

The Relationship Between Knowledge Level and Osteoarthritis Severity in the Elderly at the Posyandu Lansia of Puskesmas Tlogosari Kulon

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Abstract

Osteoarthritis is a degenerative joint disease that often leads to disability, with a globally increasing prevalence. Knowledge about a particular subject has two aspects that determine attitudes and behavior: positive and negative aspects. The more positive aspects are known, the more positive attitudes and behaviors are formed toward the subject. A lack of knowledge is one of the risk factors for Osteoarthritis. This study aims to examine the relationship between knowledge level and the severity of Osteoarthritis in the elderly at Posyandu Lansia Puskesmas Tlogosari Kulon. This is an analytical observational study with a cross-sectional approach. The sampling technique used was purposive sampling, with 57 elderly participants. Data were collected using the Lequesne index questionnaire and the PKQ-OA questionnaire. The statistical test used was the chi-square test. The study results showed that the majority of respondents had poor knowledge (54.4%) and suffered from Osteoarthritis with a very severe degree (35.1%). The bivariate analysis showed a significant relationship between knowledge level and the severity of Osteoarthritis ($p = 0.014$). There is a significant relationship between knowledge level and the severity of Osteoarthritis. The higher the level of knowledge, the lower the severity of Osteoarthritis experienced by the elderly.

Keywords: knowledge level, osteoarthritis, elderly, severity of osteoarthritis

INTRODUCTION

Osteoarthritis is the leading cause of disability among the elderly. It ranks as the 11th most debilitating disease worldwide, affecting 43 million people globally in 2017. Osteoarthritis is a degenerative joint condition characterized by cartilage damage, osteophyte formation, subchondral bone thickening, and non-specific synovial inflammation, often leading to progressive disability. Several risk factors for osteoarthritis include age, obesity, female gender, physical activity, genetics, joint trauma, race, lack of knowledge, and chondrocalcinosis. Obesity, lack of physical activity, diabetes mellitus, and the perimenopausal age of still active workers can exacerbate pre-existing OA conditions.

Globally, in 2020, there were 595 million people suffering from osteoarthritis. According to the Basic Health Research in 2018, the prevalence of osteoarthritis in Indonesia reached 713,783 individuals. The prevalence among the age group 45-54 years was 119,664 individuals, and among the age group 55-64 years, it was 79,919 individuals. In Central Java, the prevalence of OA was 6.78% among 67,977 people, consisting of 35,477 women (7.83%) and 33,300 men (5.69%).

Knowledge is crucial in community life. A person's knowledge about an object has two aspects that will determine attitudes and behaviors, namely positive and negative aspects. The more positive aspects known, the more likely they are to develop a positive attitude and behavior towards the object. Many people are unaware of diseases they have because symptoms often do not stand out and due to a lack of knowledge. This lack of knowledge results in the inability to detect the disease early.

Based on research conducted in 2021, there was a significant relationship between knowledge and attitudes about Osteoarthritis, with a p-value of 0.013. In research conducted in 2024, a significant relationship was found between the level of knowledge and recurrent pain in elderly patients with Osteoarthritis, with a p-value of 0.021.

Based on the above description, it can be concluded that Osteoarthritis is a significant health issue globally that can cause progressive disability. Lack of knowledge is often considered to cause negative behavior towards an object. Therefore, the researchers aim to conduct a study on the relationship between the level of knowledge and the severity of Osteoarthritis in the elderly at the Posyandu Lansia Puskesmas Tlogosari Kulon.

METHOD

This study uses an observational quantitative method research with a cross-sectional design. The sample used was taken with a purposive sampling technique of 57 respondents.

RESULTS AND DISCUSSION

Table 1. Univariate Analysis

Characteristics of Respondents	Frequency (n)	Percentage (%)
Age		
Middle Age	10	17,5
Alderly	43	75,4
Old	4	7,0
Gender		
Man	19	33,3
Woman	38	66,7
Education		
Elementary School	10	17,5
Middle School	20	35,1
High School	23	40,4
Bachelor	4	7,0
Level of Knowledge		
Good	26	45,6
Bad	31	54,4
Severity of Osteoarthritis		
Normal	4	7,0
Mild	12	21,1
Moderate	9	15,8
Severe	6	10,5
Very Severe	6	10,5
Extremely Severe	20	35,1
Total	57	100,0

