

Factors Affecting The Recurrence Of Rheumatic Diseases In The Working Area Of The East Ring Health Center In Bengkulu City In 2024

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ABSTRACT

Intoduction: World Health Organization (WHO) in 2016 as many as 335 million people in the world who suffer from rheumatism (Rasiman, N.B & Reskiani,2022).The prevalence of rheumatism in Indonesia is quite high, which is one of 12 non-communicable diseases of rheumatic patients in Indonesia reached 7.30%.The number of rheumatism in Bengkulu province ranked second after Aceh province, amounting to 12.11%.(Ministry of Health, 2018).The purpose of this study was to know the relationship of knowledge with the recurrence of rheumatic diseases, to know the relationship of activity with the recurrence of rheumatic diseases, knowledge of the relationship of diet with the recurrence of rheumatic diseases.Sampling method is done by purposive sampling technique where the researcher takes the sample in accordance with certain considerations. the sample in this study was 75 respondents who were diagnosed with rheumatic disease at the East ring Health Center in bengkulu city in 2024 .From the results of Chi-Square test analysis showed that the value ($p=0.001$) there is a meaningful relationship between knowledge with rheumatic recurrence, from the results of Chi-Square test analysis showed that the value ($p=0.021$) there is a meaningful relationship between activity patterns with rheumatic recurrence, the results of Chi-Square test analysis (continuity correction) showed that the value ($p=0.001$) puskesmas lingkak timur bengkulu city in 2024.It is hoped that these results to the East Lingkar Health Center can provide useful information and input in preventing and treating this rheumatic recurrence.

INTRODUCTION

Rheumatism is a chronic systemic inflammatory disease that causes joint bone destruction, deformity, and resulting disability (Minropa A, et al, 2022). Rheumatism is one of the causes of joint pain, especially small joints in the wrist and finger area. Complaints of stiffness, pain and swelling due to rheumatic disease can last continuously and get worse over time. Most rheumatic diseases are chronic, that is, they recover and recur repeatedly, causing persistent joint damage (Asmara, et al, 2023).

Based on World Health Organisation (WHO) data in 2016, there were 335 million people in the world who experienced rheumatism (Rasiman, N.B & Reskiani, 2022). The incidence of rheumatism in the elderly each year is around 3 cases per 10,000 population, and the prevalence rate is around 1% increasing with age and peaking between the ages of 35 and 50 years. In Indonesia in 2020, the number of elderly people is 28.8 million people experiencing various diseases including rheumatism as much as 49.0%.The prevalence of rheumatism in Indonesia is quite high, which is one of 12 non-communicable diseases (Andri et al in Minropa A, et al, 2022).

Based on Riskesdas data in 2018, the number of people with rheumatism in Indonesia reached 7.30%. The prevalence diagnosed by doctors is higher in women (8.5%) compared to men 6.1% (Ministry of Health, 2018). The results of the Basic Health Research showed that the rate of rheumatism in Bengkulu Province was ranked second after Aceh province, which was 12.11%. According to age characteristics, more people who experience rheumatism are over 60 years old, which is 18.95% (Kemenkes RI, 2018).

Based on data from the Bengkulu City Health Office, there are 99 rheumatic patients at the Nusa Indah Community Health Centre, 127 people at the Jembatan Kecil Community Health Centre, and 299 people at the East Ring Health Centre. (Bengkulu City Health Office 2022) Based on data from the Puskesmas Lingkar Timur, rheumatic patients in 2023 numbered 305 people. (Puskesmas Lingkar Timur 2023).

Patients with rheumatism often experience Recurrence itself, which is a recurring event experienced by sufferers more than once with frequent quality. Along with the increasing number of rheumatic patients in Indonesia, the level of awareness and misunderstanding about this disease is quite high. This situation explains that the lack of knowledge of the Indonesian people, especially sufferers, to get to know more about rheumatic diseases. In preventing recurrence, it is necessary to

prevent the risk factors for recurrence first that a good level of knowledge, activity, and a healthy diet can reduce the risk factors for rheumatic recurrence (Deka Ade A, 2019).

A person's knowledge can be influenced by education, it cannot be denied that the more educated a person is, the higher they receive information and ultimately the more knowledge they have (Purwanza et al., 2022).

Heavy activities such as going up and down stairs will also affect the recurrence of joint pain. people with joint disease usually experience complaints of joint pain which results in decreased muscle strength so that they cannot carry out daily activities such as squatting and going up and down stairs. So that if the patient goes up and down the stairs for too long it will cause knee pain (Purwanza et al., 2022).

