

ARTICLE INFORMATION

Received: March, 09, 2024

Revised: May, 14, 2024

Available online: May, 15, 2024

at : <https://ejournal.malahayati.ac.id/index.php/minh>

Impact of an educational pain management programme on patients dealing with gout

Defitria Kusuma Ardani, Wachidah Yuniartika*

Program Studi Keperawatan Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surakarta

Corresponding author: *E-mail: wachidah.yuniartika@ums.ac.id

Abstract

Background: Gout is arthritis caused by the buildup of uric acid crystals in the joints. Inadequate knowledge and poor treatment management of gouty arthritis greatly increases the likelihood of incapacity and disability.

Purpose: To determine the effect of health education on the level of knowledge in gout pain management.

Method: Quasi-experimental research, with a one group pre-test-post-test design approach. This design does not have a control or comparison, but the first observation (pre-test) is carried out, allowing the researcher to check what changes have occurred. This research uses a knowledge questionnaire created by Zakiah et al in 2005 and revised by the researcher. This research was carried out in the village of Mayang, Gatak, Sukoharjo in September-October 2023 with inclusion criteria (1) Willing to be participants, (2) Participants can communicate well, (3) People who suffer from gout. The exclusion criteria are not being willing to be a participant. The population in this study is a community of gout sufferers totalling 40 participants using a purposive sampling technique where the researcher's sample was taken based on pre and post results test determined by the researcher.

Results: The results of the hypothesis test show a probability value of less than 0.05, so it can be concluded that there is an influence of health education on the level of knowledge in gout pain management.

Conclusion: It is hoped that the Health Education that has been provided can be used as a source of information in dealing with pain in gouty arthritis with or without the use of medication. The results of research conducted in Mayang village show that providing Health Education is effective in increasing elderly knowledge regarding gout pain management. Education can help increase knowledge about gout and prevent muscle and joint problems in the elderly themselves.

Keywords: Gout Arthritis; Health Education; Knowledge Level.

INTRODUCTION

Gout is arthritis caused by the buildup of uric acid crystals in the joints (Savitri, 2016). Gout or gout is a manifestation of purine metabolism which forms in the form of crystals in the joints (Savitri, 2017). As the elderly population increases, various diseases, including arthritis, gout, often occur in the elderly. Based on data from the World Health Organization (World Health Organization, 2018), the prevalence of gout arthritis worldwide is 33.3%. The incidence of joint disease reached 11.9% of the total population of Indonesia. The prevalence based on age diagnosed

by a doctor is higher in women, 8.5%, compared to men, 6.1%. Based on screening carried out by researchers, 31 elderly people had their uric acid levels measured and it was found that 100% had high uric acid levels (Ministry of Health of the Republic of Indonesia, 2018).

Increased uric acid levels can cause disorders in the human body such as pain in the joint area, and are often accompanied by severe pain in the sufferer. Pain is an unpleasant sensory and emotional experience resulting from actual, potential, or

threatened tissue damage (Haq, Ismail, & Erawati, 2019). This is because inflammation occurs and causes swelling that feels hot and painful. If left untreated it will result in joint damage and disability.

Gout patients are unaware of the slow and gradual accumulation of urate crystals and their negative impact on joint health and are too focused on the acute attack alone without realizing what might happen (Abishek, Roddy, & Doherty, 2017). Inadequate knowledge and poor treatment management of gouty arthritis greatly increases the likelihood of incapacity and disability.

Good knowledge about gout treatment and attitudes towards its practice by gout sufferers influence the healing process and reduce the risk of injury. Insufficient knowledge and poor management of gout treatment greatly increases the possibility of incapacity and disability (Sianipar, 2021). Individual behavior tends to be influenced by knowledge, attitudes and desires. If elderly people suffering from gout are fully aware of their health problems, they will have the desire to practice so they can prevent the disease as early as possible, and vice versa (Situmorang, 2017).

Health education basically helps individuals to have a wise attitude towards health and the quality of their life and medical professionals want people to have sufficient knowledge and apply it in everyday life. To achieve optimal improvement, the family must always be actively involved in the treatment process. To support this, health education by professional medical personnel is needed. The aim of Health Education is so that gout sufferers are aware, willing, able to prevent, treat and carry out health services related to gout so that they can improve their quality of life (Hardinsyah & Supriasa, 2016).

