

(Research/Review) Article

Overview of Foot Care For Diabetes Mellitus Patients in The Work Area Gondangrejo Public Health Center Karanganyar

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Abstract: Foot care is an essential aspect of preventing diabetes mellitus complications, especially diabetic ulcers that can lead to amputation. However, foot care practices among individuals with diabetes mellitus remain low. Objective; to describe foot care practices among individuals with diabetes mellitus in the working area of Gondangrejo public health center, Karanganyar. Method; this study used a descriptive quantitative design. The population consisted of all diabetes mellitus patients enrolled in the prolanis program, totaling 82 people. Samples were selected using an accidental sampling technique, with 45 respondents participating. The research instrument used the Nottingham assessment of functional foot care (NAFF) questionnaire, which has been tested for validity and reliability. Results; Most respondents were over 45 years old, female, had completed elementary school, and were employed. The majority had suffered from diabetes for 1-5 years. Foot care behavior was mostly in the poor category (80%). Conclusion; The majority of diabetes mellitus patients in the Gondangrejo public health center area demonstrated poor foot care practices.

Keywords: Diabetes Mellitus; Diabetic Ulcer; Foot Care; Health Behavior; Ida Nur Imamah.

1. Introduction

Diabetes mellitus is a metabolic disease characterized by hyperglycemia (Rivaldy et al., 2023). Diabetes mellitus is a non-communicable disease frequently encountered in the community, characterized by elevated blood glucose levels. There are several types of diabetes mellitus, but the most common is type 2 diabetes mellitus. Type 2 diabetes mellitus affects how the body processes glucose as an energy source (Damayanti et al., 2023). Factors that cause Diabetes Mellitus include hereditary factors and obesity (Adyas et al., 2021).

International Diabetes Federation states that more than 589 million adults worldwide suffer from diabetes mellitus, and by 2050 the number is expected to increase to 853 million people worldwide. Indonesia ranks 5th with the highest number of diabetes sufferers, namely 20.4 million sufferers in 2024 (International Diabetes Federation, 2024). Basic Health Research Data in 2018 The national scale prevalence of diabetes mellitus in Indonesia in 2018 reached 2%, this percentage is based on doctor's diagnosis for ages ≥ 15 years and when compared to 2013 there has been an increase of 0.5%. (Hidayati, Sudiarto and Astuti, 2025)

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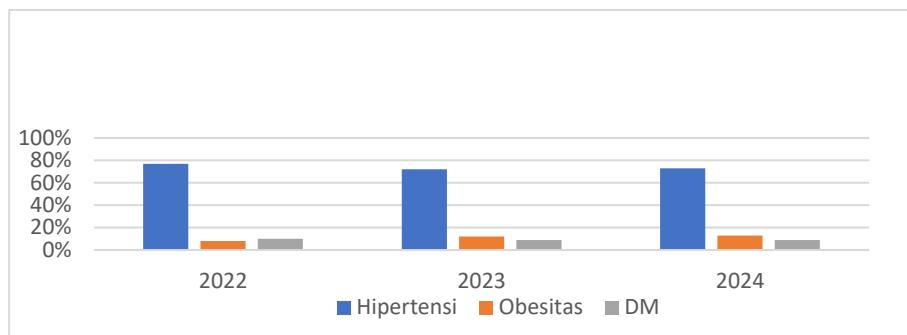


Figure 1. Proportion of non-communicable disease cases from 2022 to 2024 in Central Java province in 2024

Source: Central Java Province Pocket Book, 2024.

Diabetes Mellitus in Central Java Province has consistently ranked 3rd after hypertension and obesity for the past three years, although it has experienced a 1% decrease from year to year.(Central Java Province Pocket Book, 2024)

