SCOPING REVIEW: MANAGEMENT OF TYPE 2 DIABETES MELLITUS IN PRIMARY HEALTH CARE

Ni Luh Gde Ari Natalia Yudha[1)], and Ady Wirawan[2)]

[1)]Faculty of Science and Technology, Dhyana Pura University
arinataliayudha@undhirabali.ac.id

[2)]Faculty of Medicine, Udayana University
ady.wirawan@unud.ac.id

ABSTRACT

Type 2 diabetes mellitus is a chronic disease whose prevalence continues to increase. The increase in chronic diseases has an impact on the high health financing in Indonesia. The government through BPJS Health organizes a chronic disease management program (Prolanis) which is held in primary services throughout Indonesia in collaboration with BPJS Health. The purpose of this study is to describe the management of Type 2 DM in other countries. The research method used a scoping review based on Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR). The source of the data was obtained from an online electronic search engine from the Pubmed database. A total of 7 out of 346 articles met the inclusion criteria which were grouped into qualitative, quantitative and mixed methods research. There are similarities in the management of Type 2 DM, namely the involvement of a team consisting of interdisciplinary and multidisciplinary health workers, measurement of health status seen from the decrease in blood sugar (HbA1c) and blood pressure levels and the involvement of educators who provide education and patient self-care skills. The difference in the management of Type 2 DM is the collaboration in handling mental health such as depression.

Keyword: *Diabetes Mellitus, Primary Health Care*

1. INTRODUCTION

One of the chronic diseases with a high prevalence is Type 2 diabetes mellitus (DM). Based on estimates by the World Health Organization (WHO), from 8.4 million in 2000, the number of people with diabetes will increase to approximately 21.3 million in 2030 (Perkeni, 2021). The International Diabetic Federation (IDF) stated that in 2015 Indonesia was ranked seventh out of 10 countries in the world (Perkeni, 2021). The Basic Health Research (Riskesdas) in 2018 showed the prevalence of diabetes mellitus rose from 6.9% to 8.5% or about 20.4 million Indonesians were diagnosed with DM (Ministry of Health, 2018). Diabetes Mellitus is blood sugar levels that are elevated or above normal limits as a result of abnormalities in insulin secretion, insulin action or both. The cause of the increase in blood levels is the basis for classifying the type of DM (Ministry of Health, 2020). The increase in chronic diseases has an impact on the economy and productivity of the nation. The top cost ranking was occupied by diabetes mellitus of Rp. 9.2 trillion, and chronic disease drugs with high costs are dominated by diabetes mellitus and hypertension drugs (BPJS Kesehatan, 2015). Various evidences show that complications of type II DM can be prevented by glycemic control but the achievement of control in Indonesia has not reached the target (Perkeni, 2021). The Government of the Republic of Indonesia guarantees the health of its people through a National Health Insurance Program (JKN) managed by the Social Security Administering Body (BPJS). Health creates a Chronic Disease Program (Prolanis) which aims to encourage participants with chronic diseases to have a better quality of life (Health, BPJS, 2015). Prolanis activities involve participants, service providers and BPJS Health with cost-effective and efficient health services.

Based on the practical guidelines of prolanis, chronic diseases that are the focus of prolanis are type II diabetes and hypertension. Based on the prolanis practice guidelines, prolanis activities include medical consultation or education activities, home visits, reminders, club activities (gymnastics) and monitoring of health status (Health, 2015).

The prolanis activity was found that there were still many obstacles in the implementation of prolanis such as reminder activities and home visits and even gymnastics activities were not carried out because they were constrained from the side of the puskesmas (Sari, 2019). In addition, the level of participation of prolanist participants is still low due to low public awareness of the importance of prolanis (Meiriana, 2019). Factors that influence the low participation of participants in prolanis activities such as level of knowledge, perception of seriousness of illness and family support (Fadila &Aisyah, 2021). The low level of activeness of prolanis participants makes it difficult to monitor the health of participants such as monitoring taking medication, controlling blood sugar levels (Kristanto et al, 2021). Therefore, the purpose of this review is to systematically map and answer research questions about "how is the management of type 2 diabetes mellitus in primary care carried out in other countries based on literature studies?"so that it is expected to provide an overview of development efforts in the management of diabetes mellitus in primary services in Indonesia.

