



Education Of Safe Treatment Of Degenerative Diseases In The Elderly At The Miftahul Jannah Elderly Boarding

¹Ainun Muthoharoh, ²Dwi Bagus Pambudi, ³Slamet Slamet, ⁴Nabilatul Khusna, ⁵Avinadia Fitriani, ⁶Ade Yunita Safira, ⁷Mahdanya Puteri AB, ⁸Sri Kusmaniyah, ⁹Asfal Fuad, ¹⁰Widyastuti Handayani

¹Program Studi Sarjana Farmasi, Universitas Muhammadiyah Pekajangan Pekalongan, Pimpinan Cabang Ikatan Apoteker Indonesia Kabupaten Pekalongan, Indonesian Young Pharmacist Group Jawa Tengah, Pimpinan Daerah Nasyiatul Aisyiyah Kabupaten Pekalongan

²Program Studi Sarjana Farmasi Fakultas Ilmu Kesehatan Universitas Muhammadiyah Pekajangan Pekalongan, PC IAI Kabupaten Pemalang

³Program Studi Sarjana Farmasi Fakultas Ilmu Kesehatan Universitas Muhammadiyah Pekajangan Pekalongan, PC IAI Kabupaten Batang

^{4,5,6,7,9,10} Program Studi Sarjana Farmasi Fakultas Ilmu Kesehatan Universitas Muhammadiyah Pekajangan Pekalongan

⁸ SMA Negeri 1 Kajen Kabupaten Pekalongan, Pimpinan Daerah Aisyiyah Kabupaten Pekalongan

ainun.muthoharoh@gmail.com

Article Info	Abstract
<p>Article History Received: 16 January 2024 Revised: 3 February 2024 Published: 4 February 2024</p> <p>Keywords aisyiyah, elderly, degenerative disease</p>	<p><i>Degenerative diseases are often experienced by the elderly, such as gout, high blood pressure, arthritis, high cholesterol and diabetes. Therefore, elderly people need to know more about diseases and treatments that can be used to prevent or reduce their symptoms. Community service activities were carried out targeting elderly mothers at the Miftahul Jannah Islamic Boarding Pimpinan Daerah 'Aisyiyah (PDA) Pekalongan Regency. A total of 63 participants took part in this activity. This activity aims to provide knowledge about disease information and safe treatment of degenerative diseases in the elderly. The implementation method used the lecture and discussion method. Knowledge assessment was taken through a closed questionnaire and participants' responses during the discussion session. The conclusion that can be drawn from this activity is that elderly people need knowledge about medicines for degenerative diseases, which are common diseases suffered by elderly people. Participants enthusiastically paid attention and asked questions during the activity.</i></p>

Informasi Artikel	Abstrak
<p>Sejarah Artikel Diterima: 16 Januari 2024 Direvisi: 3 Februari 2024 Dipublikasi: 3 Februari 2024</p> <p>Kata kunci aisyiyah, lanjut usia, penyakit degenerative</p>	<p>Penyakit degeneratif yang sering dialami oleh lansia, seperti asam urat, darah tinggi, radang sendi, kolesterol tinggi dan diabetes. Oleh karena itu, lansia perlu mengetahui lebih banyak tentang penyakit dan pengobatan yang dapat digunakan untuk mencegah atau mengurangi gejalanya. Kegiatan pengabdian kepada masyarakat dilaksanakan dengan sasaran ibu-ibu lanjut usia di Pondok Pesantren Miftahul Jannah Pimpinan Daerah 'Aisyiyah (PDA) Kabupaten Pekalongan. Sebanyak 63 peserta mengikuti kegiatan ini. Kegiatan ini bertujuan untuk memberikan pengetahuan tentang informasi penyakit dan pengobatan penyakit degeneratif yang aman pada lansia. Metode pelaksanaannya menggunakan metode ceramah dan diskusi. Penilaian pengetahuan dilakukan melalui angket tertutup dan tanggapan peserta pada saat sesi diskusi. Kesimpulan yang dapat</p>

diambil dalam kegiatan ini bahwa lanjut usia membutuhkan ilmu tentang obat pada penyakit degerative yang merupakan penyakit umum yang diderita oleh lanjut usia. Peserta antusias memperhatikan dan bertanya saat kegiatan berlangsung.