Foods that tend to cause rheumatoid arthritis are foods that contain a lot of purines. Consuming foods that contain purines can cause crystallisation in the joints. Purines in food are found in nucleic acids, which are in the form of nucleoproteins. Nucleic acid is broken down into purine and pyrimidine and purine is converted into crystals in the joints (Jannah et al., 2019).

RESEARCH METHODS

The research design used is a quantitative approach, where the research results obtained later are in the form of numerical data that will be processed and analysed statistically using predetermined calculations. The population in this study were 305 respondents diagnosed with rheumatism in the working area of the East Ring Health Centre. Sampling was carried out using purposive sampling technique with a total sample of 75 respondents.

RESULTS

Univariate Analysis

Table 1. Frequency Distribution Of Knowledge In The Work Area Of The Puskesmas Lingkar Timur Bengkulu City Year 2024

No	Knowledge	Frequency	Percentage
1	Less	30	40,0
2	Enough	15	20,0
3	Good	30	40,0
Total		75	100,0

From table 1 it can be seen that out of 75 respondents, more than half of the respondents had less knowledge 30 Respondents (40.0%) in the working area of the Puskesmas Lingkar Timur Bengkulu City in 2024.

Table 2. Frequency Distribution Of Activities In The Work Area Of The Puskesmas Lingkar Timur Bengkulu City Year 2024

No	Aktivitas	Frequency	Percentage
1	Light activity	50	66,3
2	Heavy activity	25	33,7
Total		75	100.0

From table 2 it can be seen that of the 75 respondents, most respondents had light activities as many as 50 respondents or (66.3%) in the working area of the Puskesmas Lingkar Timur Bengkulu City Year 2024.

Table 3. Frequency Distribution Of Dietary Patterns In The Work Area Of The Puskesmas Lingkar Timur Bengkulu City Year 2024

No.	Diet	Frequency	Percentage
1	Not good	44	58,7
2	Good	31	41,3
Total		75	100.0

From table 3 it can be seen that of the 75 respondents, more than half of the respondents had a bad diet as many as 44 respondents or (58.7%) in the working area of the Puskesmas Lingkar Timur Bengkulu City in 2024.

Bivariate Analysis

Table 4. Relationship Between Knowledge And Recurrence Of Rheumatism In The Work Area Of Puskesmas Lingkar Timur Bengkulu City Year 2024

Knowledge	Rheumatism Recurrence				Total		P
	No Recurrence		Relapse				
	N	%	N	%	N	%	
Kurang	1	3,3	29	96,7	30	100	0,001
Cukup	6	40	9	60	15	100	
Baik	3	43,3	7	56,7	30	100	

Table 4 shows that of the 75 respondents with poor knowledge, 1 respondent (3.3%) experienced no recurrence of rheumatism and as many as 29 respondents experienced a relapse (96.7%). Of those with sufficient knowledge, 6 respondents (4.0%) experienced no recurrence of rheumatism and as many as 9 respondents experienced a relapse (60%). Of those with good knowledge, 13 respondents (43.3%) experienced no recurrence of rheumatism and as many as 17 respondents experienced a relapse (56.7%). The results of the Chi-Square test analysis (continuity correction) show that the p value = 0.001 which means less than $\alpha = 0.05$, it can be concluded that there is a significant relationship between knowledge and rheumatic recurrence in the working area of the Puskesmas Lingkar Timur Bengkulu City in 2024.

Table 5. Relationship Between Activity And Recurrence Of Rheumatism In The Work Area Of Puskesmas Lingkar Timur Bengkulu City Year 2024

Activity	Rheumatism Recurrence				Total		P
	No Recurrence		Relapse				
	N	%	N	%	N	%	
Light activity	18	36	32	64	50	100	0,021
Heavy activity	2	8	23	92	25	100	

Table 5 shows that of the 75 respondents whose light activity was 18 (36%) who experienced no relapse and light activity as many as 36 respondents (64%) who experienced relapse. While heavy activity as many as 2 respondents (8%) who experienced relapse and heavy activity as many as 23 respondents (92%) who experienced relapse.

The results of the Chi-Square test analysis (continuity correction) show that the p value = 0.021 which means less than $\alpha = 0.05$, it can be concluded that there is a significant relationship between activity patterns and Rheumatism Recurrence in the working area of the Puskesmas Lingkar Timur Bengkulu City in 2024.

Table 6: Relationship Between Diet And Recurrence Of Rheumatism In The Work Area Of The Puskesmas Lingkar Bengkulu City In 2024.