RESEARCH METHOD

This research is included in quasi-experimental research, with a one group pre-test-post-test design approach. This design does not have a control or comparison, but a first observation (pre-test) is made, allowing the researcher to check what changes occur. Measuring before and after testing using the dependent variable. The independent (free) variable in this study is Health Education for pain management and the dependent variable in this study is knowledge

of gout sufferers. This research was carried out in Mayang Village, Gatak District, Sukoharjo Regency and was carried out in September-October 2023. The population in this study were people suffering from gout in Mayang Village, Gatak District, Sukoharjo Regency totaling 40 participants using a purposive sampling technique. The research sample was taken based on the pre and post test results determined by the researcher. Inclusion criteria: (1) Willing to be a participant, (2) Participants can communicate well, (3) People who suffer from gout. The exclusion criteria are not being willing to be a participant.

Data processing uses the Wilcoxon Signed Ranks statistical test. The research instrument used is a knowledge questionnaire created in 2005 by Zakiah et al and revised by researchers with a total of 20 questions and a booklet regarding knowledge of gout, especially in pain management. Both instruments have been tested for validity using the Pearson Correlation test and reliability using the Cronbach method. Alpha. Apart from age, education is an important factor that patients must have. Good education will produce positive behavior so that they will be more open to receiving information. The knowledge variable is categorized as poor if the value is 20-30 and good if the value is 31-40.

In this research, a booklet tool or media was used. Booklets are printed media that aim to disseminate information in the form of writing and images. The novelty of this research is that the therapy that will be useful is booklet media so that elderly people can remember and do it at home. The research implementer, the researcher, conveyed informed consent to potential participants, namely asking the client's willingness to become a participant. Next, participants filled out a questionnaire as a pre-test which had previously been explained by the researcher. Furthermore, gout health education is provided, especially pain management. After 1 month of implementing Health Education, participants were asked to fill out the questionnaire again as a post-test.

The Health Research Ethics Committee of the Faculty of Health Sciences, Muhammadiyah University of Surakarta has declared this research to be ethically appropriate in accordance with 7 (seven) WHO 2011 Standards, with number 065/KEPK-FIK/XI/2023.

Defitria Kusuma Ardani, Wachidah Yuniartika*

Program Studi Keperawatan Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surakarta
Corresponding author: *E-mail: wachidah.yuniartika@ums.ac.id

DOI: <https://doi.org/10.33024/minh.v7i3.255>

RESEARCH RESULTS**Table 1. Characteristics of the Participants (N=40)**

Variable	Results
Age (n/%) (Mean±SD)(Rang)(Year)	(56.5±6.220)(47-69)
40-49 Years	4/10
50-59 Years	23/57.5
≥ 60 Years	13/32.5
Gender (n/%)	
Male	8/20
Female	32/80
Employment (n/%)	
Unemployed	23/57.5
Self-employed	17/42.5
Education (n/%)	
Elementary School	12/30
Junior High School	15/37.5
Senior High School	13/32.5
Pre-test Knowledge (n/%)	
Good	0/0
Poor	40/100
Post-test Knowledge (n/%)	
Good	40/100
Poor	0/0

Based on the table of results of frequency analysis of age characteristics, the mean and standard deviation of participants' age is (56.5 ± 6,220) with an age range of 47 to 69 years. In terms of gender characteristics, the highest number is female with a total of 80% (32 participants). In the characteristics of the highest frequency of employment, the results of the analysis were unemployed at 57.5% (23 participants), and in the last educational characteristics, the results of the analysis showed that the highest number was at the junior high school level, namely 37.5% (15 participants).

For participants' knowledge before and after receiving the health education intervention, the results showed that participants in the poor knowledge category before receiving the health education intervention were 100% (40 participants), and participants in the good knowledge category after being given Health Education were 100% (40 participants).

