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THE ANALYSIS OF HEALTH WORKERS' SUPPORT AND PERCEIVED HEALTH SERVICES NEEDS FACTORS TO IMPROVE THE USE OF THE CHRONIC DISEASE MANAGEMENT PROGRAM (PROLANIS) IN DIABETIC PATIENTS IN KAMONJI PUBLIC HEALTH CENTER, PALU CITY

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ABSTRACT

Objectives: This study aimed to determine the relationship between health workers' support and perceived health services needs with the utilization of Prolanis Programs in diabetes mellitus patients in the Kamonji Public Health Center, Palu City. *Methods:* The research design used an analytic survey with a cross-sectional design. The respondent in this study is a Diabetes Mellitus patient who is a Prolanis Program participant at the Kamonji Public Health Center, Palu City. The sampling technique applied in this study was simple random sampling. 96 respondents were involved in the samples. *Results:* The results showed a relationship between the perceived health services need (p = 0.003), and there is no relationship between health workers' support (p = 0.862) with the Prolanis Program utilization. *Conclusions:* There is a relationship between perceived health services needs and no relationship between health workers' support with the utilization of the Prolanis Program in Kamonji Public Health Center, Palu City. The Public Health Center is intended to develop Prolanis Standard Operational Procedures, both technical and administrative SOPs, to improve health worker collaboration and communication. Health workers are expected to be more proactive in providing guidance and promotion through education about Prolanis services.

Keywords: Health Workers Support, Perceived Health Service Needs, Utilization Program, Diabetes Mellitus

INTRODUCTION

Diabetes is the leading cause of end-stage kidney disease worldwide. Despite many advances in genetic mapping, no disease risk genes have been identified for diabetic kidney disease (DKD). Multi-national con- sortia examining gene variants of more than 66,000 people have found no genome-wide significant findings for DKD. Furthermore, while many genetic factors have been examined - even the most logical candidates - when analyzed together, they account for less than 5 % of genetic variability associated with DKD. These large genome-wide association studies have primarily examined populations of European descent. Broadening the diversity of studied populations is critical because of the variability of DKD development associated with increased cardiovascular risk and mortality. Indeed, Aboriginal and Torres Strait Islander peoples (respectfully described as

Indigenous Australians) are more likely to have end-stage kidney disease and be hospitalized or die with chronic kidney disease than their non-Indigenous counterparts. (1,2)

Globally, based on data released by the International Diabetes Federation (IDF), it is estimated that there are 463 million people aged 20-79 years in the world suffering from Diabetes Mellitus, or equivalent to 9.3% of the entire population at the same age in 2019. with the age of 65-79, an estimated 19.9% in 2019 is predicted to increase to 20.4% in 2030 and 20.5% in 2045(3)(4).Diabetes mellitus (DM) is a disease or chronic metabolic illness with multiple aetiologies characterized by elevated blood sugar levels and impaired carbohydrate, lipid, and protein metabolism due to insufficient insulin activity. Insulin insufficiency can be caused by inadequate or incomplete insulin synthesis by the beta cells of Langerhans in the pancreas gland or by a lack of insulin sensitivity in the body's cells (5) (6)

In 2019, 9.3% of adults worldwide had diabetes, according to the WHO. For diabetics with unstable blood glucose control, persistent hyperglycemia can cause retinopathy, nephropathy, neuropathy, cerebrovascular, cardiovascular, peripheral vascular, and endocrine issues. Treating diabetes and its complications costs over 10% of worldwide medical spending. Diabetes prognosis may be affected by patient health behaviors, knowledge, education, beliefs, and life outlook. Poor healthcare awareness and low educational attainment have been linked to stroke, poor glycemic control, and greater mortality among diabetics. Education, financial capacity, and type 2 diabetes mortality have been studied. Education and socioeconomic status affect diabetes-related mortality in Europe and the US. Diabetes healthcare is unevenly distributed by education. Diabetes patients benefit from instruction for self-care. It increases access to better healthcare. Diabetes patients with greater education were more aware of diabetes problems and adhered to diets better. Low education is one of several factors that affect patient health. Regular checkups can diagnose and treat asymptomatic illnesses like diabetes, hypertension, and hyperlipidemia. Individuals with higher education are more likely to have health checks, research shows. Higher education increases the likelihood of early diabetes detection, which may reduce early complications. Diabetes complications and mortality were significantly associated with age at diagnosis. Diabetes prevalence rises with age, making age a crucial diagnostic factor. From 2005 to 2014, Taiwan NHIRD statistics showed men had more diabetes than women. US research reveals that divorced/separated males and bereaved women have higher diabetes-related death rates. (7,8)

Indonesia has experienced an increase in the prevalence of Non-Communicable Diseases (NCD), the highest cause of death in Indonesia, one of which is Diabetes Mellitus. The majority of people with diabetes mellitus in Indonesia ranks 7th in the world from 10 countries, with 10.7 million sufferers, and it is expected to increase to 21.3 million by 2030(9).

