, and changes in sleep patterns (sleep disorders). ^[8] As people get older, the percentage of the elderly population experiencing health complaints increases with age. The number of health complaints in Indonesia among elderly women is 52.31% higher than the percentage among elderly men, namely 49.74%. The number of health complaints during the last month in Banten province was 51.90% in the city, 62.52% in the regions, 52.17 in elderly men, and 58.99% in elderly women (Central Statistics Agency, 2019). There are 64.58% of elderly people with poor quality of life, 61.1% with less social activity, and 52.8% of elderly people with less interaction. ^[10]

Exercise that can be done in old age, doing this sports activity can really help the elderly body to maintain body fitness because it can help to eliminate free radicals in the body. ^[15] Based on the results of research conducted by Tabita Ma Windri, et al (2019), it was found that before physical activity the average quality of life was 62.8% and increased to 65.25%. The quality of life domain is divided into 4, namely physical health, mental health, social relationships and the environment. It can be concluded that there is an increase in the quality of life of the elderly with an average of 2.48%. Elderly exercise done regularly has a positive impact on improving body organs and improving the quality of life of the elderly. Many people can enjoy old age, but there are also those who experience illness and die without enjoying a happy old age. To be able to face elderly people who can enjoy their lives and maintain their strength and fitness, elderly people must do elderly exercise to improve the quality of life of their elderly. ^[4]

Elderly exercise is one effort to improve the physical fitness of the elderly group. Elderly exercise is one of the factors that influences the quality of life in elderly people who suffer from hypertension. This is in accordance with the results of research that elderly people who do exercise regularly have a very good quality of life (17). Based on the description above, researchers are interested in looking more deeply at several related literature. Benefits of elderly exercise for the health of the elderly. The purpose

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of this literature review is to find out the various health benefits provided by exercise for the elderly so that later it can be used as a recommendation for therapeutic intervention modalities for the elderly.

METHOD

The sources for this literature review were compiled starting with selecting a topic, then the sources for this study were taken from searches from books, several published articles and journals. Searches for this study were obtained from the internet using the Science Direct site, and Google Scholar using the keywords "benefits" "elderly exercise" "for" "quality of life for the elderly" and the English keywords "benefits" "elderly exercise" "for" "the quality of life of the elderly". Search for eligibility of articles and articles selected for in-depth review This research is summarized in the chart below, carried out systematically by following the correct stages using the PRISMA format.^[13]

DISCUSSION

Elderly is not a disease, but an advanced stage of a life process characterized by a decrease in the body's ability to adapt to environmental stress. The decrease in the ability of various organs, functions and body systems is natural or physiological. This decrease is due to a reduction in the number and ability of body cells. In general, signs that occur during the aging process begin to appear at the age of 45 years and will cause problems around the age of 60 years. Elderly exercise can be an intervention that can improve aspects of the quality of life of the elderly according to the results of selected research articles. Elderly exercise is a series of directed and regular movements followed by the elderly whose implementation is intended to improve functional physical abilities.^[6]

Doing exercise for the elderly can be an intervention that can improve the quality of life according to the results of a review of selected research articles. The results of research by Kowel, et al (2016) explained that in this study there were positive things felt by the elderly after elderly exercise, namely that the respondents experienced increased body fitness, increased appetite, increased mobility, improved respiratory quality, decreased levels of muscle fatigue, eliminated chronic shoulder pain, increased desire to work, and experienced positive changes in ADL. Gymnastics is a light and easy exercise, not burdensome, which is applied to the elderly^[23]. This sports activity will help the body stay fit and fresh because it trains the bones to stay strong, encourages the heart to work optimally and helps eliminate free radicals roaming around in the body^[24] The results of the research conducted showed that there was a relationship between elderly exercise and quality of life. This is in accordance with research conducted by Acree and Longfors (2006), namely measuring the quality of life with the SF-36 in groups who carried out high activity and groups who carried out low activity. The result was that the group who carried out high activity had higher questionnaire scores compared to the group who carried out low activity. who carry out low activity.^[25]