Defitria Kusuma Ardani, Wachidah Yuniartika*

Program Studi Keperawatan Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surakarta
Corresponding author: *E-mail: wachidah.yuniartika@ums.ac.id

DOI: <https://doi.org/10.33024/minh.v7i3.255>

Table 2. Normality Test Results

Normality Test	Pre-test	Post-test
N	33	33
Normal Parameters ^{a,b} (Mean+SD)	(23.73±1.353)	(39.42±1.032)
Most Extreme Differences		
Absolute	.186	.439
Positive	.113	.288
Negative	-.186	-.439
Test Statistic	.186	.439
Asymp. Sig. (2-tailed)	.005 ^c	.000 ^c

Based on table 2, it is found that the normality test results are less than 0.05, which means that the data is not normally distributed, so the test used to process the data for differences before and after being given Health Education is using the Wilcoxon Signed Ranks Test.

Table 3. Differences before and after receiving the health education intervention (N=40)

Component	(Mean+SD)	Z	Asymp.Sig
Pre-test Knowledge	(24.20±1.698)		
		-5.530	0.000
Post-test Knowledge	(39.48±0.987)		

Based on table 3, this research was conducted on 40 participants suffering from gouty arthritis. Results of knowledge analysis before and after receiving the health education intervention. In this study, researchers used the Wilcoxon Signed Ranks Test and the results obtained were Asymp.Sig=0.000, which means Sig is smaller than a (0.000<0.05), so H₀ was rejected with the statement that there was a difference in the knowledge of gout arthritis sufferers about pain management before and after receiving the health education intervention.

DISCUSSION

Based on research conducted by researchers on the characteristics of the participants, 80% (32 participants) were female and 20% (8 participants) were male. Regarding the age characteristics of participants, 57.5% (23 participants) were aged 50-59 years, at that age they were already in the pre-elderly category, namely entering an age that is susceptible to gout. This is in accordance with the theory that in men, the risk of developing gouty arthritis usually occurs between the ages of 30 and 50 years, and in women, it most often occurs during menopause. Differences in the prevalence of gouty arthritis may be caused by endogenous factors, including genetic factors related to gender and hormonal differences, with uric acid levels tending to increase with age in men.

For the employment category, 57.5% (23 participants) were no longer working because most of the participants were women who were housewives.

The next characteristic is education. 37.5% (15 participants) had a junior high school education and were said to be able to understand the questionnaire given.

Based on the results of the screening carried out, more than half of the participants in Maya village suffered from gouty arthritis. The high incidence of gout is caused by a lack of public knowledge about the causes of gout and its treatment. Because the signs and symptoms of gouty arthritis are similar to milder forms of the disease, people are reluctant to seek medical treatment. Apart from that, unhealthy lifestyles such as consuming purine-rich foods and smoking in society also contribute to the high incidence of gouty arthritis (Nofia, Apriyani, & Prigawuni, 2021; Vedder, Walrabenstein, Heslinga, De Vries, Nurmohamed, van Schaardenburg, & Gerritsen, 2019).

Defitria Kusuma Ardani, Wachidah Yuniartika*

Program Studi Keperawatan Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surakarta
Corresponding author: *E-mail: wachidah.yuniartika@ums.ac.id

DOI: <https://doi.org/10.33024/minh.v7i3.255>

Impact of an educational pain management programme on patients dealing with gout

All participants underwent a pre-test which aimed to determine the participant's knowledge about pain management before receiving the health education intervention. The results obtained were 100% (40 participants) fell into the lack of knowledge category. The researchers' analysis shows that the knowledge gap is caused by a lack of access to health information and can also be influenced by the level of education. Before receiving health education, participants did not know about the meaning of gout, causes, signs and symptoms, treatment, foods to eat and avoid, prevention of gout, and complementary traditional herbal treatments for gout.

After being given Health Education and the post-test, 100% of participants (40 participants) fell into the good knowledge category, this shows that the participant's level of knowledge increased from before being given Health Education. According to researchers, Health Education has a positive impact on participants because they receive new information about Health that they can apply in their daily lives. However, after health education was carried out, the majority of elderly people now understand, actively ask questions, and explain the health problems suffered by the elderly, especially gout. Health education leads to changes in behavior in individuals, groups and society at large, from behavior that is considered detrimental to health to behavior that is beneficial for current and future health. The main concern and goal of health education is health behavior. Health behavior is a person's response to stimuli and objects related to disease, the health service system, food and drink, and the environment. Health behavior consists of three areas: knowledge, attitudes, and actions (Sari, 2019; Yuniartika, Kartinah, & Astuti, 2020; Bahar, & Gochman, 2013).