INTRODUCTION

Degenerative diseases are diseases that are not contagious (Berawi *et al.*, 2019). Degenerative diseases are chronic and are caused by the deterioration of body organs due to the aging process. Populations aged 45-54 years are more at risk of death due to degenerative diseases than those aged more than 33 years (Handajani *et al.*, 2010). Degenerative diseases can affect the health status and quality of life of the elderly. The results of a research study using a cross sectional study method on 100 elderly people in Medan City, it was found that 69% had hypertension, 55 % have hypercholesterolemia, 20% have diabetes mellitus, 20% have hyperuricemia, and 13% have proteinuria. As many as 16% of elderly suffer from at least 3 types of disease, 31% suffer from 2 types of disease, and 33% only suffer from 1 type of disease. Generally, elderly people experience hypercholesterolemia and hypertension (Harahap and Andayani, 2018).

In general, people, especially the elderly, will check themselves after symptoms appear. Early detection carried out in the Mutiara Home Care area showed that 60% had systolic blood pressure of less than 130 mmHg, 58% had diastolic blood pressure of less than 90 mmHg, 32% had obesity, 66% had normal uric acid levels, 86 % had current blood sugar levels of less than 140 mg/dL, and 60% had total cholesterol of more than 200 mg/dL (Amila *et al.* , 2021). Degenerative diseases that are not treated properly can reduce the quality of life of the elderly (Hernawan and Rosyid, 2017). Hypertension cases are often found, especially in the elderly. There are still many elderly people who do not understand hypertension, prevention efforts and early treatment of hypertension (Maulana, 2022).

Gout or hyperuricemia is a condition that describes increased uric acid levels in the body (Firdayanti and Setiawan, 2019). High fluid consumption can reduce uric acid levels in the body (Diantari and Kusumastuti, 2013). Gout is often found at the age of 40-70 years. In the elderly, there is a decrease in the production of the urikinase enzyme which oxidizes uric acid into allotonin (Siswanto, 2019). Hyperuricemia can be controlled with a low-purine diet and taking medication to lower uric acid levels (Ismanto *et al.*, 2016).

High blood pressure or hypertension occurs when blood pressure is abnormal in the blood vessels (Adam, 2019). Hypertension requires therapy in its treatment. Hypertension management is needed based on compliance with therapy so that it does not progress to complications such as stroke (Prasetyo *et al.* , 2023). Arthritis is a disease that appears in old age (Yuliyanti and Zakiyah, 2016). The family plays a very important role in resolving joint pain in the elderly (Waskita *et al.* , 2020). Analgesics are widely used by elderly people to reduce complaints of joint pain (Sanjaya *et al.*, 2018). In the elderly, body fat accumulates due to a low basal metabolic rate. This has the potential to become cholesterol (Rahmawati *et al.*, 2022). Analgesics are one of the drugs most widely used as self-medication by elderly patients (Sanjaya *et al.* , 2018). Diabetes or often referred to as diabetes mellitus. Diabetes is a condition where the body cannot produce the insulin hormone as needed (Kaban *et al.* , 2020). In the elderly, appropriate treatment recommendations are needed, due to the risk of hypoglycemia (Prasetyo, 2019) The aim of this activity is to provide information and knowledge for participants so they can understand the types of degenerative diseases that are often encountered by the elderly and use and choose degenerative disease medicines that are safe for the elderly.

METHOD

The implementation method used was five sessions, namely the first session by filling in a pre-test questionnaire, the second session was delivering material using the lecture method, the third session was a discussion using the question and answer method, the fourth session was filling in a post-test questionnaire for evaluation, and the fifth session was handing over the water storage equipment. Can be used for seniors at the Mifathul Jannah Elderly Islamic Boarding School. The questionnaire is aimed at participants and administrators. The questionnaire aimed at participants aims to evaluate the information received by participants and the continuity of the delivery process received by participants. Questionnaire aimed at the management to evaluate the presenters whether the activities carried out can provide benefits to the institution. The material presented includes safe treatment for degenerative diseases that are often experienced by the elderly, such as gout, high blood pressure, arthritis, high cholesterol and diabetes. The activity was held on Saturday, October 29 2022 at the PDA Aisyiyah Da'wah Building, Pekalongan Regency. Participants were members of the Mifathul Jannah PDA Pekalongan Regency Elderly Islamic Boarding, totaling 63 elderly participants.

