



DESCRIPTION OF OBESITY CHARACTERISTICS IN ELDERLY WITH WALKING DISTURBANCE

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ABSTRACT

A person who has reached the age of 60 years and over will experience an aging process which is characterized by changes such as decreased memory, muscles that are no longer flexible, decreased hearing and vision function, and problems walking. Barriers to walking can cause limitations in moving independently using the feet in an environment to be disrupted because it can slow down something a person is doing. Barriers to walking in the elderly are characterized by several characteristics, including obesity. This study aims to determine the characteristics of obesity in elderly people with walking obstacles in Kendal Indonesia. The design of this research is descriptive qualitative. The research population was 45 elderly people using a total sampling technique. Data were collected using the Body Mass Index (BMI) calculations as an International standard. Body mass index (BMI) is the method of utilizing an adult's height and weight to broadly place them into underweight, normal weight, overweight and obese categories. BMI can be calculated using metric or imperial (US) units. The results of this study showed that thin body weight (6.7%), normal body weight (68.9%), fat body weight (13.3%), and obese body weight (11.1%). Obesity causes obstacles to walking.

Keywords: elderly; obesity; walking disturbance

INTRODUCTION

People with age 60 years and over is the final stage of the aging process which has an impact on three aspects, namely biological, economic and social. The process of slowly losing the ability to function in tissues, which is characterized by aging such as memory loss, hair starting to turn white, skin starting to sag, muscles no longer being flexible, decreased hearing and vision function, and emotions becoming more sensitive (Desintya Fryda, 2021). Due to changes in health, elderly people experience problems walking (Ginting & Marlina, 2018). Globally, the world population in 2050 will increase by 100% from a total of 12% to 22% so that the total number of elderly people, which was initially 900 million people, will increase to 2 billion people in the world (Baris et al., 2019). The number of elderly people in Indonesia reached 20.24 million people, or equivalent to 8.03% of the entire Indonesian population in 2014 (Dahroni et al., 2019). The results of the population census in Central Java in 2020 show that the number of elderly people reached 4.82 million people or 13.87% (Supriyanto et al., 2021). According to Kendal Regency/City, the elderly population is in 24th place with an elderly population of 119,079 or 12.25 elderly residents.

Walking disturbance are limitations in moving independently using the feet in an environment (Herdman, 2018-2020). Decreased muscle strength in the elderly occurs due to leakage of calcium from a group of proteins in muscle cells called ryanodine which then triggers a series of events that limit the contraction of muscle fibers (Setiorini, 2021). Decreased muscle strength is one of the changes of the aging process. Decreased muscle strength in the elderly results in difficulty in carrying out daily activities (Setiorini, 2021). The results of this study are in line with Martha (2020), the research results showed that there was a significant difference between weak muscle strength and normal joint range of motion and muscle strength. Decreased muscle

strength in the elderly is the main factor that causes the elderly's balance to decrease. Apart from decreasing muscle mass, in the elderly there is also an increase in fat mass which can cause obesity in the elderly (Solikhah et al., 2020). Obesity is the ratio of body weight and height exceeding specified standards (Fatria et al., 2022). Obesity is excess weight caused by excessive accumulation of fat in the body (Salsabila et al., 2022). Based on the results of BMI measurements from 1,938,628 people in Central Java Province, the percentage figure for obesity was 28.97%, consisting of 148,295 men and 413,447 women. The results of research by Turege et al., (2019) at the Tegalrejo Community Health Center, Salatiga City, Central Java, show that there is a significant relationship between physical activity and obesity. This research adds to the data that obesity can cause problems with walking or activities disturbance.

METHOD

In this research design, the researcher uses descriptive analytical research, namely research carried out to analyze data by describing the data that has been collected as it is without intending to draw conclusions. The design of this research is qualitative descriptive research. The research sample was 45 elderly people using total sampling technique. Data were collected using the Body Mass Index (BMI) calculations as the instrument of obesity. The data was processed using a frequency distribution formula to describe the respondent's body weight. This research did not require ethical clearance because it was carried out in the community.