The health service model was made by Anderson in 1974, according to Notoatmodjo (2014). There are three main factors that influence how people use health services. These are predisposing factors, which mean that different people tend to use different health services. Supporting factors include the ability, availability, and cost of current health

resources, which depend on how much people can pay for health services. The need factor is the one that has the most direct relationship to how often health services are used(10) (11)

To improve the health status of the community and the success of social programs in the health sector, under Presidential Regulation Number 12 of 2013 concerning Health Insurance Article 21 Paragraph 1, one of the benefits obtained by participants of the Health Social Security Organizing Agency (BPJS) is preventive and promotive health services, including the Chronic Disease Management Program (Prolanis)(12). The Indonesian government uses BPJS Health to combat Diabetes Mellitus and Hypertension via the Prolanis Program. Prolanis Programs were explicitly established for type 2 diabetes and hypertension management in primary healthcare (13).

Prolanis Programs is one of the preventive and promotional strategies implemented by BPJS Health to reduce or avoid participants' chronic illness problems while decreasing the cost of health care. This plan aims to encourage all BPJS Health participants with chronic diseases to achieve optimal quality of life, with 75% of registered participants visiting primary healthcare achieving "good" results on specific examinations for Type 2 diabetes and hypertension serving as an indicator. Prolanis program services include medical consultations, group education for Prolanis participants, SMS gateway reminders, home visits, club activities, and a health status monitoring field(13).

What is Unknown

Based on the Health Profile of Central Sulawesi Province in 2019, the highest number of people suffering from Diabetes Mellitus was in Parigi Moutong Regency at 33,873 people, and the lowest was in Banggai Laut Regency at 5,175 people. Meanwhile, the second highest number of people suffering from Diabetes Mellitus is in Palu City at 27,005 people(14).

The findings from the 2020 annual report on Non-Communicable Diseases from the Palu City Health Office observed that among the 13 Public Health Centers in Palu City, the Kamonji Public Health Centre had the highest prevalence of historical instances of Diabetes Mellitus, including a total of 1,825 individuals.

According to preliminary research conducted at the Kamonji Public Health Center in Palu City, implementing Prolanis Programs at the public health center complied with BPJS Health In guidelines. Health education, routine health status checks, and drug services are among the activities, although SMS gateway reminders are rarely used. Home visit activities and club activities (gymnastics) have yet to be conducted since the COVID-19 pandemic in 2020, which impedes the program’s sustainability.

However, the researcher's interview with the Prolanis manager at the Kamonji Public Health Center found that the Prolanis program had yet to reach the target of 75% of registered participants receiving primary healthcare services. Nonetheless, it has effectively managed Type 2 Diabetes and Hypertension, as indicated by its active participants' high quality of life and good health examination results. In 2020, 91 registered Prolanis participants were at the Kamonji Public Health Center. Meanwhile, there were 1,919 documented cases of DM in 2020. This indicates that the total coverage of Prolanis

participants is barely 5% of the 75% registered participants who frequent primary healthcare facilities.

Additional field results were also discovered. As communicators, health workers have not provided patients with clear information to correct society's lack of knowledge and wrong attitudes towards their illness. As a motivator, a health worker has been unable to provide motivation, direction, and guidance in increasing the awareness of someone motivated to achieve the desired goal. As facilitators, health workers cannot act as companions in a forum and provide opportunities for patients to ask questions about things they do not understand. As counselors, some health workers still don't care and don't want to share their experiences with fellow health workers and don't encourage them to make decisions.

Therefore, this research aims to determine the relationship between health workers' support and perceived health services needs factors to improve the chronic disease management program (prolanis) use in diabetic patients in Kamonji Public Health Center, Palu City.

How and why should we fill the gap?

Conducting this research has significant importance as it contributes to improving understanding of the key determinants associated with the utilization of the Chronic Disease Management Program. Consequently, healthcare workers can gain valuable insights on how to effectively promote the utilization of the Prolanis program within Public Health Centers. In addition to the aforementioned, this study aims to ascertain the factors contributing to the underutilization of the Prolanis program among individuals with diabetes mellitus, with the objective of devising effective strategies to address these problems. Therefore, this research aims to analyze the relationship between health worker support and perceptions of health service needs with the utilization of a chronic disease management program (Prolanis Program).