RESULTS AND DISCUSSION

Service activities have been carried out for elderly people who are members of the Mifathul Jannah PDA Elderly Islamic Boarding, Pekalongan Regency. This activity aims to provide information and knowledge to elderly people so they can understand the types of degenerative diseases that are often encountered by elderly people and use and choose safe medicines for degenerative diseases. This effort is made so that elderly people feel cared for, their quality of life increases, and they are safe in consuming daily medication. The implementation of activities is presented in Figure 1-7.

1. Gout Disease and Treatment in the Elderly

In 2022, based on data from the Pekalongan District Health Service, gout arthritis will be highest in the Kedungwuni area. Gout arthritis patients undergoing examination at the Kedungwuni I Community Health Center use conventional antigout-phytotherapy to treat gout arthritis (Prastika *et al.* , 2023). Age over 60 years or the elderly is an age prone to gout. High uric acid levels have the potential to cause complications in the kidneys (Efendi and Natalya, 2023). Pain is one of the signs and symptoms of gout (Amalia *et al.* , 2021). In old age, there is a decline in the function of various organs in the body. It is important to regulate your diet, reduce foods high in purine, consume lots of carbohydrates, and consume fruit that contains lots of water (Nasir, 2019).

Non-pharmacological therapy can be done with ergonomic exercises and nutritional management. Management needs to be attempted to limit acute attacks, prevent recurrence, and prevent complications and physical disability (Mulianda *et al.*, 2019). Treatment for acute gouty arthritis can be treated with non-steroidal anti-inflammatory drugs (NSAIDs) such as naproxen, sulindac, and indomethacin, glucocorticoids, and colchicine. For patients who have gastrointestinal disorders, COX-2 selective NSAIDs such as etoricoxib and celecoxib can be used. Aspirin is not recommended because it can cause an increase in uric acid and retention in the kidneys (Schinas *et al.* , 2016).

2. Disease and Treatment in the Elderly

Vascular age causes arterial hypertension which can increase mortality and morbidity in the elderly. Reducing blood pressure can reduce the risk of cardiovascular disorders. Lifestyle management is very important to support the pharmacotherapy treatment of hypertension. Effective antihypertensive drugs for the elderly are diuretics, angiotensin converting enzyme (ACE) inhibitors, calcium channel blockers, and beta blockers (Bilen and Wenger, 2020).

Gymnastics activities carried out by elderly people can maintain healthy blood pressure (Pangaribuan and Berawi, 2016). Tomato juice as a non-pharmacological therapy can reduce blood pressure (Febriaty *et al.*, 2023). Apart from using tomato juice, foot soak therapy using boiled red ginger for 3 days can have an effect by increasing blood circulation and relaxing the body's muscles (Azzakiyah and Kurniawan, 2023). Knowledge about the use of Tanaman Obat Keluarga (TOGA) can prevent hypertension which will affect perceptions (Erika *et al.*, 2022).

3. Diseases and Treatment of Arthritis in the Elderly

Arthritis has symptoms of pain in the joints (Zein and El Newi, 2019). Inflammation of the joints or osteoarthritis (OA) is often found and is a cause of disability, especially in the elderly. Paracetamol is the first choice drug to treat chronic pain such as arthritis in the elderly with short-term therapy. However, to avoid gastrointestinal effects in the elderly, COX 2 inhibitor drugs such as celecoxib are preferred (Anggriani *et al.*, 2016). Compress using ginger extract can reduce joint pain because it inhibits the release of the enzymes 5-lipoxygenase and cyclooxygenase and increases the activity of the endocrine glands (Anggraini and Yanti, 2018). Apart from that, reducing the scale of joint pain in the elderly can be done with warm compress therapy and back massage (Anggraini and Yanti, 2018).