RESULTS AND DISCUSSION

Table 1.
Frequency Distribution of Respondent Characteristics Based on Gender (n=45)

Sex	f	%
Male	13	28,9
Female	32	71,1

Table 1, it shows that the majority of elderly people are female with 32 (71.1) respondents.

Table 2.
Frequency Distribution of Respondent Characteristics Based on Age (n=45)

Variabel	Mean	Median	Min	Max
Usia	64,84	65,00	60	70

The table above shows that the minimum age of respondents is 60 years and the maximum age of respondents is 70 years.

Table 3.
Frequency Distribution of Respondent Characteristics Based on Obesity (n=45)

Body weight	f	%
Underweight	3	6,7
Normal	31	68,9
Overweight	6	13,3
Obesity	5	11,1
Total	45	100,0%

Table 4 above, data shows that 31 respondents had a normal weight with a percentage of 68.9% and 3 respondents (6.7%) were underweight.

Characteristics of Respondents Based on Gender

The results of the research based on the gender characteristics of elderly respondents with walking impairments are based on table 4.1 with a total of 45 respondents showing that the majority of respondents were female, namely 32 respondents (71.1%), while male gender was 13 respondents (28.9%). These numbers can show that women have a greater proportion/percentage of experiencing walking obstacles than men. The results of this research

are in line with Cahyaningrum (2021), the research results showed that the majority of elderly people in Rojinhome Yoichi Kokuba Yonabaru Okinawa Japan were female. The results of this research are supported by Samplean et al., (2015) who stated that in their research there were more female respondents, namely 63.5%, compared to male respondents, namely 36.5%. This occurs due to gait disorders which can cause elderly people to be unable to support their bodies when walking (Dzulhidayat, 2022). Low physical activity can increase risk factors for gender balance. Time spent doing low physical activity such as walking shows a decrease (Ivanali et al., 2021).

Characteristics of Respondents Based on Age

The results of research based on age show the minimum age for elderly people who experience walking obstacles based on table 4.2 with a total of 45 respondents showing that the average respondent is 64 years old, the minimum age of respondents is 60 years while the maximum age is 70 years. This research is in line with Redha et al., (2022), that as a person's age increases, the person's risk of experiencing walking disorders increases. Increasing age causes a decrease in muscle strength and joint flexibility which can affect a person's walking balance.

Obesity

Based on table 4.4, it shows that respondents with normal weight were 31 respondents (68.9%) and underweight were 3 respondents (6.7%). The results of this study are in line with Khadijah et al., (2023) who stated that excess BMI can cause obesity due to decreased metabolic processes and there is no balance in physical activity, so excess calories will be converted into fat which can result in obesity. According to research by Almunawar et al., (2020) obesity is a condition that occurs due to the accumulation of excess fat in the body. Obesity in the elderly can result in balance disorders, increased body weight which will directly increase pressure on the legs. The distribution of body mass in people with obesity causes the main fulcrum of the body to experience a decrease in the strength of both bones, muscles and joints. When this lever system reaches its maximum limit, there will be a predisposition to structural changes in the foot and changes in foot function which can affect a person's walking balance (Redha et al., 2022).

In obese individuals, locomotor activity involves greater changes or control of body mass, which inhibits functional movement and contributes to higher rates of lower extremity orthopedic changes, such as tibial shaft and plantar stresses. among people with obesity (Barros et al, 2022). In adult individuals with obesity, movement limitations are influenced by the presence of excess fatty tissue around the joint segment that mechanically inhibits it joint movement. 6 The obesity factor is related to other factors such as joint load Excessive exercise, changes in posture, and a sedentary lifestyle can affect development musculoskeletal and impact on movement. Thus, the mobility of the joint changes is one of the risk factors for orthopedic problems. This may be a physiological explanation for a significant correlation of obesity with joint motion (Raharjo, et, al, 2016).

CONCLUSION

The age characteristics of elderly respondents who experience walking difficulties show that the average respondent is 64 years old and 32 respondents (71.1%) are female. Characteristics of respondents based on obesity in elderly people who have difficulty walking with a total of 45 respondents showing that respondents with normal weight were 31 respondents (68.9%) and thin body weight were 3 respondents (6.7%).

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