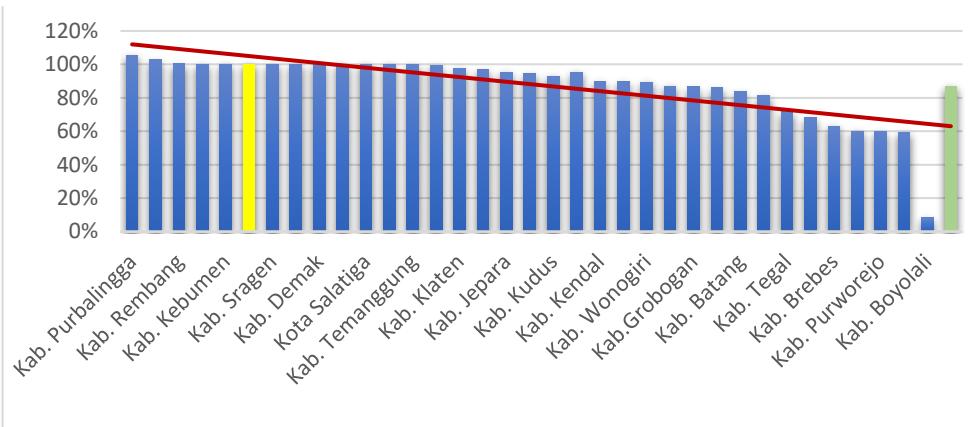


Figure 1. Percentage of diabetes mellitus health screening services for the population aged 15-49 years by district/city in Central Java province in 2023

Source: Central Java health profile 2023

Based on the data in Figure 2 regarding diabetes mellitus screening results in Central Java Province, Karanganyar Regency ranked sixth with 100% cases. Conversely, Boyolali Regency showed the lowest percentage, at 8.2%.(Central Java Health Profile, 2023).

Table 1. Services for Diabetes Mellitus Patients by District and Community Health Center in Karanganyar Regency/City in 2023

No	Subdistrict	Community Health Center	Number of DM Sufferers
1	Gondangrejo	Gondangrejo	1,682
2	Tasikmadu	Tasikmadu	1,413
3	Karanganyar	Karanganyar	1,233
4	Jumantono	Jumantono	1,208
5	Colomadu	Colomadu I	905
6	Friday	Friday	886
7	Tawangmangu	Tawangmangu	843
8	Jaten	Jaten II	812
9	Karangpandan	Karangpandan	792
10	Jaten	Jaten I	773
11	Kebakkramat	Kebakkramat I	759
12	Ngargoyoso	Ngargoyoso	749
13	Work	Work	714
14	Jatipuro	Jatipuro	701
15	Colomadu	Colomadu II	679
16	Mojogedang	Mojogedang I	678
17	Kebakkramat	Kebakkramat II	541

Source: Karanganyar Regency Health Profile 2023

Based on the 2023 Karanganyar Regency Health Profile, it can be seen that Gondangrejo sub-district in the Gondangrejo Community Health Center area is ranked first with 1,682 DM sufferers, and the last ranking is at Kebakkramat II Community Health Center with 541 sufferers.(Karanganyar Regency Health Profile, 2023)

Diabetes mellitus has impacts such as increased morbidity, decreased quality of life, increased risk of lower limb amputation, and premature death.(Arifin & Kurnia, 2022)A total of 1,785 diabetes patients in Indonesia experienced various complications, including diabetic neuropathy (45.6%), microvascular complications (57%), diabetic retinopathy (20.7%), and diabetic nephropathy (33.7%). Microvascular complications were the most common, accounting for 57% of the cases, with the most common complications being diabetic foot ulcers (29.9%), heart disease (27.8%), and cerebrovascular disease (19.4%).(Saputri, 2020).

Diabetic ulcers are a complication that occurs in the lower extremities. This complication is influenced by several risk factors for foot injury, such as poor foot hygiene, inappropriate footwear, and careless activity. The public is encouraged to be more aware of daily habits that can increase the risk of this complication.(Herlitawati et al., 2023)In Indonesia, the incidence of diabetic ulcers in DM patients has reached 25%. Diabetic ulcers occur in 15% - 25% of patients with DM and more than 2% per year between 5% to 7.5% of patients with neuropathy.(Trisnawati, Anggraini and Nurvinanda, 2023).

Table 1. Data on DM Patients with Diabetic Ulcers at the Gondangrejo Community Health Center in 2023 and 2024

Year	2023	2024
DM with diabetic ulcers	1,049 sufferers	1,577 sufferers

Source: Primary Data 2025

Diabetic ulcer data at Gondangrejo Community Health Center shows an increase.