4. Diseases and Treatment of High Cholesterol in the Elderly

High cholesterol or hypercholesterol can cause symptoms such as aches and headaches (Sari, 2014). High cholesterol is a disease that is not contagious in the elderly (Rahayu *et al.*, 2021). Hypercholesterol can cause blockage of blood vessels (atherosclerosis) which can reduce cognitive abilities in the elderly (Alfarissi, 2021). Initial therapy for dyslipidemia suggests lifestyle modification. If this is not successful, a combination of lifestyle modification and medication is recommended. Statins are a safe first line for the elderly. Several studies state that statins are safe and effective for the elderly (Shao *et al.*, 2011). Bay leaf boiled water consumed for 5 days can reduce cholesterol levels in elderly people by as much as 65 mg/dL (Pratiwi *et al.*, 2023).

5. Diseases and Treatment of Diabetes in the Elderly

Diabetes or diabetes mellitus is characterized by hyperglycemia which is associated with insulin deficiency. Non-adherent treatment can cause therapy failure (Syifannisa *et al.*, 2022). Diabetes can be caused by consuming too much sugar (Ningrum *et al.*, 2020). Elderly people are at risk of polypharmacy which can cause Inappropriate Prescription (IP) or Potentially Prescription Omission (PPO) (Listiani *et al.*, 2021).

Diabetes requires long and regular medical therapy. The use of combined or single oral antidiabetic drugs can help control blood sugar levels (Muthoharoh *et al.*, 2020). Long diabetes treatment also has a large cost impact (Ningrum *et al.*, 2019). External behavioral and motivational factors can be a factor in patient boredom when undergoing long-term treatment. So education and motivation are needed so that patients comply and have treatment behavior to achieve therapy targets (Saputri *et al.*, 2019). Diabetes can potentially cause hypertension, hyperlipidemia and stroke (Pambudi *et al.*, 2019).

6. Evaluation of Participant Knowledge

Table 1. Participants' knowledge through closed questionnaires

No	Closed Questionnaire Questions (True/False Answers)	Correct Amount (%)
1	High uric acid levels are characterized by pain and swelling in the fingers	73
2	Amlodipine and captopril are examples of drugs to reduce high blood pressure	97
3	Arthritis can be reduced by compressing it with cold water.	51
4	High cholesterol levels can cause stroke.	91
5	Diabetes is known as diabetes. Diabetes medication must be taken regularly every day.	94

Providing education can increase participants' knowledge (Muthoharoh *et al.*, 2021). Participants who are given the opportunity to ask questions can have an impact on increasing knowledge (Muthoharoh *et al.*, 2023). Based on the evaluation given at the start of the activity which is presented in Table 1, it shows that not all participants understand about gout, high blood pressure, arthritis, high cholesterol and diabetes. The hope is that providing education and discussion sessions can provide better experience and knowledge.



Figure 1. Delivery of material using the lecture method



Figure 2. Discussion



Figure 3. Assistance in filling out the pretest questionnaire



Figure 4. Participants fill out the posttest questionnaire



Figure 5. Delivery of water storage equipment



Figure 6. Provision of basic necessities



Figure 7. Group photo of administrators and participants

RESULT

Community service activities carried out with the Pimpinan Daerah ‘Aisyiyah (PDA) of Pekalongan Regency through the Miftahul Jannah Elderly Islamic Boarding Community were carried out well as shown by participants being interested, cooperative in participating in activities, and asking questions during discussion sessions and when delivering material. As for the next activity, it is necessary to practice in recognizing and selecting appropriate medications for the elderly. Participants enthusiastically paid attention and asked questions during the activity.

RECOGNITION

The author would like to thank the LPPM Universitas Muhammadiyah Pekajangan Pekalongan for providing funds and the Pekalongan Regency PDA for facilitating the activities.