METHODS

The research design used was an analytic survey with a cross-sectional approach. The respondent in this study is a Diabetes Mellitus patient who is a Prolanis Program participant at the Kamonji Public Health Center, Palu City.

The population in this study was the entire prevalence of diabetes mellitus cases in 2020, totaling 1,919 cases. The sampling technique applied in this study was simple random sampling, which consisted of a random selection of sample members from the population without consideration of similarities or strata within the population(15). In this study, 96 respondents were involved in the samples. People with diabetes mellitus who were registered as participants in the Prolanis Program at the public health center and willing to participate as research subjects were eligible for inclusion in this study. The Exclusion Criteria include diabetics with severe problems and those who cannot communicate well.

The collection of primary data involved the administration of a questionnaire that had undergone rigorous testing to ensure its reliability and validity and was analyzed using the chi-square test. This approach aimed to directly examine the correlation between health

workers' support and the perceived health services needs among patients with diabetes mellitus in the Kamonji Public Health Center's work area in Palu City. Data processing uses a computer program through editing, coding, data entry, and cleaning. This study's data presentation was carried out using a computerized program. After processing the data, the data that has been analyzed is presented in the form of a frequency distribution table, narration, and then a chi-square test table.

RESULTS

Table 1.
Research Variables Frequency Distribution

Variable	Frequency(n)	Percentage(%)
Utilization of Prolanis Programs		
Not Utilizing	56	58.3
Utilise	40	41.7
Gender		
Man	31	32.3
Woman	65	67.7
Age Group		
Adult (26-45)	15	15.6
Elderly (46-65)	65	67.7
Seniors (>65)	16	16.7
Last education		
Elementary School	29	30.2
Junior High School	30	31.2
Senior High School	28	29.2
College	9	9.4
Occupation		
Unemployed	38	39.6
Self-employed	16	16.7
Civil servant	5	5.2
Retired	18	18.8
Other	19	19.8
Health Workers' Support		
No Support	43	44.8
Support	53	55.2
Perceived Health Service Needs		
No Need	26	27.1
Need	70	72.9

Source: Primary Data,2022

Based on table 1 shows that most of the respondents did not use Prolanis services, namely 56 respondents (58.3%), while respondents who used Prolanis services were 40 respondents (41.7%). According to the table, the distribution of respondents by gender is predominantly female, with 65 respondents (67.7%), compared with 31 respondents (32.3%).

The elderly age group (46-65 years) has as many as 65 respondents (67.7%), whereas the adult age group (26-45 years) has as few as 15 respondents (15.6%). Supplied data in the table presents information on the distribution of respondents based on their latest education. Most of the respondents with the latest junior high school education were 30 respondents (31.2%), while the lowest was a college with nine respondents (9.4%).

The occupation distribution of respondents is presented in Table. As many as 38 respondents (39.6%) were unemployed, while only five (5.2%) were civil servants. The table indicates that most respondents received health workers' support, particularly 53 respondents (55.2%). However, 43 respondents (44.8%) did not receive the support of health workers. The information presented in the table reveals that most respondents believed that they needed health services, as many as 70 respondents (72.9%). In comparison, the percentage of people who say they do not need health services is just as much as 26 (27.1%).

Table 2.
Chi-Square Test Results

Variables	Use of Prolanis Program				Total		*p-value*
	Not Utilizing		Utilize				
	f	%	f	%	f	%	
Health Workers Support	26	27.1	17	17.7	43	44.8	0.862
No support	30	31.2	23	24.0	53	55.2	
Support							
Perceived Health Service Needs	22	22.9	4	4.2	26	27.1	0.003
No Need	34	35.4	36	37.5	70	72.9	
Need							

Source: Primary Data, 2022

Table 2 demonstrates that 26 respondents (27.1%) did not receive support from health workers and did not utilize the Prolanis Program. However, 17 respondents (17.7%) utilized the Prolanis Program. Similarly, 30 respondents (31.2%) got support from health workers who did not use the Prolanis Program, compared to 23 respondents (24.0%) who utilized the Prolanis Program.

Based on the results of the analysis using the Chi-Square test to determine the

relationship between health worker support and the utilization of the Prolanis Program, the null hypothesis (Ho) was accepted, indicating that there is no relationship between health worker support and the utilization of the Prolanis program at the Kamonji Public Health Center in Palu City.