From 2023 to 2024, the number of cases increased by 50.34%. This increase was dominated by type 2 diabetes sufferers who are at high risk of developing diabetic ulcers.(Wahyudi et al., 2023).

Diabetic ulcers can be prevented through proper foot care. Foot care is an integral part of diabetes self-care practices. Regular foot care practices are essential to prevent and delay potential complications.(Ningrum et al., 2021). Behavior is the way in which someone acts or does something to themselves, or to something or someone else(April and Tupah, 2024)Foot care is a procedure performed to maintain the cleanliness of the feet of patients with diabetes mellitus and to prevent early injury to the feet, which can lead to the risk of infection. People with diabetes mellitus must understand proper diabetic foot care to prevent diabetic ulcers and foot amputation.(Ningrum et al., 2021)However, research shows that many people with diabetes mellitus do not take care of their feet. This is evidenced by research.Princess (2023) stated that research with 80 respondents showed that the level of respondents' knowledge about foot care was in the good category (47.5%), but foot care was lacking (77.5%).Rahmanita (2024)In his research, he stated that there is a relationship between foot care and the occurrence of ulcers in diabetes mellitus patients.

The results of a preliminary study with an interview with one of the health workers at the Gondangrejo Community Health Center said that there has been a program as a form of diabetes mellitus management in preventing diabetic ulcers with prolanis activities such as gymnastics every Wednesday and regular blood sugar checks. However, education about foot care has never been carried out on sufferers. The results of interviews with 10 prolanis members found that 6 people had a history of diabetic ulcers, 8 people had dirty and long nails, 9 people had cracked soles, this is the background to the researcher's interest in identifying the description of foot care in people with diabetes mellitus, especially in the work area of the Gondangrejo Community Health Center.

2. Preliminaries or Related Work or Literature Review

Diabetes Mellitus

Definition of Diabetes Mellitus

Diabetes Mellitus (DM) is a chronic, non-communicable disease that remains a major global problem (Sanjaya & Setiawan, 2024). DM is a chronic disease that disrupts carbohydrate, fat, and protein metabolism (Amalia, Putri Dita, & Aprilia, 2022). Type 2 diabetes is a metabolic disorder characterized by elevated blood sugar levels due to decreased insulin secretion by pancreatic beta cells (Purwanti, Mintarsih, & Sukoco, 2023). Impaired

insulin function prevents glucose from entering cells, leading to increased blood glucose levels and triggering diabetes mellitus (Wulandari, 2021).

Etiology

The etiology of Diabetes Mellitus includes genetic or hereditary factors, overnutrition that triggers obesity, stress that affects blood sugar control, and smoking habits that increase free radicals and damage pancreatic beta cells so that insulin production is disrupted (Nursucita & Handayani, 2021; Fanani, 2022; Fitriyah & Herdiani, 2022).

Clinical Manifestations

Clinical manifestations of DM include polyuria due to blood sugar levels exceeding the renal threshold, polydipsia due to dehydration, polyphagia due to impaired glucose entry into cells, weight loss due to the breakdown of fat and protein, and additional symptoms such as tingling, itching, and wounds that are difficult to heal due to complications (Lestari et al., 2021).

Pathophysiology of Diabetes Mellitus

The primary pathophysiology of type 2 diabetes includes insulin resistance and pancreatic beta-cell failure. Adipose tissue, the gastrointestinal tract, pancreatic alpha cells, the kidneys, and the brain all contribute to impaired glucose tolerance. Chronic hyperglycemia causes nerve damage through metabolic, mechanical, and compressive effects, increasing the risk of diabetic foot ulcers (PERKENI, 2021; Lestari et al., 2021).

Management of Diabetes Mellitus

Diabetes management encompasses five pillars: diet, medication, physical activity, education, and blood sugar monitoring (Witriyani, 2024). A diet high in calories and fat increases the risk of diabetes (Siagian et al., 2023). Treatment is given if diet and physical activity fail to achieve optimal results, including oral antidiabetic drugs or insulin (Samuel et al., 2021). Regular physical activity lowers blood glucose levels (Nurman, Nur, & Ardianti, 2020; Barnes et al., 2020). Education promotes good self-care behaviors (Ginting, 2023), while blood sugar monitoring prevents acute and long-term complications (Rahman, Khariroh, & Kurniati, 2023).