BIBLIOGRAPHY

- Adam, L., 2019, Determinan hipertensi pada lanjut usia, *Jambura Heal. Sport J.*, 1, 82–89.
- Alfarissi, M.A., 2021, Hubungan Hiperkolesterolemia Dengan Fungsi Kognitif Pada Lanjut Usia Di Kelurahan Nagarasari, Kecamatan Cipedes, Kota Tasikmalaya,.
- Amalia, I.N., Pratama, B.P., Agustin, I.J., Khotimah, K.K., Lestari, N., Jauza, S.S., and others, 2021, Pengaruh Pemberian Kompres Hangat Jahe Merah Terhadap Tingkat Nyeri Arthritis Gout (Asam Urat), *J. Sehat Masada*, 15, 112–119.
- Amila, A., Sembiring, E., and Aryani, N., 2021, Deteksi Dini Dan Pencegahan Penyakit Degeneratif Pada Masyarakat Wilayah Mutiara Home Care, *J. Kreat. Pengabd. Kpd. Masy.*, 4, 102–112.
- Anggraini, S.N. and Yanti, N.F., 2018, Efektifitas Kompres Ekstrak Jahe Terhadap Nyeri Sendi Lansia Dengan Arthritis Gout Di Panti Sosial Tresna Werda Khusus Khotimah Pekanbaru, *Heal. Care J. Kesehat.*, 7, 69–76.
- Anggriani, A., Lisni, I., and Faujiah, D.S.R., 2016, Analisis masalah terkait obat pada pasien lanjut usia penderita osteoarthritis di poli ortopedi di salah satu rumah sakit di bandung, *Kartika J. Ilm. Farm.*, 4, 13–20.
- Azzakiyah, K.N. and Kurniawan, W.E., 2023, Asuhan Keperawatan Nyeri Akut pada Ny. S dengan Rendam Kaki Menggunakan Rebusan Jahe Merah terhadap Penderita Hipertensi, *J. Gawat Darurat*, 5, 59–66.
- Berawi, K.N., Wahyudo, R., and Pratama, A.A., 2019, Potensi terapi Moringa oleifera (Kelor) pada penyakit degeneratif, *J. Kedokt. Univ. Lampung*, 3, 210–214.

- Bilen, O. and Wenger, N.K., 2020, Hypertension management in older adults [version 1 ; peer review : 5 approved] Ozlem Bilen, *F1000Research*, 9, 1–8.
- Diantari, E. and Kusumastuti, A.C., 2013, Pengaruh asupan purin dan cairan terhadap kadar asam urat wanita usia 50-60 tahun di Kecamatan Gajah Mungkur, Semarang, *J. Nutr. Coll.*, 2, 44–49.
- Efendi, M. and Natalya, W., 2023, Gambaran kadar asam urat pada lanjut usia di Desa Rowoyoso Kecamatan Wonokerto Kabupaten Pekalongan,. In, *Prosiding University Research Colloquium.*, pp. 1054–1060.
- Erika, E., Ningrum, W.A., Muthoharoh, A., and Permadi, Y.W., 2022, PENGARUH PEMBERIAN EDUKASI TERHADAP TINGKAT PENGETAHUAN DAN PERSEPSI PADA PEMANFAATAN TOGA UNTUK PENCEGAHAN HIPERTENSI DI DESA SOKOYOSO, *Kajen J. Penelit. dan Pengemb. Pembang.*, 6, 83–93.
