



RISK OF FALLS IN ELDERLY PARENTS WITH CHRONIC DISEASES

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ABSTRACT

Chronic conditions in the elderly, such as hypertension, diabetes, heart disease, and nerve disorders, have a higher tendency to cause balance and body coordination problems, which contribute to falls. Falls among elderly individuals with chronic diseases are a serious health issue because they can increase morbidity and mortality rates and reduce the quality of life. The population in this study consisted of 107 elderly people suffering from chronic diseases, with a sample size of 84 respondents. The sampling technique used was purposive sampling with the following inclusion criteria: elderly individuals suffering from chronic diseases. The exclusion criteria included those who did not experience hearing, vision, or speech impairments, dementia, or total paralysis. The research instrument used was the Morse Fall Scale (MFS). The data obtained were analyzed using descriptive statistics via SPSS. The results showed that the majority of respondents with chronic diseases were aged 60–70 years (94.0%), with 63.1% being female. Regarding the number of chronic diseases, 44.3% of respondents had one chronic disease. The fall risk scale indicated that 41.7% had a low risk of falling, 36.9% had no risk, and 21.4% had a high risk. The conclusion of this study is that elderly individuals with chronic diseases have varying fall risks, both low and high.

Keywords: chronic disease; elderly; risk of falls

INTRODUCTION

Prospects population elderly in the world in 2050, 1 in 6 people in the world will be over 65 years old, up from 1 in 11 in 2019 (United Nations, 2019). The number of elderly people aged 65 years and over in 2019 was 703 million and is projected to double to 1.5 billion by 2050. This condition shows that each country is experiencing an increase in the number and proportion of the elderly population (United Nations, 2019); (Kazeminia et al., 2020). Elderly are stage end development in the human life cycle, which occurs after the age of 60 years. As they age, the elderly experience several changes in the physiological, physical, psychological and social domains. Psychological and social changes include social interaction disorders, withdrawal, loneliness, depression, anxiety disorders and changes in physiological functions including cells, sensory systems, integumentary systems, neurological, pulmonary, endocrine, urinary, gastrointestinal, sexual, and cardiovascular systems. And changes that occur in the physical domain changes to the system musculoskeletal (Kemenkes RI, 2021). Changes that occur in the elderly make them more susceptible to chronic diseases.

Disease chronic is problem health chronic (Nugraha & Ramdhanie, 2018). Most of them elderly own One or more condition disease (Hirst et al., 2020). The World Health Organization (WHO) classifies chronic diseases into two categories: communicable diseases and non-communicable diseases. The communicable disease that is a trending issue in developing countries is tuberculosis, while non-communicable diseases are degenerative diseases related to lifestyle. Chronic diseases that are commonly suffered by the elderly include hypertension, diabetes mellitus, tuberculosis, cancer, kidney failure, heart disease, stroke, gastritis, rheumatism, and acid reflux (WHO, 2021). Supported results study previously by (Kirana et al., 2024), history disease Chronic diseases that are often suffered by the elderly are hypertension, diabetes mellitus, heart disease and joints.

Elderly with history disease chronic in Indonesia in 2021 has a fairly high number. As many as 28.53% of elderly people aged 60-69 years have health complaints related to a history of chronic diseases including hypertension by 25%, stroke incidence by 30-40% and incidence disease heart Coronary by 20% (Badan Pusat Statistik, 2023). Based on results recapitulation of new NCD case data, the total number of new cases of 15 types of NCD reported in 2023 was 6,987,551 cases with the following proportions. Disease Hypertension Still occupy proportion the biggest from all reported NCDs, which is 72.0%, while the second highest is Obesity at 12.44% and in third place is Diabetes Mellitus at 9.59%. These three diseases are the main priorities for controlling NCDs in Central Java. If Hypertension, Obesity and Diabetes Mellitus are not managed properly, they will cause further NCDs such as Heart Disease, Stroke, Kidney Failure, and so on. NCD control can be carried out with appropriate interventions in each target/population group so that the increase in cases new PTM can pressed (Badan Pusat Statistik, 2023). History of disease chronic diseases suffered by the elderly can increase the risk of falls