Diet	Rheumatism Recurrence				Total		P
	No Recurrence		Relapse				
	N	%	N	%	N	%	
Good	5	48,4	16	51,6	31	100	0,001
Not good	5	11,4	39	88,6	44	100	

Table 5 shows that of the 75 respondents who had a good diet, 15 respondents (48.4%) did not relapse and as many as 16 respondents (51.6%) who relapsed. while the pattern was not well obtained as many as 5 respondents (11.4%) who did not relapse and as many as 39 respondents

(88.6%) who relapsed. The results of the Chi-Square test analysis (continuity correction) show that the p value = 0.001 which means less than $\alpha = 0.05$, it can be concluded that there is a significant relationship between diet and rheumatic recurrence in the working area of the Puskesmas Lingkar Timur Bengkulu City in 2024.

DISCUSSION

Relationship Between Knowledge And Recurrence Of Rheumatism In The Work Area Of Puskesmas Lingkar Timur Bengkulu City Year 2024

Research conducted at the Puskesmas Lingkar Timur, Bengkulu City out of 75 respondents who were less knowledgeable, 1 respondent (3.3%) experienced no recurrence of rheumatism and as many as 29 respondents experienced relapse (96.7%). Of those with sufficient knowledge, 6 respondents (4.0%) experienced no recurrence of rheumatism and as many as 9 respondents experienced relapse (60%). Of those with good knowledge, 13 respondents (43.3%) experienced no recurrence of rheumatism and as many as 17 respondents experienced relapse (56.7%). Knowledge is less but relapses because respondents know less about rheumatic recurrence and also the average respondent has a lower level of education so that the respondent does not know the recurrence of rheumatism. Meanwhile, good knowledge but still relapses because respondents know information about rheumatism from other people and other media who do not know the correctness of the information, so knowledge is good but still relapses. A person's knowledge can be influenced by education, it cannot be denied that the more educated a person is, the higher they receive information and ultimately the more knowledge they have (Purwanza et al., 2022). A low level of education will cause respondents to understand less about the signs and symptoms and factors that cause rheumatic recurrence itself. so that respondents only know that rheumatism is a disease that feels pain in the bones and is a natural thing. this knowledge can be obtained from experience, information from health workers and from other media (deka., 2019). The results of the Chi-Square test analysis (continuity correction) show that the p value is 0.001 which means less than alpha 0.05, so H_0 is rejected and H_a is accepted, meaning that there is a significant relationship between Knowledge and Rheumatic Recurrence in the work area of the Puskesmas Lingkar Timur Bengkulu City in 2024. the results of this study mean that the better the knowledge, the recurrence of rheumatism is reduced. if knowledge is lacking, the respondent's rheumatic recurrence is re-exposed to rheumatic recurrence. Based on research conducted by deka (2019). there is a significant relationship between knowledge and recurrence of rheumatism in the elderly in the village of beran ngawi. This is evidenced by the Chi Square test with a value of ($\rho = 0.003 \leq \alpha = 0.05$) which means that there is a significant relationship between knowledge and rheumatic recurrence in the elderly in Beran Ngawi village. From the results of the study it can be concluded that respondents who have better knowledge, the recurrence of rheumatism is reduced and vice versa if knowledge is lacking, the respondent's rheumatic recurrence will be exposed to a relapse of rheumatism, this can be seen from the p value = 0.001.

Relationship Between Activity And Recurrence Of Rheumatism In The Work Area Of Puskesmas Lingkar Timur Bengkulu City Year 2024

Research conducted at the eastern ring health centre of Bengkulu city out of 75 respondents whose light activity was 18 (36%) who experienced no relapse and light activity as many as 36 respondents (64%) who experienced relapse. While heavy activity as many as 2 respondents (8%) who experienced relapse and heavy activity as many as 23 respondents (92%) who experienced relapse. The pattern of light activity but relapses is because respondents do light activities but use more of the burden of workers and their pressure which can aggravate the joints and use their hands for a long time so that rheumatic relapses can occur again. while heavy activity but relapses, that respondents lack the willingness to do activities such as morning running and gymnastics so as to prevent rheumatic relapses from occurring again and also because of the fear of feeling joint pain when exercising or gymnastics. Activity is the state of people moving when their business needs energy to end the game. Activity is the movement of limbs, which causes energy expenditure which is very important for maintaining physical and mental health, and maintaining quality of life to be healthy and fit full time throughout the day. Heni (Purnama and Tia Suaahda, 2019) Regular activities such as sports, gymnastics, or physical activity according to ability can help increase joint strength and reduce the risk of rheumatic recurrence. However, if doing activities such as sports or gymnastics regularly and under control will help maintain and help the body's muscles work optimally in bearing weight, keeping bones and joints strong and improving blood circulation. (Primadi., 2018) Regular physical