The results of the research showed that most of the elderly were female, this is in line with the Riau Islands Central Statistics Agency (BPS, 2014), which found that the number of elderly women was more than male, namely 657 per 1000 population. Gender found that there were differences between the quality of life between men and women, where the quality of life of men tended to be better than the quality of life of women. Meanwhile, more than half are also in the middle age category. Middle age is the age that begins to experience a productive period and experiences a decrease in both physical and psychological problems. An elderly person is someone who has entered the age of 60 years.^[21] The results of this study showed that there was a significant difference in quality of life respondents before and after doing elderly exercise. Quality of life is defined as an individual's perception of their functioning in the field of life.^[22]

The results of Nur Iffah's research (2019) explained that after the exercise was carried out, the elderly could see developments such as being able to socialize in exercise, being able to communicate more, there was a change in behavior where the elderly began to often greet each other and joke. This exercise can increase interaction due to communication. The disadvantage of some journals is that they do not discuss the benefits for others, and there are 4 journals that discuss other benefits apart from the discussion taken. In 1 journal it did not explain in detail how many respondents there were but only showed the elderly who took part in exercise and 1 journal did not explain in detail the results data before treatment. Most journals conduct research with a one group pre test-post test design so that the results can only be seen from 1 group without being able to compare with the control group. The advantage of all journals can be concluded that elderly exercise can provide beneficial effects.

For the elderly on physical health it can provide physical fitness, body balance, breathing, lowering blood pressure. Psychologically, it can have an effect on improving sleep quality, reducing levels of insomnia, reducing levels of depression, reducing levels of stress, and to reduce pain and provide social and environmental benefits. In doing elderly exercise, there are 3 phases that

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must be carried out, namely warming up, core movements and cooling down.^[1] Each journal discusses the influence and comparison with elderly exercise, there are shortcomings in how it is treated, each journal does not discuss how to implement it, there is only 1 journal that discusses it. 6 journals did not discuss the length and duration of exercise treatment in the elderly. Some journals do not include according to theory how many times a week, the duration and how many weeks/months, whereas according to the Ministry of Health (2018) physical activity can be done for a minimum of 30 minutes/day for 5x/week, can be done 3x a day for 10 minutes or 2x a day for 15 minutes. For those who have problems in the body such as cholesterol and blood pressure, it is recommended to do at least 40 minutes of moderate intensity exercise 3-4x/week.

The advantage of all these journals is that they can have an effective influence in providing benefits to the elderly. It can be concluded that by doing elderly exercise 3 times a week with a minimum duration of 30 minutes and a maximum of 40 minutes with a time of >4 weeks, it will be more effective to get many benefits. It is hoped that the elderly can do elderly exercise regularly to get optimal results and thus improve the quality of life of the elderly. The implication of this literature for the field of gerontic nursing is that nurses can integrate elderly exercise as a group activity therapy for the elderly in nursing care. Elderly exercise is not only beneficial for physical fitness, but also for physical, psychological, social and environmental health. Increasing the potential ability of elderly people to live their lives is the main goal in elderly care.

CONCLUSIONS

The results of this literature review show that exercise for the elderly can have several benefits, namely: physical benefits, it can improve physical fitness, body balance, breathing, and reduce blood pressure in hypertensive elderly. The psychological benefits can be improved sleep quality, reduced levels of insomnia, reduced levels of depression, reduced levels of stress, and pain management. Social and environmental benefits, as well as cognitive function benefits can improve cognition. By doing elderly exercise 3 times a week with a minimum duration of 30 minutes and a maximum of 40 minutes with a time of >4 weeks, it will be more effective to get many benefits, the quality of life for the elderly will also increase.