2. RESEARCH METODOLOGY

a. Protocol and Registration

This Scoping Review complies with the guidelines following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Extensions for Scope Reviews (PRISMA-ScR) with the number…

b. Sources of Information and Data Search Strategies

This Scoping review was retrieved using an online electronic search engine from the Pubmed database. The keywords used are "diabetes mellitus"AND "primary care"AND "disease management". Search data using the initial filter text availability checklist Free full textand publication date 10 years. The data search was carried out from June 29, 2022 to July 5, 2022.

c. Eligibility Criteria

Screening of data using inclusion criteria, namely: 1) original study, review, research protocol, and guidelines that describe the management of diabetes mellitus in primary care; 2) there is no special discussion about therapy/medical action/sports/surgery given to people with diabetes mellitus; 3) written in English; 4) full articles can be accessed for free/free; 5) without duplication. While the exclusion criteria are studies that do not match the inclusion criteria above.

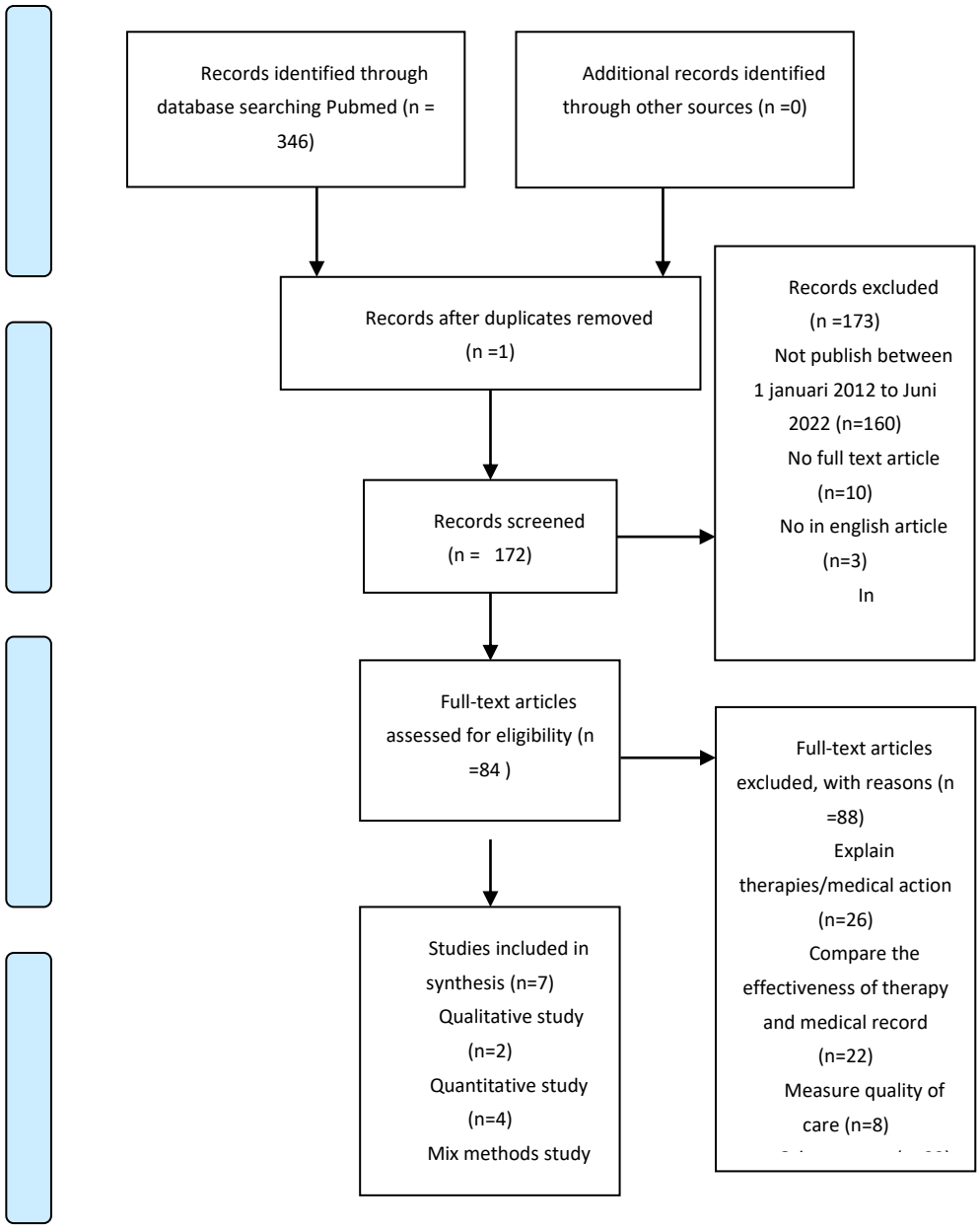

Figure 1. Article selection using Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR)

d. Data Charting Process

The process of searching for data in the electronic database at Pubmed is carried out for 1 week from June 29, 2022 to July 5, 2022 by entering keywords. Then the writer goes through the search and reads the abstract based on the results obtained from writing keywords. Research title and abstract according to inclusion criteria followed by reading the article in full. Articles that matched the inclusion criteria were collected in tabular form and data was then extracted based on the author's name and year of publication, title, research location, research objectives, type of research and research method or design, as well as research results.

3. RESULTS AND DISCUSSION

a. Result

The initial search yielded 346 articles (Figure 1). After deletion of duplicate articles (n=1) a total of 172 studies were identified from an electronic database search for screening by article title and abstract. After the assessment based on the inclusion criteria was carried out, it was continued with a complete reading of 84 articles so that 7 articles were obtained which would be analyzed and synthesized.