Types of Diabetes Mellitus

Diabetes Mellitus consists of type 1 diabetes which is insulin-dependent due to damage to pancreatic beta cells, type 2 diabetes which is related to lifestyle and insulin resistance, and gestational diabetes which occurs during pregnancy and carries the risk of causing maternal and perinatal complications (Aspilayuli, Suhartatik, & Mato, 2023; PERKENI, 2021; Anggraini & Haiti, 2024).

Complications of Diabetes Mellitus

Complications of DM include short-term complications such as hypoglycemia, hyperglycemia, metabolic ketoacidosis, and decreased consciousness, as well as long-term complications such as peripheral neuropathy, motor and autonomic disorders, kidney failure, diabetic retinopathy, atherosclerosis, heart disease, hypertension, stroke, neuropathic pain, and diabetic ulcers that can lead to amputation (Lestari et al., 2021; Oktarina et al., 2023).

Foot Care

Definition of Foot Care

Foot care is a self-care action or by a health professional that includes foot hygiene, nail trimming, wearing appropriate footwear, and early treatment of injuries to prevent diabetic foot complications such as ulcers, infections, gangrene, and Charcot arthropathy (Ningrum et al., 2021; Pratiwi et al., 2020).

How to Perform Foot Care

Foot care includes daily foot examinations, maintaining cleanliness and moisture of the skin of the feet, wearing appropriate footwear, proper nail trimming, wound prevention, and immediate consultation if any abnormalities are found in the feet (Sakinah et al., 2025; Prabawati & Ratnasari, 2023).

Factors Affecting Foot Care

Foot care is influenced by age, gender, education level, duration of diabetes, and occupation. Advanced age, low education level, long duration of diabetes, and high work activity can impact adherence and the quality of foot care in people with diabetes (Sari, Lestari, & Pebrianti, 2021; Ningrum & Imamah, 2022; Putri et al., 2020; Nisak et al., 2024; Paris et al., 2023).

The Impact of Not Taking Care of Your Feet

Not performing foot care can cause infection, gangrene, amputation, peripheral neuropathy, and diabetic ulcers which have an impact on reducing the quality of life of DM sufferers and increasing morbidity and mortality (Sabri et al., 2023; Ayu et al., 2024; Novitasari et al., 2022; Oktarina et al., 2023).

Behavior

Behavior is all human activities that can be observed or not directly observed (Notoatmodjo in Ariyani, 2024). The Health Belief Model (HBM) explains health behavior based on an individual's beliefs about susceptibility, severity, benefits, barriers, motivation to act, and self-efficacy in preventing and controlling disease (Jaya et al., 2023).

Measuring Tools

Nottingham Assessment of Functional Footcare (NAFF)

The Nottingham Assessment of Functional Footcare (NAFF) instrument is used to measure the foot care behavior of DM patients. It consists of 29 items with a total score of 0–87. A score of 44–87 indicates good foot care, while a score of 0–43 indicates poor foot care (Lincoln, 2007; Ningrum & Imamah, 2022).

Diabetic Functional Care Behavior (DFBC)

Diabetic Functional Care Behavior Questionnaire The DFBC (Foot Care Compliance Scale) is used to assess foot care compliance through 14 observation items. Scores of 7–14 are categorized as compliant, and scores of 0–6 as non-compliant, with reliability tested by previous researchers (Oktavianti & Putri, 2021).