Table 2 also indicates that individuals who believe they do not need health services do not utilize Prolanis Programs. Furthermore, 22 respondents (22.9%) Compared to four respondents (4.2%) who use Prolanis Programs. In contrast, respondents who perceived a need for health services did not utilize Prolanis Programs, comprising as many as 34 respondents (35.4%) and as many as 36 respondents who did use Prolanis Programs (37.5).

Based on the results of the analysis using the Chi-Square test to determine the relationship between the perceived need for health services and the utilization of Prolanis Program, the null hypothesis (Ho) was rejected, indicating that there is a relationship between the perceived need for health services and the utilization of Prolanis Program at the Kamonji Public Health Center in Palu City.

DISCUSSION

The Prolanis program is a health service system and a proactive approach implemented in an integrated manner by incorporating participants, health facilities, and BPJS Health in the context of chronic disease care for BPJS Health participants. It aims to reach the optimal quality of life with an indicator of 75% of registered participants visiting health facilities having good results on specific examinations for diabetes type 2 and hypertension in accordance with relevant clinical guidelines, thereby preventing complications with cost-effective health care (16)

Health Workers' Support

According to the Laws of the Republic of Indonesia number 36 of 2014, a health worker is any person who is committed to the health sector and has acquired knowledge and skills through education in the health sector, which, for certain types, requires authorization to conduct health activities. As managers of improving physical and psychological circumstances, the involvement and assistance of health care staff are crucial for patients, as they can affect their trust and acceptance (17).

The analysis revealed that respondents did not receive help from health workers and did not use Prolanis Programs because they needed to familiarize themselves with the existence of the Prolanis Program, its implementation goal, and the program's activities and activities schedules. In addition, respondents claimed that health workers should have given information about Prolanis Program services and provided treatment when blood sugar levels were high. Furthermore, health workers only apply for the program proactively by introducing innovations in each activity. This is what discourages members from utilizing the Prolanis Program's services.

Contrast respondents who did not receive health worker support and kept going to use the Prolanis Program occurred because Prolanis Program workers assumed they would only provide information on the existence of Prolanis Programs and the activities

conducted if the patient exhibited high blood sugar levels after (at least three) examinations and repeated treatment.

This study's analysis indicates that respondents who received support from health workers but did not utilize the Prolanis Program were less interested in participating in activities due to a lack of understanding regarding the goals and activities carried out in implementing the Prolanis Program. This lack of understanding resulted from the absence of specific socialization from health workers regarding this program, as well as inadequacies in the program's implementation. Participants who have not visited Prolanis in a long time, such as for a medical check or to take medicine, will only receive a text message reminder every three months for their Prolanis visits.

The majority of respondents who received support from health workers and utilized the Prolanis Program did so because they had only recently received information about the service program. However, several respondents also admitted to participating in counseling and group health checks conducted every three months in several subdistricts. This is what encourages respondents to participate in Prolanis events regularly.

Following the study findings, there was no correlation between health worker support and the utilization of the Prolanis Program at the Kamonji Public Health Center in Palu City. Participants' interest in utilizing Prolanis services can be enhanced by proactively implementing Prolanis by presenting innovations in every activity based on the knowledge and skills of health workers.

The Healthy Indonesia Program with a Family Approach (PIS-PK), a method for primary health care to expand goal reach and access to health services by visiting families, is another effort that health workers can perform. One of the national priority scales in achieving a Healthy Indonesia is the reduction of noncommunicable diseases, including diabetes and hypertension, which is one of the indicators for healthy families in the PIS-PK to achieve Minimum Service Standards.

Conforming to the research results of Afrilla's (2020) study, the services of Prolanis officers had no effect on the participation of Diabetes Mellitus (DM) patients in Prolanis activities at the Lakessi Public Health Center in Parepare City(18). At the Darussalam Medan Petisah Public Health Center, Ginting et al. (2020) found no significant correlation between the function of officers and the use of the Prolanis program. According to the study, health workers did not participate in specific social activities within this program. Health Workers have confirmed that they would only share activity information if the patient received repeated treatment(19).

Contrary to the findings of Abdullah's (2017) research, which indicates a significant correlation between the role of health workers and the number of visits to participants in the chronic disease management program at the Minasa Upa Public Health Center in Makassar City(20).

Perceived Health Services Needs

In Notoatmodjo (2012), Anderson (1974) uses pain to illustrate the demand for health care. Disease assessment is part of the requirement. As a family's need for medical

services determines the frequency to which it uses health services, the characteristic of illnesses is the factor most strongly associated with health service utilization(10).

