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Access to Personal Hygiene Improves the Quality of Life at Elderly Hostels

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Abstract

The awareness of someone's ability to maintain and to keep life has become better; hence having a longer life expectation became a grace and a pride. It is estimated that life expectancy figures maximally up to 125 years. The increase in people's awareness of maintaining and sustaining life, in order to get a better quality of life, results in a higher life expectancy. Aging is a natural and spontaneous process started from the childhood, puberty, young adults, and then declines in the middle to seniors (elderly). The prosperity of the elderly people, whom due to their physical or mental condition no longer possible role in development, needs special attention from the government and society. This research was conducted in a nursing home (home service). The nursing home as a place where the elderly live needs to adjust and redesign their bathroom. This effort is done by considering that the ability of the elderly's motor movement has tremendously declined; it is caused by the decrease in their motor sensor capacity. The elderly should get attention, particularly on meeting their needs on personal hygiene. The bathroom is the most dangerous area for their activity. Therefore that site needs special attention concerning the access to be easily used by the elderly. The provision of personal hygiene accessibility provides an ease of doing a daily living activity independently without depending on the help of the nursing personnel or other persons. And the elderly can use the facilities without any obstacles and obtain a full participation support. Method: This research is an experimental treatment research, by the subject of design, with 12 respondents from elderly- hostels in Bali. Result and Discussion: Access to personal hygiene is the ease of the elderly to use the facilities independently or without the help of others. Bathroom modification intervention, special for seniors based on ergonomic through the access of personal hygiene makes it easier to do the activity day living independently without depending on the help of the nursing personnel or other persons, improve their health by decreasing the musculoskeletal complaints, and increase quality of life. Musculoskeletal disorders were measured using a nordic body map questionnaire. A test on the difference shows significant results (p*<0.05).

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This means that there is a significant difference between PI group and PII group on the musculoskeletal complaints. In another word, there is a decline of 25.69%. Accessibility friendly bathroom Seniors are not only safe to use also gives credence to the Elderly without the help of others and without fear of injury. In the PI obtained a score of 8.31 while the security of PII obtained a score of 16.49, an increase of safety and security of 98.4%. These results indicate that the ergonomics intervention proved to cause an increase in safety in the elderly in elderly-hostels of Bali Province. Accessibility interventions include the facilities such as bathtub, a handle or railing, a repair to a handled door, toilet seat, shower wash, and shower seat.

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1. Introduction

The elderly are the final stage of the aging process characterized by declining physical abilities, which started with some changes in life. The elderly have a tendency of decreasing physical, psychological, and social condition (Departemen Sosial RI, 2004). Aging is a thorough and spontaneous changing process that starts from childhood, puberty, young adults, and then declined in the middle to seniors (elderly). Someone's awareness of maintaining and sustaining life is increasing, giving an impact on better quality of life so that the life expectancy is getting higher. The life expectancy is supported by a variety of aspects such as the availability of good health facilities, especially in the medical field and medical technology, better health care, nutrition fulfillment, a good marriage condition, and the maintenance of a healthy environment. All those factors bring a positive impact on the control of the aging process (Departemen Sosial RI, 2004).

Physiologically, the body of the elderly will suffer from various setbacks capacity and capability that comes slowly. Progressively, the cells of the body have suffered a setback that causes anatomical, physiological, and biochemical changes in the body tissue, which ultimately will affect the physical, mental, and social function and ability entirely (Kroemer and Grandjien, 2009). Setbacks on physical ability are characterized by a decrease in body muscle strength in the elderly, for example, hand muscle strength decrease by 16-40%. Organ coordination is weakened so that 25% of elderly had almost fallen (near miss) in the bathroom. The setback also occurred on the ability of vision, partial blindness, weakening the pace of focusing on the eyes, and fading eye lens that results in slow and limited movement on the elderly, so if they are not able to estimate the distance accurately, so that they are vulnerable to the possibility of a bathroom accident (Kumashiro, 2005).

In the current condition, the available necessary facilities for personal hygiene are not in accordance with the elderly anthropometry. They are not equipped with jet showers that will make it difficult for the elderly to clean themselves and are not equipped with a handrail that will cause difficulties, especially to get up from sitting. Quite often, this can lead to falls, accidents, and injury, due to the slippery floor.

An access to ergonomic personal hygiene can be said to be very rare even not provided in elderly- hostels. This is caused by lack of knowledge of either the manager or the architect or contractor building to generate an elderly bathroom design in accordance with the limitations of the elderly. elderly- hostels as government institution should have already started to provide access for elderly people which are elderly friendly, useful to improve the quality of life of the elderly to stay healthy, independent, and efficient so they will not become a burden to themselves, family at the nursing home and the community.

2. Materials and Methods

Material

a) Elderly people and ergonomic

Law No.23 of the year 1992 on health, states the elderly is a person who, because of his age, experiences a biological, physical, psychological, and social change. If it is seen based on the normal human productive age, then the elderly community is people who are aged from sixty years old. Elderly is a term to call the final stage of the aging process. The definition of the elderly is the declining phase of mind and physical ability, which began with a few changes in life (Manuaba, 2012).

Ergonomics is the multi and interdisciplinary science or approach to matching tools, methods, and work environment to the human's ability, skill, and limitations to achieve the highest level of health, safety, comfort, and efficiency (Manuaba, 1998). Ergonomics is also defined as a science, technology, and art or a multi and interdisciplinary approach to match tools, methods, and work environment on human's ability, skill, and limitation to achieve the highest level of health, safety, comfort, and efficiency, through the optimal or maximal use of functional human body (Kumashiro, 2005).