3. Materials and Method

This research is a descriptive study with a quantitative approach that aims to describe foot care for diabetes mellitus patients. The study was conducted in the Gondangrejo Community Health Center Working Area, Karanganyar Regency on September 10–17, 2025. The study population was all 82 diabetes mellitus patients who participated in prolanis activities at the Gondangrejo Community Health Center. The research sample consisted of 45 respondents who were determined using an accidental sampling technique with the Slovin formula calculation at a 10% accuracy level, with inclusion criteria being diabetes mellitus patients who participated in prolanis activities in August–September 2025 and were willing to be respondents, and exclusion criteria were patients who did not attend prolanis activities. The variables in this study were foot care as an effort to prevent diabetic ulcers in diabetes mellitus patients, with respondent characteristics including age, gender, education level, employment status, and duration of diabetes mellitus. The research instrument used a sociodemographic questionnaire and the Nottingham Assessment of Functional Footcare (NAFF) questionnaire consisting of 29 questions to assess foot care behavior, with the category of good foot care if the total score is 44–87 and poor if the score is 0–43. Data collection was carried out directly through interviews and questionnaires by respondents, as well as indirectly through secondary data in the form of books, journals, and health articles. Data analysis was carried out univariately using the assistance of a computer program, through data processing stages including editing, coding, transferring, and tabulating, to produce a frequency distribution of respondent characteristics and an overview of foot care in people with diabetes mellitus.

4. Results and Discussion

Research Location Overview

This research was conducted in the Gondangrejo Community Health Center (Puskesmas Gondangrejo) working area, Karanganyar Regency, Central Java. The Gondangrejo Community Health Center is a Technical Implementation Unit (UPT) under the Karanganyar Regency Government that provides basic health services to the community in Gondangrejo District. Its vision and mission are to be part of the community's needs to create a healthy Gondangrejo District through improving the administrative system, increasing knowledge and skills, and improving the quality and affordability of services. Its services include promotive and preventive health, as well as outpatient services, with the motto "Your Health is Our Happiness" and the PRIMA values (Professional, Friendly, Innovative, Independent, Actual).

Gondangrejo Health Center is located at Jl. Raya Solo-Purwodadi Km. 12 Ds. Tuban, Kec. Gondangrejo, Kab. Karanganyar, Central Java, Indonesia 57188 precisely behind the Gondangrejo Terminal and Tuban Kaliyoso market. Gondangrejo Health Center covers 15 villages with a total of 512 RT / RW. Gondangrejo Health Center has provided health services in the form of inpatient care, Free Health Check activities once a month, education to the community every week, exercise and prolanis activities every Wednesday, vaccine immunization, health screening for pregnant women, adolescent posyandu, elderly posyandu, IUD and IMPLAN KB safari and other health services.

Research result

Characteristics of Respondents with Diabetes Mellitus in Prolanis, Gondangrejo Community Health Center, Karanganyar

Table 3. characteristics of respondents with DM

Variables	Characteristics	f	%
Age	26-35 years old	1	2.2
	36-45 years	6	13.3
	46-59 years	19	42.2
	>60 years	19	42.2
Gender	Man	3	2.7
	Woman	42	93.3
Education	Early Childhood Education	6	13.3
	Elementary School	14	31.1
	JUNIOR HIGH SCHOOL	7	15.6
	High School/Vocational School	12	26.7
	College	6	13.3
Work	Work	38	84.4
	Doesn't work	7	15.6
Long time suffering from DM	1-5 years	29	64.4
	>5 years	16	35.6

Source: Primary Data 2025

Based on table 3, the majority of respondents were aged between 46–59 years and >60 years, respectively, 19 people (42.2%), indicating that diabetes mellitus sufferers are predominantly elderly. Based on gender, the majority of respondents were women, 42 people (93.3%), while 3 were men (6.7%). In terms of education level, the most respondents had elementary school education, 14 people (31.1%), followed by high school/vocational school, 12 people (26.7%), junior high school, 7 people (15.6%), and early childhood education and college, each with 6 people (13.3%). Based on employment status, the majority of respondents were employed, 38 people (84.4%), while 7 people (15.6%) were unemployed. The longest duration of diabetes mellitus was 1–5 years, 29 people (64.4%), while those who had suffered from diabetes for more than 5 years were 16 people (35.6%).

