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Improving Self-Efficacy of Gout Arthritis Sufferers with Self-Help Group

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A B S T R A C T

Gouty arthritis can cause severe pain and other symptoms, that interfere with the activities and enthusiasm of the participants in carrying out disease treatment programs. Therefore, efforts are needed to increase the self-efficacy of sufferers. Self-Help Groups are a type of group therapy that can help exchange experiences and information about disease care and increase emotional support that motivates sufferers to gain self-confidence. This study aims to analyze the effect of implementing a self-help group on the self-efficacy of people with gouty arthritis. This study used a quasi-experimental design with pretests and posttests in the control group. The total sampling technique collected 60 people with gouty arthritis from the Dau Public Health Center in Malang Regency. Data was collected using the Arthritis Self-Efficacy Scale (ASES) questionnaire to assess the respondents' self-efficacy before and after the intervention. The data analysis process used a statistical approach. Paired Sample t-test and Independent Sample t-test by performing the normality and homogeneity tests with Shapiro-Wilk. There was a significant difference in self-efficacy of people with gouty arthritis after participating in a self-help group, according to the findings. It is recommended that the self-help group become a group activity that continues to be carried out for patients with chronic diseases at the public health centers.

Kata kunci:

self-help group
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A B S T R A K

Gout arthritis dapat mengakibatkan nyeri hebat dan gejala lain, yang mengganggu aktivitas dan semangat penderita dalam menjalankan program perawatan penyakit. Maka dibutuhkan upaya untuk meningkatkan efikasi diri para penderita. Self Help Group merupakan terapi kelompok yang dapat memfasilitasi terjadinya proses bertukar pengalaman serta informasi mengenai perawatan penyakit, dan meningkatkan dukungan emosional yang memotivasi para penderita, sehingga dapat meningkatkan keyakinan akan kemampuan diri. Penelitian ini bertujuan untuk menganalisis pengaruh pelaksanaan Self Help Group terhadap efikasi diri penderita Gout Arthritis. Penelitian ini menggunakan desain quasy experimen, dengan pretest dan posttest pada kelompok kontrol. Sampel penelitian ini adalah 60 orang penderita Gout Arthritis di Puskesmas Dau Kabupaten Malang, yang diperoleh dengan teknik total sampling. Pengumpulan data dilakukan dengan menggunakan kuesioner The Arthritis Self-Efficacy Scale (ASES) untuk menilai efikasi diri responden sebelum dan sesudah dilakukan intervensi. Proses analisis data menggunakan pendekatan statistik Paired Sample t-test dan Independent Sample t-test dengan terlebih dahulu dilakukan uji normalitas menggunakan Saphiro

Wilk dan uji homogenitas. Hasil penelitian menunjukkan bahwa terdapat perbedaan yang signifikan pada efikasi diri penderita Gout Arthritis setelah dilaksanakan Self Help Group. Direkomendasikan agar Self Help Group dapat menjadi aktivitas kelompok yang terus dilaksanakan pada penderita penyakit kronis di Puskesmas.

INTRODUCTION

Gout arthritis is an inflammation of the joints caused by the accumulation of monosodium urate crystals, characterized by severe pain, warmth, redness, and swelling around the joints (Yu et al., 2018). In chronic cases, monosodium urate crystals will form tophi, which can lead to joint deformities and functional joint disorders and, if not handled properly, kidney stones and nephropathy (Schlee et al., 2018). Increased uric acid levels that occur in gouty arthritis are also independent risk factors for cardiovascular and kidney disease (Day et al., 2017).

According to the WHO (*World Health Organization*) (2018), the prevalence of *gouty arthritis* in the world has increased to 33.3% (Nofia et al., 2021). WHO also stated that the percentage of *people with gout arthritis* in Indonesia was 8.1% of the total population, of which 29% reported their condition to their doctor and 71% took over-the-counter drugs if they experienced a recurrence or felt pain (Asrizal & Berawi, 2019). Riskesdas (2018) shows that the national percentage of joint disease based on a doctor's diagnosis in the population aged more than 15 years is 7.3%, with the highest percentage of cases namely in the Aceh region at 13.26% and Bengkulu at 12.11%. In East Java Province, the percentage of joint disease, according to Riskesdas data (2018), is 6.72% (Ministry of Health RI, 2018). Hidayati et al. (2020) stated that, based on the 2019 Gout Case Report in Malang City, there were 4937 cases of *gouty arthritis* in Malang City.

