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OPTIMIZATION OF DIABETES MELLITUS CONTROL ON MIGRANT WORKERS IN MALAYSIA

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ABSTRACT Indonesian migrant workers in Malaysia need to be given education, namely health education about diabetes mellitus because the lifestyle of the Malaysian population can cause several factors in the occurrence of diabetes mellitus and its complications among migrant workers because this disease has a significant impact on quality of life, health and productivity. migrant workers. Hyperglycemia is a medical condition in the form of an increase in blood sugar levels above normal which is characteristic of several diseases, especially diabetes mellitus as well as various other conditions. Based on the cause, DM can be classified into 4 groups, namely type 1 DM, type 2 DM, Gestational DM and other types of DM. Various epidemiological studies show a tendency to increase the incidence and prevalence of type 2 DM in various parts of the world. The WHO organization predicts a significant increase in the number of type 2 DM patients in the coming years. International Diabetes Federation (IDF) predictions also show that in 2019-2030 there will be an increase in the number of DM patients from 10.7 million to 13.7 million in 2030.

KEYWORD: *Optimization, Treatment, Diabetes Mellitus, Malaysian Migrant Workers*

1. INTRODUCTION

The prevalence of diabetes mellitus (DM) is increasing rapidly worldwide, and action needs to be taken to minimize the burden of diabetes mellitus and reduce its complications. Diabetes mellitus is currently a global health threat. In Malaysia, diabetes mellitus is an

increasingly worrying problem. Significant changes in the lifestyle of Malaysians have contributed to the increasing incidence of diabetes. Malaysia, a multiethnic country consisting of three major races, Malays, Chinese and Indians with a population of around 30 million people including 0.86 million people in the Klang district of Malaysia which has a high diabetes mellitus epidemic. The World Health Organization (WHO) estimates that by 2030, Malaysia will have a total of 2.48 million people with diabetes compared to 0.94 million in 2000 which is an increase of 164%. This increasing trend is mainly caused by several factors such as population growth, aging, urbanization and the increasing prevalence of obesity and lack of physical activity among Malaysian people. In this condition, migrant workers who work in Malaysia can also be affected by the habits or lifestyle they follow. Malaysian residents.

Diabetes Mellitus is also associated with long-term consequences that include severe complications. Knowledge is essential for adequate diabetes management and self-management education is the cornerstone of treatment for all people with diabetes. Patients need the knowledge and skills to make informed choices and to facilitate self-directed behavioral change and ultimately to reduce the risk of associated complications. Behavioral and lifestyle changes are key to successful diabetes self-management.

Several studies report that knowledge about diabetes is still poor in developing and underdeveloped countries and that knowledge should be improved through continuing education by health care professionals such as pharmacists, nurses and doctors. After considering the above factors, it is clear that there is a need to optimize knowledge about diabetes mellitus among migrant workers working in Malaysia. Therefore, this time there will be community service for migrant workers working in Malaysia using the health education method.

2. METHOD

The method for implementing community service for migrant workers in Malaysia is by providing health education using online methods. This activity was carried out at the Embassy of the Republic of Indonesia (KBRI) in Kuala Lumpur, Malaysia on May 26 2024. The subject of the service was the migrant worker community in Malaysia. The counseling stages include explaining the meaning of diabetes mellitus, types of diabetes mellitus, causes and complications of diabetes mellitus, and prevention of diabetes mellitus.

Explaining education about:

1. Definition of diabetes mellitus

Diabetes mellitus (DM) is a metabolic disorder characterized by hyperglycemia accompanied by disorders of carbohydrate, fat and protein metabolism caused by defects in insulin secretion and insulin action (Alberti, 2010). According to Guyton and Hall (2011), DM is a syndrome of metabolic failure of carbohydrates, fats and proteins due to lack of insulin secretion or decreased tissue sensitivity to insulin. According to a report from WHO (World Health Organization), Indonesia ranks fourth in terms of diabetes mellitus sufferers. Serious damage occurs to many body systems, especially the nerves and blood vessels.

2. Type of diabetes mellitus

a. Type 1 DM or also called Juvenile Diabetes or Insulin Dependent Diabetes Mellitus (IDDM), with the number of sufferers around 5% - 10% of the total number of DM sufferers and most often occurs in people under 25 years of age, around 95%. Type 1 DM is characterized by damage to pancreatic β cells caused by an autoimmune process, resulting in absolute insulin deficiency so that sufferers must require external (exogenous) insulin assistance to maintain blood sugar levels within normal limits. Until now, type 1 diabetes is a disease that cannot be prevented, including by diet or exercise. In the initial phase of type 1 DM, most sufferers have fairly good health and body weight, and the body's response to insulin is still normal. An autoimmunity reaction that destroys pancreatic beta cells in type 1 DM sufferers. An autoimmunity reaction can be triggered by an infection in the body (Sutanto, 2010).