Foot Care Categories for Diabetes Mellitus Patients at Prolanis, Gondangrejo Health Center

Table 4. Foot Care Category for Diabetes Mellitus Patients at Gondangrejo Health Center

No	Category	Frequency	Presentation
1.	Good	9	20.0
2.	Not good	36	80.0
Total		45	100.0

Source: Primary Data 2025

Discussion

Based on the attached research results, further discussion will be carried out. interpret the research data, which is then compared with the concepts and theories related to the discussion, which can be seen as follows:

Characteristics of Respondents with Diabetes Mellitus at Prolanis Gondangrejo Health Center, Karanganyar

a) Respondent characteristics based on age

The results of the study showed that the majority of respondents were aged > 46 years. Age has an impact on foot care. This is in line with research. Sari et al., (2021) Researchers found that the average age of 45-60 years was better at performing foot care than the elderly,

who performed less well. This was due to decreased function, including mobility and activity, which led to decreased motivation to perform foot care.

Rosita et al., (2022) In his research, he stated that people aged 45 and over are at high risk for developing diabetes mellitus. Increasing age causes changes in the body's metabolic system, resulting in impaired glucose release. This age is approaching old adulthood and is related to women aged 45 and over entering menopause, which causes a decrease in the hormone estrogen. Estrogen is a protective factor against atherosclerosis, making women at this age more susceptible to diabetic ulcers.

Thus, the high proportion of DM sufferers in foot care for the elderly age group in the Gondangrejo Community Health Center work area can illustrate an increase in cases in the elderly age group which requires special attention in efforts to prevent complications, especially complications in the feet.

b) Respondent characteristics based on gender.

The results of the study showed that the majority of respondents were female. This number was influenced by the greater number of women in the DM population at the Gondangrejo Community Health Center in Karanganyar. This is in line with research Feby Handika, (2024) which says that women do less exercise and are more likely to become obese, which can increase the incidence of diabetes mellitus.

Exercise is crucial in diabetes management because it can lower blood glucose levels and reduce the risk of diabetic foot ulcers. Recommended exercises for diabetes mellitus patients include dynamic exercises, including continuous exercise, rhythmic exercise, interval training, progressive exercise, and endurance training, with a frequency of 3-5 times per week and a duration of 30 minutes. (Prima and Oktarini, 2024).

Thus, the respondents were predominantly female, indicating that women have a higher risk of diabetes complications such as diabetic ulcers. Researchers believe that low physical activity in women is a contributing factor to the increasing prevalence of diabetes and suboptimal foot care. Regular exercise is crucial for controlling blood glucose levels and preventing complications, particularly diabetic foot ulcers.

c) Respondent characteristics based on education.

The results of the study show that the majority of respondents had an elementary school education. This finding is in line with research Husen & Basri, (2021) In his research, the majority of the last education was elementary school. It turns out that the education factor really supports the level of client knowledge to understand the causes and prevention of diabetic ulcers.

Research conducted by Sari et al. (2021) He stated that basic education and advanced education have distinct differences. Advanced education is more capable of guiding individuals through critical thinking and understanding cause and effect. Education has a significant influence on a person's behavior. The higher the level of education, the easier it is for someone to receive information, both formal and informal, so it can be concluded that knowledge of foot care is influenced by a person's education and can reduce the risk of complications. (Yusra et al., 2024).

This can occur because someone with an elementary school education lacks knowledge about diabetes mellitus (DM), which can trigger complications of diabetic ulcers, according to the theory that education factors influence the incidence of diabetes mellitus (DM) because respondents' ignorance about diabetes mellitus (DM) can trigger complications of diabetic ulcers, while a person's level of knowledge is influenced by their level of education. The higher a person's education, the faster they receive and understand information, thus increasing their knowledge.

d) Respondent characteristics based on occupation

The results of the study showed that the majority of respondents were employed. Employment is an important determinant of health. The type of work a person does and the working conditions they perform will influence their health. This research aligns with research Ningrum et al., (2021) said that respondents who work are generally busy with their work so they don't have time to do regular foot care.

According to Notoadmojo in Widagdo, (2021) Working people tend to have less time to visit health facilities, so they have less time and opportunity to maintain their health and undergo medical treatment. In addition, Arania et al., (2021) states that the type of work influences the risk of developing diabetes mellitus, work with less physical activity can cause a lack of energy burning so that it can cause weight gain and a high risk of developing diabetes mellitus.