Risk fall in the elderly is problem significant health benefits because it can leading to injury serious, limitations function, and decline quality life (Agustiningrum et al., 2023). In Indonesia, the number of elderly people who fall each year is around 30%, this is This increase will Keep going increases to 25% at the age of 70 years to 35% after the age of 75 years. One of the reason fall that is disease chronic (Stanley, M. & Beare, 2019). The factors that cause falls in the elderly are very complex and involve various physical, psychological, and environmental aspects. Some of the main risk factors that can increase the likelihood of falls in the elderly are impaired balance and mobility, decreased muscle strength, especially in the leg muscles, can reduce stability and balance elderly, movements slow condition medical certain like disease chronic, visual disturbances, use of certain medications, especially those that affect blood pressure blood , system nerve center , or balance can increase risk fall (Shalahuddin et al., 2022);(Nurhayati et al., 2024).

Environmental factors also affect the incidence of falls in the elderly such as slippery floors, scattered objects, poor lighting and the unavailability of walkers in the bathroom mandi (Appeadu & Bordoni, 2023). The impact of falls in the elderly can be fatal or lead to injuries that affect their quality of life, such as fractures (especially the pelvis, wrist, or femur) (Saraswati et al., 2022). Previous studies have shown that older people who suffer from one or more specific chronic diseases have a high risk of falling (Immonen et al., 2020). The purpose of this study was to describe the type of disease history and risk of falls in the elderly with chronic diseases.

METHOD

The type of research used by the researcher is descriptive, with a cross-sectional approach, the population in this study was 107 elderly people suffering from chronic diseases, the sample in this study was 84 respondents, the sampling technique used was purposive sampling with inclusion criteria; elderly people suffering from chronic diseases. Exclusion criteria; do not experience hearing, vision, speech, dementia and total paralysis. The instruments used were a health history questionnaire and a risk assessment sheet, namely the Morse Fall Scale (MFS). The validity results of the Morse Fall Scale questionnaire are with a cut-off point of 51 and the overall correlation value is a sensitivity of 0.72 and a specificity of 0.91. So it is determined that this tool is a valid fall predictor to measure the level of fall risk. The reliability results obtained in the Morse Fall Scale are Cronbach's alpha with a result of 0.94 which shows a result > 0.60 which proves that all statements in the questionnaire are declared reliable (Morse et al., 1989 in Borikova et al, 2017).

RESULT

This study began with the researcher requesting a time contract and asking for approval from the respondents. Respondents who had signed the consent form, the researcher then accompanied the respondents in filling out the questionnaire and observation sheet. Based on results. The data analysis carried out produced the following results:

Table 1
Respondent Characteristics

Respondents	f (%)
Age	
Elderly 60-70	79 (94.0%)
Old 75-90	5 (6.0%)
Gender	
Man	31 (36.9%)
Woman	53 (63.1%)
Number of diseases suffered	
1 Disease	37 (44.3%)
2 Diseases	35 (41.7%)
3 Diseases	9 (10.7%)
4 Diseases	3 (3.6%)

Based on table 1 of respondent characteristics, it is known that the majority of respondents with chronic diseases, as many as 94.0%, are aged 60-70 years, the majority of gender data are female, as many as 63.1%, while the data on the number of diseases suffered by the majority, as many as 44.3% suffer from 1 chronic disease.

Table 2
Fall Risk Scale

Fall Risk Scale	f (%)
No Risk of Falling	31 (36.9%)
Low Risk of Falling	35 (41.7%)
High Risk of Falling	18 (21.4%)

Based on table 2, the risk scale for falling shows that the low risk of falling is 41.7%, no risk of falling is 36.9%, and the high risk of falling is 21.4%.