Gout arthritis treatment can be managed in two ways, namely medically and self-management strategies (Madyaningrum et al., 2020). The management and treatment of *gout* are based on reducing serum uric acid levels below 6 mg/dl (Ashiq et al., 2018). Self-management strategies or lifestyle modifications are needed to reduce the severity and complications of gouty arthritis (Kang & Lee, 2020). Lifestyle modifications by reducing consumption of animal protein, consuming nuts and seeds, exercising, and losing weight can reduce the risk of increased uric acid (Ashiq et al., 2018). Some types of alcohol, such as beer, can also cause gout attacks because they contain purines, and just like drinks containing fructose, they can cause the formation of lactic acid, which inhibits the release of uric acid, thus causing an increase in uric acid levels (Roman, 2019).

Although it is an important thing in the treatment of chronic diseases, lifestyle modifications that must be done regularly are not easy. Data shows that 77.9% of gout sufferers have poor self-care (Yin et al., 2021). This is because the arthritis that occurs causes severe pain and other physical problems, making it difficult for patients to move. Various complaints related to symptoms that arise from arthritis reduce the patient's confidence in his own ability to manage disease treatment, besides the fact that the presence of pain and other symptoms affects a person's physical ability to carry out self-care (Oroh et al., 2020). Therefore, the self-efficacy of gouty arthritis sufferers is needed to improve their ability to treat the disease.

Self-efficacy is a person's belief in one's ability to achieve success in certain desired things (Bandura, 1993; Fereydouni et al., 2022). Self-efficacy affects how much the patient's effort is put into carrying out certain actions for the treatment of the illness, how much resilience and strength the patient has in dealing with difficult situations caused by medical conditions, and how well the patient is able to overcome obstacles and failures (Lai et al., 2021b). One of the key factors in achieving successful self-management is high self-efficacy (Messina et al., 2018). Research conducted by Lai et al (2021) shows that self-efficacy and self-management are highly and significantly correlated with one another.

Good knowledge and adequate information have a large impact on self-efficacy and self-management (Lai et al., 2021). One source of information to increase self-efficacy is learning from the experiences of other people who have the same problems in terms of achieving certain goals (Cahyadi, 2021). Apart from increasing self-efficacy, research conducted by Yin et al (2021) shows that support and information from fellow patients are also needed by gouty arthritis sufferers. The method that supports the process of exchanging experiences, receiving information, and getting emotional support from friends is the *self-help group* (Prakoso et al, 2016; C. R. Putri, 2020).

A Self-Help Group (SHG) is a group activity in which members provide mutual support to one another. Each member of this group shares experiences with each other about illness, addiction problems, and feelings (Ahmadi, 2013; (Maryam et al., 2019). This will increase the participants' knowledge about the health problems they are experiencing, as well as certain ways that can be done to overcome these problems (Haack et al., 2018). In addition, participating in a *self-help group* will also increase self-confidence and the ability to control the disease experienced (Christiansen et al., 2021). Ririnisahawaitu (2010) in Turnip et al (2022) also explained that the *self-help group* provides psychological and social support to its participants through sharing information about treatment, how to prevent it, and even all the problems that each member experiences in caring for their health, then providing mutual motivation and the right way to solve the problem. *The purpose of this study is to analyze the effect of self-help groups on the self-efficacy of gouty arthritis sufferers.*

METHOD

Participant Characteristics and Research Design

Respondents in this study were all 60 people with gouty arthritis, who were determined using a total sampling technique. Determination of the intervention group using the inclusion criteria, which correspond to the criteria for members of the self-help group, namely:

1) Individuals who are willing and able to play an active role in sharing their experiences in carrying out disease care and solving problems as a form of information.
2) Individuals who can understand the needs of other members of the group, care about them, and want to help them solve their problems.
3) Individuals who can respect any information obtained and guarantee the confidentiality of that information.

This research is a type of experimental research with a quasi-experiment design and a pretest-posttest control group design that was carried out from July to October 2022. The research was conducted after obtaining approval from the Research Ethics Committee of the Faculty of Health Sciences, Universitas Brawijaya *No. 4042/UN10.F17.10/TU/2022,* and permission from the Malang District Health Office and the Dau Health Center. All research procedures were explained before data collection. There is no risk of harming or endangering the respondent, and the respondent may withdraw during the study.

Sampling Procedure, Sample Size, Strength, and Precision

Sampling in this study was carried out at the Dau Health Center in Malang Regency based on data from people who were diagnosed by a doctor as suffering from gouty arthritis, using a total sampling technique. The sample size of the study was 60 people.