The findings indicate that individuals who assume they don't need health services and do not utilize the program primarily do so because they believe they'll only do a health checkup if they feel sick. Several people also said they needed more knowledge and health information because they didn't understand the program very well. This may encourage people to think more positively about the need for health services.

Respondents who perceive that they do not need health services but still use Prolanis because they perceive that they do not need routine health checks and only do it for prevention or after experiencing complications than take treatment. Respondents also felt they were no longer required to control their health status at the public health center after consuming the drug.

This study also showed that respondents who felt they needed health services but didn't use the Prolanis Program admitted they did need them. However, there were still many respondents who didn't take part in Prolanis activities. Some people would rather treat themselves, like by taking herbal medicines. Respondents also think that if they need health care, they will go to the public health center for an exam rather than regularly going to Prolanis activities.

While the respondents felt they needed health services and were getting the benefit of the Prolanis Program, most of them admitted that they did need health services such as educational activities and medical checks. Respondents thought there were benefits to having routine health checks so that health could be controlled. Respondents also said they needed easy access to health services, like the ones they had been getting at the public health center, which included health checks (such as checking blood sugar levels) and referral letters to secondary health facilities for diseases that couldn't be treated at first-level health facilities.

The chi-square test results show a relationship between perceived health services needs and the utilization of the Prolanis Program at the Kamonji Public Health Center, Palu City. As indicated by Habiba's study (2020) results, patients with a positive opinion of their pain are more likely to use Prolanis. This means there is a relationship between the perception of pain in patients with diabetes mellitus at the Makassar City Health Center using Prolanis(21). In contrast to the findings of Yuliaristi's research (2018), which shows that service needs don't affect how often chronic disease management programs are used in the working area of the Mandala Public Health Center in 2018, this study shows that service needs do have an effect(22).

Health workers must carry out activities such as providing education regarding the benefits and importance of utilizing the Prolanis Program and implementing a healthy lifestyle. This information is hoped to change people's perceptions with a healthy paradigm in maintaining health through a higher awareness of the importance of promotive and preventive health services.

CONCLUSION

Based on the research results, it can be concluded that there is a relationship between

perceived health services needs and no relationship between health workers' support with the utilization of the Prolanis Program in Kamonji Public Health Center, Palu City.

The Public Health Center is intended to develop Prolanis Standard Operational Procedures, both technical and administrative SOPs, to improve health worker collaboration and communication.

Health workers are expected to be more proactive in providing guidance and promotion in the form of education about Prolanis services, beginning with the goals, benefits, and activities carried out not only for Diabetes Mellitus and Hypertension patients but also for the patient's families.

Funding

None

Conflict Of Interest

None

What is Known?

In Palu City's Kamonji Public Health Center, this study is the first to be carried out. This research examines the variables influencing the Chronic Disease Management Program utilization in Diabetes Mellitus Patients at Kamonji Public Health Center in Palu City, especially for health workers' support and perceived health service needs. This study explains a relationship between perceived health services needs and no relationship between health workers' support with the utilization of Prolanis in Kamonji Public Health in Palu City. As part of the health worker support that must be provided to participants, Prolanis must be implemented proactively for each activity, integrating innovations based on the knowledge and abilities of health workers. It can enhance participant enthusiasm in utilizing Prolanis services. The Healthy Indonesia Program with a Family Approach (PIS-PK), which allows the public health center to expand its target reach and access to health services by visiting families, is an addition to the development that health workers can undertake. One of the national priority scales in reaching a Healthy Indonesia is the reduction of non-communicable diseases, such as hypertension and diabetes, which is one of the indicators for healthy families in PIS-PK to achieve Minimum Service Standards. Public health workers can participate in activities such as educating patients about the importance and benefits of using Prolanis Programs and promoting a healthy lifestyle. Through a greater understanding of the significance of promotive and preventive health services, this information will influence people's attitudes of a healthy attitude to maintaining health.

What it Contribute?

This study can be used to examine how to improve the use of the Chronic Disease Management Program in Patients with Diabetes Mellitus throughout all of Palu City's public health facilities, particularly in the active region of the Kamonji Public Health Center. It can also be utilized as a resource for further study on the Chronic Disease Management Program and as educational material for researchers.

This analysis can provide insights into what influences patients with diabetes mellitus at Kamonji Public Health in Palu City to utilize the Chronic Disease Management Program. Therefore, it is expected that the Public Health Centre would establish

administrative and technological standard operating procedures and enhance coordination and communication among healthcare workers. It is vital to look at different indicators as a variable measuring tool for research development. Predisposing factors (gender, age, education, and occupation) and supportive factors (family support and ability to buy health services) can also be investigated.

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