- Febriaty, M.N., Safitri, A., and Sari, R.P., 2023, Asuhan Keperawatan Keluarga Pada Tahap Perkembangan Lanjut Usia Dengan Pemberian Intervensi Jus Tomat Untuk Menurunkan Tekanan Darah Pada Ibu S Di Link Kaong Rt 01/Rw 05 Desa Cipocok Jaya Kecamatan Cipocok Jaya Kota Serang Tahun 2023., *J. Ilm. Kedokt. dan Kesehat.*, 2, 193–198.
- Firdayanti, S. and Setiawan, M.A., 2019, Perbedaan Jenis Kelamin Dan Usia Terhadap Kadar Asam Urat Pada Penderita Hiperurisemia, *J. Med. Udayana*, 8, 2597–8012.
- Handajani, A., Roosihermatie, B., and Maryani, H., 2010, Faktor-faktor yang berhubungan dengan pola kematian pada penyakit degeneratif di Indonesia, *Bul. Penelit. Sist. Kesehat.*, 13, 21301.
- Harahap, J. and Andayani, L.S., 2018, Pola Penyakit Degeneratif, Tingkat Kepuasan Kesehatan dan Kualitas Hidup pada Lansia (Lanjut Usia) di Kota Medan,. In, *Talenta Conference Series: Tropical Medicine (TM)*., pp. 142–149.
- Hernawan, T. and Rosyid, F.N., 2017, Pengaruh senam hipertensi lansia terhadap penurunan tekanan darah lansia dengan hipertensi di panti wreda Darma Bhakti Kelurahan Pajang Surakarta, *J. Kesehat.*, 10, 26–31.
- Ismanto, A.Y., Masi, G., and others, 2016, Pengaruh air rebusan daun kemangi terhadap kadar asam urat darah pada penderita hiperurisemia di wilayah kerja Puskesmas Wolaang, *J. Keperawatan*, 4, .
- Kaban, K.B., Nduru, A.P., and Nduru, M., 2020, PELATIHAN THERAPEUTIK EXERCISE WALKING UNTUK MELANCARKAN DARAH PERIFER PADA DM TIPE II DI UPT PELAYANAN LANJUT USIA BINJAI, *Mitra Keperawatan dan Kebidanan Prima*, 2, .
- Listiani, S., Muthoharoh, A., and Prafitri, L.D., 2021, Evaluasi pola persepsian pada pasien lanjut usia rawat jalan diabetes melitus terhadap kejadian inappropriate prescription dan potentially prescription omission di RSUD Kraton Tahun 2019, *Med. Sains J. Ilm. Kefarmasian*, 5, 181–190.
- Maulana, N., 2022, Pencegahan dan Penanganan Hipertensi Pada Lansia, *J. Peduli Masy.*, 4, 163–168.
- Mulianda, D., Susilo, A.D., Mustakim, J.R., Khasanah, N., Srilambang, W.P., and others, 2019, PENATALAKSANAAN PENINGKATAN ASAM URAT, *J. Pengabd. Kpd. Masy. SISTHANA*, 1, 43–48.
- Muthoharoh, A., Rejeki, H., Pambudi, D.B., Khuzaiyah, S., and AB, M.P., 2023, Food Safety Education for Pregnant and Breastfeeding Mothers, Toddlers, Adolescents, and the Elderly, *J. Pemberdaya. Masy. Madani*, 7, 18–25.
- Muthoharoh, A., Safitri, W.A., Pambudi, D.B., and Rahman, F., 2020, Pola Pengobatan Antidiabetik Oral pada Pasien Diabetes Mellitus Tipe 2 Rawat Jalan di RSUD Kajen Pekalongan, *Pharmacon J. Farm. Indones.*, 29–36.