Researchers believe that work influences the health behaviors of people with diabetes mellitus, particularly regarding foot care. Respondents who work are often busy, leaving them with little time for regular self-care, which can increase the risk of diabetic ulcers. Furthermore, jobs with low physical activity can lead to reduced energy expenditure and increase the risk of diabetes. Therefore, health education tailored to work conditions and schedules is needed to ensure patients maintain optimal foot health.

e) Respondent characteristics based on the length of time they have suffered from Diabetes Mellitus.

The research results showed that the majority of respondents had suffered from diabetes for 1-5 years. Long-term diabetes is a contributing factor to the development of diabetic ulcers. Feby Handika (2024) stated that there is a correlation between long-term diabetes mellitus (DM) and the occurrence of diabetic ulcers. This is because the longer the patient suffers, the greater the likelihood of developing chronic hyperglycemia. Chronic hyperglycemia can lead to complications of diabetes, including retinopathy, nephropathy, coronary heart disease, and diabetic ulcers.

Ayu et al., (2022) Long-term diabetes sufferers experience persistently high and uncontrolled blood glucose levels. This can lead to macroangiopathy, which can lead to decreased blood circulation and loss of pain sensation in wounds. Therefore, patients with diabetes mellitus who have had it for a longer period of time require higher levels of healthcare than those with diabetes mellitus for a shorter period.

Therefore, the duration of diabetes mellitus can influence complications. Longer duration of diabetes can increase the risk of complications due to uncontrolled glucose levels, such as circulatory disorders and decreased pain sensation. Therefore, researchers believe that the duration of diabetes requires attention in efforts to improve education and support so that sufferers can prevent complications, particularly diabetic ulcers.

Foot Care for Diabetes Mellitus Patients at Prolanis, Gondangrejo Community Health Center, Karanganyar.

The results of the study showed that the majority of respondents' foot care categories were poor (80%) according to the results of the study using the NAAF (Nottingham Assessment of Functional Footcare) questionnaire. This is in line with research (Fetia, Debbyousha and Nadira, 2025) which shows that the results of foot care for most patients are still not good.

In this study, there are 6 indicators in foot care, namely patient foot care in checking the condition of the feet, maintaining foot hygiene, cutting toenails, maintenance and use of footwear, injury prevention, injury management in patients. The results of this study indicate that most patients do not understand the importance of maintaining foot hygiene and health to prevent complications of dissected wounds. It can be described through filling out the questionnaire on respondents, it turns out that respondents have a habit of never checking their feet every day. Many respondents who are less aware of checking their feet every day are likely caused by work factors, where the majority of respondents are working. So the many busy activities in their activities, make them not pay attention to the condition of their feet.

Based on the results of interviews conducted with respondents, most respondents wash their feet regularly and do not dry them, especially between the toes, but they wash their feet only during ablution. In addition, they rarely wear shoes when doing activities outside the home. Respondents believe that walking on gravel directly will improve blood circulation. Respondents do not understand that this can actually increase the risk of complications in people with diabetes mellitus. Furthermore, although there are gymnastics activities in their prolantis activities, however, diabetic foot exercises have never been done. Respondents only understand that foot exercises are gymnastic activities that they often do as long as the feet move during the exercise. However, diabetic foot exercises are exercises specifically aimed at the feet or lower extremities and are intended to prevent diabetic ulcers on the feet.

Nestriani et al., (2023) It was stated that better foot care reduces the incidence of diabetic ulcers, while poor foot care increases the incidence. People with diabetes mellitus should pay closer attention to their condition to prevent complications.

Thus, researchers assess that improving foot care needs to be focused on the aspects of patient education and empowerment, as well as providing foot exercise treatment so that the knowledge and skills acquired can be applied consistently in daily practice to prevent diabetic foot complications.

5. Conclusion

Based on data analysis and discussion, the conclusions drawn in this study are as follows:

- The majority of respondents in this study were over 45 years old, female, had a primary school education, most of them worked, and had suffered from DM for 1-5 years.
- The majority of respondents in this study had poor foot care behavior.

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