DISCUSSION

Based on the results of the study, the majority of 94.0% are aged 60-70. In line with previous research, the age of the elderly who suffer from chronic diseases is 61-70 years. The older a person is, the vestibular system in the brain that regulates balance body the more decrease level its sensitivity (Subandi et al., 2021). Characteristics based on gender found that the majority of elderly people suffering from chronic diseases are female. Supported by previous research, the majority of elderly people suffering from chronic diseases are female, as much as 57.5% (Harisa et al., 2022). In line with the results of previous studies that the majority of elderly people suffering from chronic diseases are female, as much as 81.8% of the total respondents are 50 (Sovianti et al., 2025).

Women are more Lots suffer degenerative diseases at the age of 40-60 years. At this age, women are usually reaching the peak of their careers, and it is precisely at this time that they will experience menopause (age 45-55 years) (Palupi & Ghazaly, 2024). Menopausal conditions can reduce the production of female hormones (estrogen and progesterone). With the decline in female hormones, the distribution of body fat begins to be disrupted. The accumulation of fat that is not distributed properly will affect the body's metabolism. If this process is followed by unhealthy eating patterns, lifestyles, and activities for a long time, then after the age of 60 individuals will prone to to attack disease degenerative (Permana S et al., 2024);(Detty et al., 2020).

Elderly people are a natural process, aging will occur in all human body systems and not all systems will experience humans getting old at different ages. This condition is characterized by the occurrence of many declines Good in a way physical, as well as psychic (Fatmawati & Imron, 2017);(Palupi & Ghozaly, 2024). As age increases, physiological functions decrease due to the aging process so that non-communicable diseases often appear in the elderly. Degenerative problems also reduce the body's resistance so that the elderly prone to caught infection disease infectious (Zaenurrohman, Destiara Hesriantica, 2017).

Elderly people with chronic diseases generally have several diseases, based on research results obtained that the types of chronic diseases suffered by the elderly are hypertension, diabetes mellitus, CKD, gout, cholesterol, stroke, GERD, tuberculosis, cataracts, prostate cancer. In line with the results of previous research, the types of chronic diseases that many elderly people suffer from are cardiovascular disease, cancer, diabetes, chronic respiratory disease, asthma, chronic kidney disease, arthritis, cataracts, osteoporosis, and psychology (Ikakusumawati et al., 2024);(Gea et al., 2024); (Harisa et al., 2022).

The results of the questionnaire were obtained from the respondents' answers. The most frequently answered type of chronic disease was hypertension, and on average the elderly suffer from this chronic disease for more than one year, and there is special treatment to deal with chronic diseases suffered by the elderly, including: elderly people seek treatment at nearby facilities such as community health centers or hospitals. Chronic diseases can put seniors at risk of falls. The results of this study also show that the majority of elderly individuals suffer from a single condition, specifically hypertension and diabetes mellitus (DM). Elderly individuals with two conditions include hypertension and DM, stroke and hypertension, DM and high cholesterol, as well as hypertension and high cholesterol. Those with three conditions include hypertension, DM, and stroke; hypertension, DM, and high cholesterol; and hypertension, vertigo, and gout. Elderly individuals with four conditions include hypertension, DM, high cholesterol, and gout, as well as vertigo, hypertension, gout, and asthma.

Risk fall can cause injury serious which causes elderly lost independence in do activity daily (Bahriah et al., 2024); (Setiorini, 2021). The risk of falls in elderly people with chronic diseases is a significant health problem, because it can increase morbidity and mortality, and reduce quality of life (Astuti & Triyana, 2024); (Ahmad et al., 2024). Elderly people with chronic illnesses have a higher tendency to experience balance disorders and weak body coordination, which contribute to fall accidents (Ivanali et al., 2021). Other influencing factors include medications that can affect cognitive and physical function, as well as unsafe living conditions (Ariyanti et al., 2024).

CONCLUSION

Elderly people with chronic diseases have problems with physical activity so they experience limitations in their range of motion, besides that the leg muscles will weaken and experience a decrease in function causing stiffness in the joints so that the elderly are at risk of falling. The factors causing other falls in the elderly are very complex and involve various aspects of chronic disease, physical, psychological and environmental.

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