Based on the research results, it was found that there was a difference in average knowledge during the pre-test and post-test. The pre-test average is 24.20 and the post-test average is 39.48. The results of the analysis of knowledge research before and after Health Education in this study, researchers used the Wilcoxon Signed Ranks test to obtain the Asymp value. Sig = 0.000 which means Sig is less than 0.05, so H1 is accepted and H0 is rejected, which means there is a difference in the knowledge of gout patients before and after receiving Health Education on gout pain management. This research found that the level of knowledge of participants increased significantly

after being given Health Education, which means that Health Education can increase knowledge of gout pain management. This proves that providing Health Education can be effectively used to increase elderly knowledge about gout pain management. These results indicate that health education regarding gouty arthritis is an activity that can influence changes in participant behavior, including knowledge and attitudes. By providing counseling, participants gain insight that leads to previously unknown personal changes and has a positive impact on the process of communication and behavior change with participants, supporting behavior change. Improving community attitudes by improving attitudes towards society.

This shows that direct and indirect counseling is very effective in expanding community knowledge. Differences in people's understanding before and after counseling. This shows that public understanding of the health information provided is increasing. Human knowledge comes from a combination of a series of stimuli and responses. The more often these associations are used or reinforced, the stronger the bond (Barsalou, 2015; Zeriya, 2013). Based on the behavioral psychology perspective above, we can conclude that human knowledge is obtained through associations (bonds) that combine stimuli and responses. On the other hand, Gestalt psychologists believe that the process of acquiring knowledge is obtained by viewing all the senses as an object with a certain structure or pattern, and constructivist psychologists believe that the process of acquiring knowledge is based on existing cognition, achieved by arranging the structure so that it is adaptive and in accordance with the knowledge obtained. This means that elderly people who receive information from health workers listen better because they are able to adapt the knowledge they gain. Actions based on knowledge, awareness and positive attitudes are more sustainable. On the other hand, actions that are not based on knowledge and awareness will not last long (Notoatmodjo, 2012). Therefore, although it is very important to reduce or control the occurrence of gout, the elderly prefer not to pay attention to their food intake, even though they are more or less knowledgeable. Health education leads to behavioral changes in individuals or groups of behavior, and behaviors that are beneficial to current and future health are considered detrimental

Defitria Kusuma Ardani, Wachidah Yuniartika*

Program Studi Keperawatan Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surakarta
Corresponding author: *E-mail: wachidah.yuniartika@ums.ac.id

DOI: <https://doi.org/10.33024/minh.v7i3.255>

to health (Eldredge, Markham, Ruiters, Fernández, Kok, & Parcel, 2016). The main concern and goal of health education is health behavior. Knowledge is the result of thinking (reasoning), which changes ignorance into knowledge and resolves doubts about something (Rustan, 2020; Halpern, 2013).

CONCLUSION

Health Education is effective in increasing elderly knowledge regarding gout pain management. Education can help increase knowledge about gout and prevent muscle and joint problems in the elderly themselves. Different methods require appropriate action plans from all parties.

SUGGESTION

It is hoped that the Health Education that has been provided can be used as a source of information in dealing with pain in gouty arthritis with or without the use of medication.

It is hoped that future researchers can carry out further research on gouty arthritis with different variables, and can expand the population and not just limit it to elderly people who suffer from gouty arthritis.