REFERENCES

- 1) Adiputra, Nyoman Et Al. 2016. "Perbandingan Kombinasi Bergantian Senam Lansia Dan Latihan Core Stability The Comparison Of Turn Combination Of Elderly Gymnastic
- 2) Badan Pusat Statistik. 2018. Statistik Penduduk Lanjut Usia 2018. Jakarta: Badan Pusat Statistik.
- 3) Nugroho, W. (2008). Keperawatan Gerontik dan Geriatrik. Edisi 3. Jakarta: EGC.
- 4) Wahyuni, ni putu dewi sri. 2017. "Sehat Dan Bahagia Dengan Senam Bugar Lansia." Jurnal Penjakora 3(1):66–77.
- 5) Rikesdas. 2018. "Hasil Utama Riset Kesehatan Dasar." Kementerian Kesehatan Republik Indonesia 1–100. doi: 1 Desember 2013.
- 6) Mardius, Ali, And Yuni Astuti. 2018. "Pengaruh Senam Lansia Terhadap Kebugaran Jasmani Warga Perumahan Pondok Pinang Kelurahan Lubuk Buaya Kecamatan Koto Tangah Kota Padang." Journal Of Education Research And Evaluation (November).
- 7) Meril Valentine Manangkot, et al. 2016. "Pengaruh Senam Lansia Terhadap Keseimbangan Tubuh Pada Lansia Di Lingkungan Dajan Bingin Sading." Jurnal Keperawatan Community Of Publishing In Nursing (Coping) Ners (April): 24–27.
- 8) Ratnawati, Emmela. 2017. Keperawatan Komunitas. Yogyakarta: Pustaka Batu Press
- 9) Notoatmodjo, S. 2014. Ilmu Perilaku Kesehatan. Jakarta ; Rineka Cipta
- 10) Supraba, N. P. 2016. Hubungan Aktivitas Sosial, Interaksi Sosial, Dan Fungsi Keluarga Dengan Kualitas Hidup Lanjut Usia Di Wilayah Kerja Puskesmas I Denpasar Utara Kota Denpasar. Tesis. Bali.
- 11) Susilo, W., Limyat, Y., & Decky, G., 2017. The Risk of Falling in Elderly Increased With Age Growth and Unaffected y Gender. Journal of Medicine and Health, 3.
- 12) Fauzia, Hilda. 2012. Perbedaan asupan energi, protein, aktivitas fisik dan status gizi antara lansia yang mengikuti dan tidak mengikuti senam bugarlansia. Laporan hasil penelitian. Universitas Diponegoro. Semarang
- 13) Wahyuni, Sri. 2019. "Systematic Review Metode Intervensi Pengetahuan Masyarakat Dalam Pengendalian Kasus Leptospirosis Di Wilayah Kota Semarang." Jurnal Kesehatan Masyarakat (E-Journal) 7(1): 211–20.
- 14) WHO. 2018. Ageing And Health. Jenewa. <http://www.who.int/news-room/fact-sh eets/detail/ageing-and-health>

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- 15) Widianti, Anggriana, Tri & Proverawati. 2010. Senam Kesehatan. Yogyakarta: Nuha Medika 16. Mubarak. Ilmu Keperawatan Komunitas Konsep dan Aplikasi. Ed II. Jakarta: Salemba; 2006. 17. Saftarina F. Hubungan Senam Lansia terhadap Kualitas Hidup Lansia yang Menderita Hipertensi di Klinik Swasta Kedaton Bandar Lampung. Jurnal Kesehatan. Volume 7:3. 2015.
- 16) Pangkahda, W. Anti Aging Medicine: Memperlambat Penuaan, Meningkatkan Kualitas Hidup. Cetakan ke-1. Jakarta: Penerbit Buku Kompas; 2017.
- 17) Sandra, S. (2018). Faktor- faktor yang Berhubungan dengan Gangguan Kognitif Pada Lansia di Panti Sosial.
- 18) Dwi, N. (2016). Hubungan Fungsi Kognitif Dengan Kualitas Hidup Pada Lansia di Kelurahan Barusari Kecamatan SemarangSelatan. Jurnal Keperawatan Vol.7(1) Januari 2016.
- 19) Depkes RI (2013). Masalah kesehatan pada lansia, didaat dari www.depkesri.go.id
- 20) Nofitri, Alimul H.(2009). Kualitas hidup penduduk dewasa di jakarta.didapat dari www.repository.usu.ac.id
- 21) Poweel, J.E.(2015).Senam. Jakarta:Gramedia Pustaka
- 22) Rahayu (2008). Kualitas hidup lansia di posbindu lansia pergeri. Didapat di www.eprintums.ac.id
- 23) Acree dan longfros (2006). Domain of Quality of life. Journal health reseach: 5(8), 251359



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