The study results showed that the total number of respondents used was 57 elderly individuals, most of whom were categorized as elderly, with 41 individuals (71.9%), followed by middle-aged individuals, with 11 individuals (19.3%). Based on gender, the majority of respondents were female, with 38

individuals (66.7%), and male, with 19 individuals (33.3%). In terms of educational level, most respondents had a high school education, with 23 individuals (40.4%), followed by those with junior high school education, with 20 individuals (35.1%). Respondents had good knowledge about Osteoarthritis, with 26 respondents (45.6%) having good knowledge and 31 respondents (54.4%) having poor knowledge. Respondents who experienced Osteoarthritis complaints based on the Lequesne index with mild severity amounted to 12 respondents (21.1%), moderate severity amounted to 9 respondents (15.8%), severe severity amounted to 6 respondents (10.5%), very severe amounted to 6 respondents (10.5%), and the most common was extremely severe severity amounting to 20 respondents (35.1%).

Table 2. Bivariate Analysis

Level of Knowledge	Severity of Osteoarthritis						p-value	RP (95% CI)
	Normal-Moderate		Severe-Extremely Severe		Total			
	N	%	N	%	N	%		
Good	16	61,5%	10	38,5%	26	100%	0,014	0,54
Bad	9	29,0%	22	71,0%	31	100%		

Based on the Chi-Square test analysis, it was found that respondents with good knowledge who experienced normal to moderate severity of Osteoarthritis amounted to 16 individuals (61.5%), and respondents with good knowledge who experienced severe to extremely severe Osteoarthritis amounted to 10 individuals (38.5%). Meanwhile, respondents with poor knowledge who experienced normal to moderate severity of Osteoarthritis amounted to 9 individuals (29.0%), and respondents with poor knowledge who experienced severe to extremely severe Osteoarthritis amounted to 22 individuals (71.0%).

The Chi-Square test results showed a p-value of 0.014 and RP (95% CI) = 0.54. Since the p-value < 0.05, H₀ is rejected, and H_a is accepted. Therefore, it can be concluded that there is a significant relationship between the level of knowledge and the severity of Osteoarthritis in the elderly at the Posyandu Lansia Puskesmas Tlogosari Kulon. It was found that individuals with poor knowledge have a 0.54 times greater risk compared to individuals with good knowledge of Osteoarthritis.

DISCUSSION

Based on the conducted research, it was found that the majority of respondents, who are elderly at the Posyandu Lansia Puskesmas Tlogosari Kulon, have poor knowledge about Osteoarthritis, totaling 31 elderly individuals or 54.4% of the 57 respondents. This is consistent with the research conducted in 2021, which showed that the level of knowledge among the elderly regarding Osteoarthritis was poor. Another study conducted in 2023 also showed similar results, with the majority of respondents having poor knowledge about Osteoarthritis. The severity of Osteoarthritis found in this study using the Lequesne Index questionnaire revealed that most elderly individuals experienced severe to extremely severe levels of Osteoarthritis, with the highest intensity being extremely severe in 20 respondents or 35.1% of the 57 respondents. This is in line with previous research in 2024, which found that the majority of respondents experienced very severe levels of Osteoarthritis.

The results of the analysis between the level of knowledge and the severity of Osteoarthritis using the Chi-Square test showed a significance value of $p=0.014$ ($p<0.05$), indicating a significant relationship between the level of knowledge and the severity of Osteoarthritis at the Posyandu Lansia Puskesmas Tlogosari Kulon. The risk calculation showed an RP value of 0.54, meaning that respondents with poor knowledge have a 0.54 times greater risk than those with good knowledge. This study is in line with Lawrence Green's theory, which explains that knowledge is a predisposing factor that influences a person's health behavior, where positive health behavior can improve a person's health status.

The research results show that knowledge affects the severity of Osteoarthritis. The lower the level of knowledge about Osteoarthritis among the elderly, the higher the risk of severe Osteoarthritis, and vice versa, the higher the level of knowledge about Osteoarthritis, the lower the severity of Osteoarthritis experienced. Knowledge is crucial in determining a person's health condition. It plays an important role in both the prevention and management of Osteoarthritis. Lack of knowledge leads to individuals not recognizing their condition, preventing early detection. Knowledge about an object includes two aspects: negative and positive aspects, which help determine a person's attitude and behavior. The higher the knowledge in the positive aspect of an object, the more likely it is to result in positive attitudes or actions towards that object, enabling the community to perform early prevention and management of diseases.

CONCLUSION

There is a significant relationship between the level of knowledge and the severity of Osteoarthritis in the elderly at the Posyandu Lansia Puskesmas Tlogosari Kulon, as indicated by the p -value of 0.014 ($p<0.005$). This study shows that low levels of knowledge are one of the factors that worsen the severity of Osteoarthritis in the elderly.

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