Data Collection

The collection was carried out using a questionnaire, The Arthritis Self-Efficacy Scale (ASES), which consisted of two items, namely, pain self-efficacy to measure self-efficacy in controlling pain (5 questions) and other self-efficacy to measure self-efficacy in controlling other symptoms (6 questions). The 11 questions in this questionnaire use a scale range of 1–10, where the higher the score, the higher the self-efficacy.

Data Analysis

The data that has been collected is checked for completeness and analyzed using the statistical test tool SPSS 24.0 for Windows. Bivariate analysis used the paired sample t-test with a normality test first performed using Shapiro-Wilk. Following that, an independent t-test with a 95% confidence level (0.05) and a p-value significance value of 0.05 was used to look for differences in self-efficacy after the self-help group activities.

RESULTS AND DISCUSSION

Table 1.
Characteristics of respondents based on gender, last education, and occupation

Characteristics Respondents	Intervention Group		Control Group	
	n	%	n	%
Gender				
Male	2	6.7	6	20
Female	28	93.3	24	80
Total	30	100	30	100
Last Education				
Not Schooled	0	0	0	0
Elementary School	1	3.3	4	13.3
Junior High School	5	16.7	2	6.7
Senior High School	13	43.3	15	50
University	11	36.7	9	30
Total	30	100	30	100
Employment				
Civil Servant	1	3.3	1	3.3
Private Employee	0	0	4	13.3
Entrepreneur	5	16.7	10	33.3
Workers	1	3.3	4	13.3
Housewives	23	76.7	11	36.7
Total	30	100	30	100

Table 2.
Characteristics of Respondents by Age

Characteristics	Group	Mean	Std. Deviation
Age	Intervention	53.03	8.049
	Control	52.87	7.601

Sixty people with *gouty arthritis* participated in this study. Nothing came out during the research process, so the respondent's participation rate was 100%. Table 1 shows that most of the respondents were female, both in the intervention group, which was 93.3% (28 people), and in the control group, which was 80% (24 people). The respondents' most recent education was that the majority of them had completed senior high school, with information on 13 people in the intervention group and 15 people in the control group. In the description of the types of work of the respondents, it was found that 76.7% or 23 respondents in the treatment group were housewives, and 36.7% or 11 respondents in the intervention group were also housewives. The majority of respondents are early retirees in the age range of 46–55 years. In Table 2, it can be seen that the average age of the respondents who took part in this study in the intervention group was 53 years, and the average age of respondents in the control group was 52 years.

Table 3.
Self-Efficacy of *Gout Arthritis* Before and After *Self-Help Group*

Variabel	Group	Pre-test			Post-test			P-value
		N	Mean	Std. Deviation	N	Mean	Std. Deviation	
Pain self-efficacy	Intervention	30	21.63	3.92	30	44.10	3.96	0.000
	Control	30	22.43	4.66	30	22.07	2.92	0.645
Other self-efficacy	Intervention	30	32.10	2.57	30	55	4.18	0.000
	Control	30	33.77	5.24	30	32.03	3.34	0.052

Prior to analysis using the paired sample t-test, the researcher conducted a normality test using the Shapiro-Wilk test and a homogeneity test, and the test results showed that all data were normally distributed and homogeneous, so that the paired sample t-test could be carried out. Table 3 provides an overview of the average change in respondents' self-efficacy, both pain self-efficacy and other self-efficacy. Before the intervention was given, the average respondent's pain self-efficacy was 21.63 and increased to 44.10 after the *self-help group.* Changes also occurred in other self-efficacy; before the *self-help group,* the average other self-efficacy was 32.10, increasing to 55 after the *self-help group.* The results of the analysis using the *paired sample t-test also* showed that the *p value was* 0.000 (0.05) for each respondent's self-efficacy item. This means that the *self-help group* can increase the self-efficacy of *people with gouty arthritis.*

Table 4.
Frequency Distribution of Differences in Self-Efficacy Changes in the Intervention Group and the Control

Variabel	Group	N	Mean	Std. Deviation	*Mean Difference*	*P Value*
Pain self-efficacy	Intervention	30	44.10	3.96	22.03	0.000
	Control	30	22.07	2.92		
Other self-efficacy	Intervention	30	55	4.18	22.96	0.000
	Control	30	32.03	3.34		

Table 4 shows the difference in changes in self-efficacy scores between respondents in the intervention group after being given *a self-help group* and the control group after being given standard education at the community health center using leaflet media, as tested using the *independent sample t-test.* The test results showed that the *p value* for pain self-efficacy and other self-efficacy was 0.000 (0.05), which means that there was a significant difference in self-efficacy between the treatment group and the control group after the *self-help group.*