activity such as sports, gymnastics or physical activity according to ability can help increase joint strength and reduce the risk of recurrence of rheumatism, that poor activity is one of the factors causing the appearance of rheumatism (Ade k., 2019). The relationship between activity patterns and rheumatic recurrence in the work area of the Puskesmas Lingkar Timur Bengkulu City in 2024, the results of the Chi-Square test analysis (continuity correction) show that the p value = 0.021 which means less than alpha 0.05 then H_0 is rejected and H_a is accepted, meaning that there is a meaningful relationship between activity patterns and rheumatic recurrence in the work area of the Puskesmas Lingkar Timur Bengkulu City in 2024. the results of this study mean that the better the activity pattern, the less rheumatic recurrence, if the activity pattern is less, the rheumatic recurrence will recur again. Based on research conducted by deka (2019). there is a significant relationship between activity and rheumatic recurrence in the elderly in the village of beran ngawi. This is evidenced by the Chi Square test with a value of ($\rho = 0.001 \leq \alpha = 0.05$) which means that there is a relationship between activity patterns and rheumatic recurrence in the elderly in Beran Ngawi Village. From the results of the study it can be concluded that respondents who have a better activity pattern, the recurrence of rheumatism is reduced, if the activity pattern is less, the recurrence of rheumatism will recur again, it can be seen the value of $p = 0.021$.

Relationship Between Diet And Recurrence Of Rheumatism In The Work Area Of Puskesmas Lingkar Timur Bengkulu City Year 2024

Research conducted at the Puskesmas Lingkar Timur, Bengkulu City, out of 75 respondents who had a good diet, 15 respondents (48.4%) did not relapse and as many as 16 respondents (51.6%) relapsed, while the diet was not good, 5 respondents (11.4%) did not relapse and as many as 39 respondents (88.6%) relapsed. A diet that is not good but relapses is due to the respondent because the respondent does not know what foods can cause a relapse of rheumatism. While the diet is good but still relapsing, that respondents know foods that can cause recurrence of rheumatism, but many respondents forget about abstinence from foods that cause recurrence of rheumatism due to age factors. Foods that tend to cause rheumatism are foods that contain a lot of purines Consuming foods that contain purines can cause crystallisation in the joints. Purines in food are contained in nucleic acids, which are in the form of nucleoproteins Nucleic acids are broken down into purines and pyrimidines and purines are converted into crystals in the joints (Jannah et al., 2019). Foods to avoid with Rheumatism, red meat, dairy, as they are major sources of saturated fats that can cause inflammation in fatty tissues, include full-fat dairy products, pasta dishes and grain-based desserts. Corn oil due to omega-6 fatty acids as it causes weight gain and joint inflammation. Fried foods, fast foods, and processed foods, because the main source of trans fats, which are made when hydrogen is added to vegetable oil to make it durable, can trigger inflammation throughout the body.(Primadi, 2018) The results of the Chi-Square test analysis (continuity correction) show that the p value = 0.001 which means less than $\alpha = 0.05$, so H_0 is rejected and H_a is accepted, meaning that there is a significant relationship between diet and Rheumatic Recurrence in the work area of the Puskesmas Lingkar Timur Bengkulu City Year 2024. the results of this study mean that a good pattern will reduce the recurrence of rheumatism and vice versa if the diet is not good, the recurrence of rheumatism will recur again. From the results of research by Deka (2019), it shows that there is a relationship between diet and rheumatic recurrence in the elderly in Beran Ngawi Village. This is confirmed by the Chi Square test with a value of ($\rho = 0.005 \leq \alpha = 0.05$) which means that there is a relationship between diet and rheumatic recurrence in the elderly in Beran Ngaw Village. From the results of the study it can be concluded that respondents who have a good pattern, the recurrence of rheumatism will decrease and vice versa if the diet is not good, the recurrence of rheumatism will recur, it can be seen that the p value = 0.001.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. Almost half of the respondents did not have poor knowledge as many as 30 respondents(40%)
2. Almost half of the respondents had light activity as many as 29 respondents (40.8%).
3. Almost part of the diet is not good as many as 44 respondents (58.7%).
4. Almost part of the recurrence of rheumatism as many as 55 respondents relapsed (73.3%).
5. There is a relationship between knowledge and recurrence of rheumatism in the Working Area of the East Ring Health Centre in 2024 ($p=0.001$).

6. There is a relationship between activity patterns and recurrence of rheumatism in the Working Area of the East Ring Health Centre in 2024.(p value = 0.021)
7. There is a relationship between diet and recurrence of rheumatism in the eastern ring health centre working area in 2024 (p=0.001)

Recommendations

This study needs to be conducted in more depth with the right number of samples and support aspects of knowledge, diet, activity patterns so that rheumatic recurrence does not reappear.

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