b. Type 2 diabetes mellitus (not insulin dependent). Type 2 DM is also called Non-Insulin Dependent Diabetes Mellitus (NIDDM) or Adult Onset Diabetes. The number of people suffering from type 2 DM is the largest number of sufferers, around 90% - 95% of all DM cases (WHO, 2003), occurs in middle adulthood and the increase occurs higher in men than women. Due to insulin resistance, the number of insulin receptors on the cell surface is reduced, although the amount of insulin is not reduced. This can result in glucose not being able to enter the cells even though insulin is available. This disease is caused by central obesity, a diet high in fat and low in carbohydrates, lack of physical activity and hereditary factors (Iskandar, 2004). Several theories explain the exact cause and mechanism of this resistance, but central obesity (obesity with fat accumulation in the abdominal area) is known to be a factor in insulin resistance. This reason is associated with the release of certain groups of hormones that impair glucose tolerance.

c. Gestational Diabetes Mellitus (GDM). Pregnant women who have never experienced diabetes mellitus, but have high blood sugar during pregnancy, may be associated with having gestational diabetes. This type of diabetes is a disorder of glucose tolerance that is found during pregnancy. In general, DMG indicates a relatively mild impaired glucose tolerance so that it rarely requires medical help. But blood sugar levels usually return to normal after giving birth.

d. Other types of diabetes (Secondary Diabetes) The cause of other types of diabetes mellitus is due to abnormalities in beta cell function and insulin work due to genetic disorders, diseases of the exocrine glands of the pancreas, drugs or chemicals, infections, immunological disorders, and other genetic syndromes related to occurrence of diabetes mellitus.

3. Causes of diabetes mellitus

The cause of DM is not yet known with certainty, but there are several factors that can influence it, namely genetics, obesity, autoimmune diseases, and viruses. Apart from that, other factors such as environment, economy and culture can also influence the occurrence of DM. According to Faisalado and Cecep (2013), the risk factors for someone to develop DM are if the following conditions are found :

a. Family history with DM
b. Obesity (> 20%, ideal body weight) or body mass index (IMT) > 27 kg/m^2
c. Age over 40 years
d. High blood pressure (> 140/90 mmHg)
e. Blood lipid profile abnormalities (dyslipidemia), namely HDL cholesterol <35 mg/dL, and/or triglycerides > 250 mg/dL
f. Someone who has impaired glucose tolerance or impaired fasting blood sugar
g. Women with a history of gestational diabetes
h. Women who have given birth with a baby weighing > 4000 gr
i. History of using oral or injected drugs for a long period of time, especially corticosteroid drugs which are indicated for the treatment of asthma, skin, rheumatism, and others.

4. Complications from diabetes mellitus

a. Cardiovascular system disorders
b. Visual impairment

c. Kidney demage
d. Neuropati diabetic

5. Prevention and control of diabetes mellitus

a. Exercise regulary
b. Maintain ideal body weight
c. Implement a healthy eating pattern
d. Check your blood sugar regularly
e. Managing stress
f. Drink water regularly
g. Maintain optimal vitamin D levels
h. Stop smoking habits

3. RESULT AND DISCUSSION

International community service III for activity was carried out online in collaboration with LSMSharing, with the target audience being Indonesian migrant workers working in Malaysia. The community service targets gathered in the SIKL Hall during the activity were 113 Indonesian migrant workers and 7 foreign migrant workers. The resource person provided material according to his field regarding time management to migrant workers in Malaysia. The material is presented in a simple way so that it is easy for participants to understand and easy to implement. Next, participants were given the opportunity to ask questions about the material presented.

The migrant workers were very enthusiastic about taking part in the activity, namely health education with the theme of optimizing the management of diabetes mellitus by explaining the meaning of diabetes mellitus, types of diabetes mellitus, complications of diabetes mellitus, and prevention of diabetes mellitus. It is hoped that in the future migrant workers will be able to carry out what has been conveyed to prevent and control diabetes mellitus.

Figure 1. PKM III participants and migrant workers working in Malaysia who took part in PKM III activities