- Muthoharoh, A., Waznah, U., Slamet, S., Rahmasari, K.S., and Nur, A.V., 2021, Communication, information, and education (CIE) on food safety issues in Kalimojosari Village, Pekalongan, *Community Empower.*, 6, 1159–1162.
- Nasir, M., 2019, Gambaran Asam Urat Pada Lansia Di Wilayah Kampung Selayar Kota Makassar, *J. Media Anal. Kesehat.*, 8, 78–82.
- Ningrum, W.A., Muthoharoh, A., Fajriyah, N.N., and Bahrie, M.S., 2020, Hubungan Karakteristik dan Tingkat Pengetahuan Responden Prolanis Terhadap Pengobatan Diabetes Melitus Tipe II di Wilayah Kerja Puskesmas Wonopringgo Kabupaten Pekalongan,. In, *Prosiding University Research Colloquium.*, pp. 26–30.
- Ningrum, W.A., Muthoharoh, A., and Qoyimah, M., 2019, Analisis Biaya Pengobatan Pasien Diabetes Mellitus Rawat Jalan Di RSUD Kraton Pekalongan, *Pena J. Ilmu Pengetah. dan Teknol.*, 33, 15–21.
- Pambudi, D.B., Safitri, W.A., and Muthoharoh, A., 2019, Potensi Penyakit Penyerta pada Pengobatan Pasien Diabetes Mellitus Perspektif Terhadap Antidiabetik Oral, *J. Ilm. Kesehat.*, 12, .
- Pangaribuan, B.B.P. and Berawi, K., 2016, Pengaruh senam jantung, yoga, senam lansia, dan senam aerobik dalam penurunan tekanan darah pada lanjut usia, *J. Major.*, 5, 33–38.
- Prasetyo, A., 2019, Tatalaksana diabetes melitus pada pasien geriatri, *Cermin Dunia Kedokt.*, 46, 420–422.
- Prasetyo, A., Rahayu, Y.S.E., and others, 2023, Antisipasi Komplikasi Hipertensi pada Lanjut Usia dengan Pengelolaan Obat Antihipertensi dan Diet yang Tepat: Anticipation of Hypertension Complications in The Elderly with Antihypertensive Drug Management and The Right Diet, *J. Pengabd. Kpd. Masy. Kesehat.*, 3, 68–76.
- Prastika, S.W., Ningrum, W.A., Muthoharoh, A., and others, 2023, Perpesi Tentang Penggunaan Antigout Konvensional-Fitoterapi Terhadap Efektivitas Terapi Pasien Gout Arthritis di Puskesmas Kedungwuni I, *J. Ilm. Kesehat.*, 16, 99–109.
- Pratiwi, M., Sari, R.P., Basri, M.H., and Safitri, A., 2023, Asuhan Keperawatan Keluarga Dengan Tahap Perkembangan Usia Lanjut Keluarga BPK A Khususnya Ibu Y Dengan Hiperkolesterolemia Terhadap Air Rebusan Daun Salam Untuk Menurunkan Kadar Kolesterol Di Kampung Bayur Pintu 1000 Tangerang, *An-Najat*, 1, 55–59.
- Rahayu, D., Irawan, H., Santoso, P., Susilowati, E., Atmojo, D.S., and Kristanto, H., 2021, Deteksi Dini Penyakit Tidak Menular pada Lansia, *J. Peduli Masy.*, 3, 91–96.
- Rahmawati, Y., Ramadanty, D.D., Rahmawati, F., and Perwitasari, E., 2022, Hiperkolesterolemia Pada Pasien Lanjut Usia: Studi Kasus Puskesmas Seyegan, *J. Kesehat. Tambusai*, 3, 157–163.
- Sanjaya, D.A., Damayanti, I.A.M., Antari, N.W.S., and Padmiswari, A.A.I.M., 2018, Gambaran Swamedikasi Analgesik pada Lansia dengan Nyeri Sendi di Pelayanan Komunitas, *J. Ris. Kesehat. Nas.*, 2, 180–187.
- Saputri, G.Z., Akrom, A., Muhlis, M., and Muthoharoh, A., 2019, Efek konseling menggunakan brief counseling 5A modifikasi disertai pesan motivasional farmasis dalam peningkatan perilaku dan outcome klinik pasien diabetes melitus dengan hipertensi rawat jalan di RSUD Panembahan Senopati, Bantul, *Farmasi*, 8, .
- Sari, D.K., 2014, Tanda gejala dan bahaya hiperkolesterolemia, *Tanda Gejala Dan Bahaya Hiperkolesterolemia*, 3, 1–8.
- Schinas, A., Chatzipavlou, M., Koutsogeorgopoulou, L., and Kassimos, D., 2016, RH ME, *Mediterr J Rheumatol*, 27, 36–39.
- Shao, H., Chen, L.Q., and Xu, J., 2011, Treatment of dyslipidemia in the elderly, *J. Geriatr. Cardiol.*, 8, 55–64.
- Siswanto, H., 2019, GAMBARAN KADAR ASAM URAT PADA PASIEN LANJUT USIA DI PUSKESMAS PANGKALAN SUSU,.

- Syifannisa, R., Muthoharoh, A., Ningrum, W.A., and Rahmatullah, S., 2022, Pengaruh Konseling Apoteker Terhadap Kepatuhan Pengobatan dan Outcome Klinis Pasien DM Tipe 2 Puskesmas Mulyoharjo, *J. Ilm. Kesehat.*, 15, 93–102.
- Waskita, I.G.B.S., Yanti, N.L.P.E., and Krisnawati, K.M.S., 2020, Hubungan Dukungan Keluarga dengan Upaya Penanganan Nyeri Sendi pada Lansia, *J. Ners Widya Husada*, 4, 65–70.
- Yuliyanti, T. and Zakiyah, E., 2016, Tugas Kesehatan Keluarga Sebagai Upaya Memperbaiki Status Kesehatan Dan Kemandirian Lanjut Usia, *Profesi (Profesional Islam. Media Publ. Penelit.*, 14, 49–55.
- Zein, U. and El Newi, E., 2019, Buku Ajar Ilmu Kesehatan (Memahami Gejala, Tanda Dan Mitos), Deepublish.