In this study, self-efficacy was measured using two scales: pain self-efficacy and other self-efficacy. Where the increase in self-efficacy occurs on the scale of pain self-efficacy and other self-efficacy for pain self-efficacy, the highest score that the respondent should have obtained was 50, but before being given the *self-help group*, the respondent's highest score was 29 and the lowest score was 10, far from the average self-efficacy score of 21.63 (SD ± 3.92). After being given the intervention, the highest pain self-efficacy score achieved was 50, and the lowest score was 35. Meanwhile, for other self-efficacy, the highest score that the respondent should have obtained was 60. Before being given the *self-help group,* the respondent's highest score was 38 and his lowest score was 28. This value then increases after the intervention is given, namely, the highest score is 60 and the lowest score is 45. This means that the self-help group can increase the sufferers' self-efficacy.

The activities of the self-help group in this study were held four times per week. At each meeting, the respondents shared information regarding any problems they experienced while treating *gouty arthritis* and how to solve these problems. The process of exchanging experiences and information related to health care in *a self-help group* increases the respondent's knowledge about the treatment of *gouty arthritis* and ultimately increases self-efficacy. According to Cahyadi, (2021), when individuals see the experiences of other people who have the same goals as themselves, certain information will be obtained, which ultimately forms comparisons. This information will foster an individual's confidence in his ability to achieve certain goals. In addition to increasing self-knowledge, according to Christiansen et al., (2021), participating in *a self-help group* will also increase the patient's self-confidence and ability to control disease.

There is a significant difference in self-efficacy between groups that are given *self help group* and those that are not in this study, in line with the results of research conducted by Syaipuddin et al., (2022), where in this study the results obtained were that there was an effect of *self help group* on sufferers' self-efficacy in DM Type 2 with a *p value of* 0.000. Learning from the experiences of others obtained in *a self-help group* is a source for increasing self-efficacy; observing the success of other people who have the same problems will increase self-efficacy in solving problems experienced (Syaipuddin et al., 2022). This means that establishing self-help groups for gouty arthritis patients can boost their self-efficacy.

Other factors that can support increased self-efficacy are a person's age and educational level. In this study, the mean age of the treatment group respondents was 53 years, which is middle age. In middle age, a person experiences physical and mental changes more often, so that he is susceptible to disease but also has a great will and determination to solve health problems that are experienced, so that when individuals carry out certain activities aimed at solving problems, self-efficacy will increase (Ismatika & Soleha, 2017). This is in line with the results of research in China, which suggests that as a person ages, his self-efficacy will also increase (Chen et al., 2019).

In this study, most of the respondents completed their education at the senior high school. Susanti et al., (2020) suggested that individuals who have a high level of education will find it easier to understand the information obtained and will have the desire and ability to seek additional information about the health problems they are experiencing, which will affect increased self-efficacy. *This is supported by the results of research in Taiwan, which found that education level has a positive relationship with increased self-efficacy* (Lai et al., 2021a).

A self-help group will provide an opportunity for its members to provide advice to each other as well as ways to solve the problems arising from the health problems they are

experiencing (Kim et al., 2017; Kulsum et al., 2021). Directly listening to the experiences of others dealing with similar health issues, as well as seeing firsthand evidence of success from other people's actions, one can form the will and belief that oneself can do the same thing and achieve the same success.

RESEARCH LIMITATIONS

This study has several limitations. First, the sample size in this study is relatively small to analyze individuals from only one health care center. The research sample was only taken from the working area of one of the public health centers in East Java. Second, even though the participants came from the same area under the guidance of the public health centers, the characteristics of the respondents, such as their jobs, varied. This then affects the timing of the implementation of self-help groups, which sometimes runs behind schedule or is not implemented at all. In the control group, the pretest and posttest were not carried out simultaneously at one time but followed the time the respondent came to the public health centers.

CONCLUSIONS AND SUGGESTIONS

The intervention self-help group used in this study was shown to increase self-efficacy. As a result, the self-help group is expected to become one of the public health centers' routine activities for dealing with gout, arthritis, and other chronic diseases. Recommendations For further research, research can be carried out over a longer period of time, around 12 to 24 weeks.

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ETHIC CONSIDERATIONS

The research has received approval from the Research Ethics Committee of the Faculty of Health Sciences, University of Brawijaya, *No.* ***4042/UN10.F17.10/TU/2022,*** **and** permission from the Malang District Health Office and Malang District Health Center Dau.

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Potential Conflict of Interest

The author says that there is no possible conflict of interest between writing this article and getting it published.

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