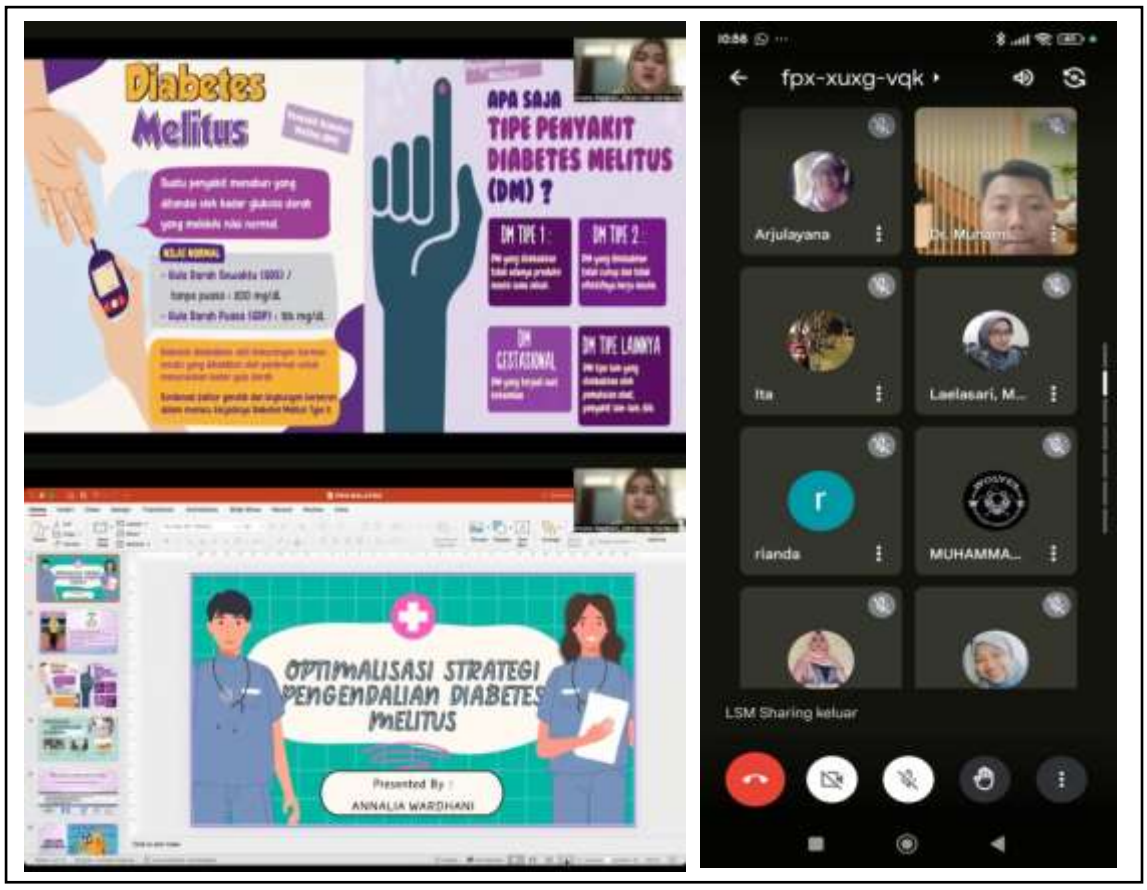

Figure 2. Providing counseling material by resource persons using online methods to PKM III participants and migrant workers working in Malaysia who take part in PKM III activities

4. CONCLUSION

Hopefully, the results of community service activities for Indonesian migrant workers in Malaysia which are carried out online and offline will provide good benefits for the participants and all migrant workers in Malaysia, all activities starting from the opening to counseling activities regarding optimizing the control of diabetes mellitus. runs well and smoothly. It is necessary to develop sustainable activities from the local health team so that programmed activities continue. Development will continue to be carried out in community service activities with other innovations.

REFERENCE

Mafauzy M. Diabetes melitus di Malaysia. *medis. J.Melayu.* 2006; 61 :397–398.

Murata GH, Shah JH, Adam KD, Wendel CS, Bokhari SU, Solvas PA, Hoffman RM, Duckworth WC Faktor yang mempengaruhi pengetahuan diabetes pada veteran diabetes tipe 2. *Diabetologi.*2003; 46 :1170–1178.

Letchumanan GR, Wan-Nazaimoon WM, Wan-Mohamad WB, Chandran LR, Tee GH, Jamaiyah H., Isa MR, Zanariah H., Fatanah I., Ahmad Faudzi Y. Prevalensi Diabetes dalam Survei Morbiditas Kesehatan Nasional Malaysia III 2006. *Kedokteran. J.Melayu.* 2010; 65 :173–179.

Palanisamy S., ArulKumaran KSG, Rajasekaran A. Penilaian pengetahuan dalam reaksi dan pelaporan obat yang merugikan. *Lengkungan. farmasi. Praktek.* 2013; 4 :104–119.

Najib Mohd NM, Dali AF, Ahmad A., Sulaiman S., Hussin SN, Mokhtar N. Pengetahuan dan Sikap tentang Diabetes di Kalangan Masyarakat Di Kota Bharu Kelantan, Malaysia. *Int. J.Edu. Res.* 2014; 2 :1–10.

Qamar.Muhammad, Awareness of diabetes mellitus among general public in Shah Alam, Malaysia: A cross-sectional study**,** September 2017.Asian Journal of Pharmaceutical and Clinical Research 10(9):192

MulerL,Gorter K, Hak E, Goudzwaard, schellevis F and Hoepelman A, Increased risk of common infection in patient with type 1 and type 2 diabetes mellitus. Clin infect dis. 2005;41:281-8

PERKENI, pencegahan diabetes mellitus di Indonesia, 2015.Jakarta : PB PERKENI