Ergonomics seeks to give a special attention to the elderly, to harmonize the tools, methods, and the activity environment to the ability, skill and all human limitations, so that the elderly can optimally do their activities without any bad effects. From the standpoint of ergonomics, the demands of the activity and the capacity should always be in the line of balance so that high-performance activities can be achieved. In other words, the demands of the task of the elderly should not be too low (under load) and also should not be too excessive (overload) for both either the underload and overload will cause stress.

b) Elderly's Special Needs

The prosperity of the elderly, because of their physical or mental condition, needs a special attention from the government and society. From the anatomy and physiology point of view, every elderly experience a physical decline. Human's optimal physical ability can be achieved at age of 25-30 years old, and the capacity of a person's physiology will decline 1% per year after its peak is exceeded. A person's physical capacity is directly proportional to age to a certain extent and reaches its peak at the age of 25 years old. Physiologically at age 25-60 years old, there is a decrease in muscle strength as much as 25% and motor sensory abilities decreased by 60% (Reed *et al.*, 2012). Degeneration process occurs on the cartilage and muscles leading to a decreasing mobility and increased risk of injury. Therefore, the most important thing is, the work done by the elderly should not require muscular strength, endurance, speed, and flexibility. Bone loss (osteoporosis), including diseases of metabolic disorders in which the body is unable to absorb and use the materials for the process of reinforcement normally. In these circumstances, there is a reduction in bone mass that results in lighter and more fragile bone (Soeweno, 2010).

Provision of accessibility in physical objects is conducted in public facilities and infrastructure that include accessibility in public buildings as well as in nursing homes. The facilities and accessibility principles are: 1) Safety, every building that is for the public in a built environment, should pay attention to safety for the Elderly. 2) Easiness, everyone can reach all the places or buildings that are common in the environment. 3) Usage, everyone can use all places or buildings that are common in the environment. 4) Independence, everyone should be able to reach, enter, and use all places or buildings that are common in an environment without any help from others.

Safety & Security Needs Elderly to perform personal hygiene activities without fear of falling in the bathroom.

Safety & Security Needs bathroom for the elderly, is more focused on the adjustment of equipment that is more ergonomic, such as avoiding the use of a slippery floor, the addition of handrails and grabs bars to facilitate the elderly to lift her out of the toilet, bathtub, and out of the bathroom access that facilitates to be achieved and are used by the elderly will support elderly people feel safe.

Methods

This research is experimental with treatment by subject design and 12 respondents from elderly- hostels in Bali. Samples are given two treatments, PI (sample using the old facility) and PII (sample using the new facilities). Musculoskeletal disorders were measured using a questionnaire nordic body map. Safety and security are measured using a questionnaire. The data were analyzed using t-test with a significance level of 5%.

3. Results and Discussions

a. Characteristic of Subject

The mean age of respondents was 79.8 ± 6.4 years. This shows that the subjects are in the old age category. The UN world body defines that the elderly are those who aged over 60 years. The elderly average age of 79.8 years indicates an increase in life expectancy for the Elderly in elderly- hostels as a house inhabited by elderly needs an adjustment and design of bathrooms in accordance with the physical condition of its inhabitants. This effort is conducted by considering that the ability of the elderly motor movement has been tremendously reduced. It is caused by the decrease in motor sensor capacity. Elderly should get attention, in particular to needs of personal r. The bathroom is the most dangerous area for activity. Therefore this site needs a special attention. Accessibility to personal hygiene should be easy to use by the elderly so that their health is maintained and their quality of life is getting better. In this study, personal hygiene accessibility includes bathtub, toilet seat, bathroom door handles, railing, and providing seating for a shower.

b. The decrease in musculoskeletal complaints

The amount of musculoskeletal complaints in the first period is caused by the imposition of the muscles, especially in the wrists, neck, shoulders, hips, knees, thighs, and legs because the access provided for the activities is incompatible with the needs of the elderly, also it is a result of activities undertaken by standing with active and static movements. Back pain can be caused by muscle tension and posture while on the move. Difference Test Analysis in the final conditions (post) obtained significant results ($p * < 0.05$). This gives the sense that there is a significant difference between the PI and PII group on the musculoskeletal complaints. The decrease of musculoskeletal complaints amounted to 25.69% indicates that elderly ergonomics lowers excessive muscle use, because of the easy access to the facilities used for personal hygiene activities. This effort is done by considering that the ability of elderly motor movement has been tremendously reduced, it is caused by the decrease in motor sensor capacity.

c. Safety & Security Needs Elderly

Safety & Security Needs bathroom for the elderly, is more focused on the adjustment of equipment that is more ergonomic, such as avoiding the use of a slippery floor, the addition of handrails and grabs bars to facilitate the elderly to lift her out of the toilet, bathtub, and out of the bathroom access that facilitates to be achieved and are used by the elderly will support elderly people feel safe. Accessibility friendly bathroom Seniors are not only safe to use also gives credence to the Elderly without the help of others and without fear of injury. In the PI obtained a score of 8.31 while the security of PII obtained a score of 16.49, an increase of safety and security of 98.4%. These results indicate that the ergonomics intervention proved to cause an increase in safety in the elderly in PSTW of Bali Province. Accessibility interventions include the facilities such as bathtub, a handle or railing, a repair to a handled door, toilet seat, shower wash, and shower seat.

4. Conclusion

Elderly should get attention, in particular to the need for personal hygiene fulfillment. The bathroom is the most dangerous area to do the activities. Therefore that site needs a special attention through an access to be easily used by the elderly. Nursing Home (home service) as a place inhabited by the elderly need a specially designed bathroom tailored to meet the capabilities, the ability, and limitations. This effort is done by considering that the ability of motor movement and motor sensor of the elderly have been tremendously reduced.

Suggestion

The time has come for the government to pay attention to the special needs of the elderly by providing facilities and infrastructure that is easy to access for the elderly to give their rights and to treat the elderly humanly.

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