REFERENCES

- Abhishek, A., Roddy, E., & Doherty, M. (2017). Gout—a guide for the general and acute physicians. *Clinical Medicine*, 17(1), 54.
- Bahar, S., & Gochman, D. S. (2013). Health behavior: Emerging research perspectives.
- Barsalou, L. W. (2015). Processes that mediate stimuli and responses make human action possible. The pragmatic turn: Toward action-oriented views in cognitive science, 18, 81.
- Eldredge, L. K. B., Markham, C. M., Ruiters, R. A., Fernández, M. E., Kok, G., & Parcel, G. S. (2016). Planning health promotion programs: an intervention mapping approach. John Wiley & Sons.
- Halpern, D. F. (2013). Thought and knowledge: An introduction to critical thinking. Psychology press.
- Haq, R. K., Ismail, S., & Erawati, M. (2019). Studi Eksplorasi Manajemen Nyeri pada Pasien Post Operasi dengan Ventilasi Mekanik. *Jurnal Perawat Indonesia*, 3(3), 191. <https://doi.org/10.32584/jpi.v3i3.307>
- Hardinsyah, M., & Supariasa, I. D. N. (2016). Ilmu gizi teori dan aplikasi. Jakarta: penerbit buku kedokteran EGC, 131.
- Ministry of Health of the Republic of Indonesia. (2018). Hasil utama riset kesehata dasar (RISKESDAS). *Journal of Physics A: Mathematical and Theoretical*, 44(8), 1-200.
- Nofia, V. R., Apriyeni, E., & Prigawuni, F. (2021). Pendidikan Kesehatan Tentang Arthritis Gout Di Puskesmas Dadok Tunggul Hitam Padang. *Jurnal Abdimas Saintika*, 3(1), 130-137.
- Notoatmodjo, S. (2012). Pendidikan dan perilaku Kesehatan. Jakarta: Rineka Cipta.
- Rustan, E. (2020). Model Pembelajaran: Menulis Kreatif Berbasis Neuro Linguistic Program.
- Sari, M. T. (2019). Upaya Peningkatan Pengetahuan tentang Asam Urat Pada Lansia di Posyandu Lansia RT 12 Kelurahan Rawasari. *Jurnal Abdimas Kesehatan (JAK)*, 1(2), 132-137.
- Savitri, A. (2016). Waspadalah! Masuk Usia 40 Keatas.
- Savitri, D. (2017). Diam-diam mematikan, cegah asam urat dan hipertensi. *Anak Hebat Indonesia*.
- Sianipar, C. M. (2021). Pengetahuan Rheumatoid Arthritis Pada Penderita Lansia di Puskesmas Sipintuangin 2019. *Jurnal Penelitian Keperawatan Kontemporer*, 1(2), 53-61.
- Situmorang, P. R. (2017). Gambaran Faktor–Faktor yang Mempengaruhi Pengetahuan Lansia terhadap Upaya Pencegahan Rematoid Arthritis di Kelurahan Medan Labuhan Tahun 2017. *Jurnal Ilmiah Keperawatan IMELDA*, 3(1), 74-79.

Defitria Kusuma Ardani, Wachidah Yuniartika*

Program Studi Keperawatan Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surakarta
Corresponding author: *E-mail: wachidah.yuniartika@ums.ac.id

DOI: <https://doi.org/10.33024/minh.v7i3.255>

Impact of an educational pain management programme on patients dealing with gout

Vedder, D., Walrabenstein, W., Heslinga, M., De Vries, R., Nurmohamed, M., van Schaardenburg, D., & Gerritsen, M. (2019). Dietary interventions for gout and effect on cardiovascular risk factors: a systematic review. *Nutrients*, 11(12), 2955.

World Health Organization. (2018). WHO methods and data sources for global burden of disease estimates 2000-2016. Global health estimates technical paper WHO/HIS/IER/GHE, 4.

Yuniartika, W., Kartinah, K., & Astuti, N. (2020). Giving Brain Gym Using Booklets To Reduce The Level Of Depression Among Elderly In The Community. *JNKI (Jurnal Ners Dan Kebidanan Indonesia) (Indonesian Journal Of Nursing And Midwifery)*, 8(3), 216-222. doi:[http://dx.doi.org/10.21927/jnki.2020.8\(3\).216-222](http://dx.doi.org/10.21927/jnki.2020.8(3).216-222)

Zeriyana, W. (2013). Hubungan antara pengetahuan dan sikap dengan perilaku bidan dalam penanggulangan efek samping pil kombinasi di wilayah kerja Puskesmas Sungai Pinyuh (Doctoral Dissertation, Fakultas Ilmu Kesehatan).

Defitria Kusuma Ardani, Wachidah Yuniartika*

Program Studi Keperawatan Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surakarta
Corresponding author: *E-mail: wachidah.yuniartika@ums.ac.id

DOI: <https://doi.org/10.33024/minh.v7i3.255>