b. Study Characteristics

From the 7 articles that were analyzed and synthesized, 2 articles were grouped into qualitative research, 4 articles were grouped into quantitative research, and 1 article was grouped into mixed methods research.

c. Study Search Results

The article search results from the studies conducted were all grouped into the table for managing diabetes mellitus in primary care, shown in table.

d. Synthesis of Results

Based on 7 articles that were synthesized based on search results, that the management of diabetes mellitus in primary care was built in interdisciplinary and multidisciplinary collaboration teams in dealing with Type 2 DM patients. mental disorders such as depression that occurs in sufferers (Beck et al., 2018; Khan et al., 2015). Almost all studies used teams consisting of various disciplines such as family medicine, nurses, nutritionists, pharmacists and educators. HbA1c/blood glucose and blood pressure indicators are physiological indications that are focused on the management of DM in primary care. Educator support in increasing self-care knowledge and skills in the management of Type 2 DM patients, which has an impact on improving quality of life (JC Zgibor et al., 2014). The establishment of a good relationship in the collaborative team in the management of DM patients so that an atmosphere of mutual respect will increase trust and encourage patients to comply and continue their care visits to primary care (Noel et al., 2020; King et al., 2020). The design of a systematic clinical algorithm to coordinate chronic disease care contributes to the development of an integrated behavioral medical service model to help patients manage their condition (Eeghen et al., 2018).

e. Discussion

The management of Type 2 DM in Indonesia is carried out through prolanis activities. Prolanis based on the Clinical Guidelines BPJS Health Prolanis activities (2015) are carried out with various forms of prolanis activities, namely medical consultations, education for groups of prolanis participants, reminders through WhatsApp groups that aim to motivate participants to make regular visits to health services, home visits, namely home visits of prolanis participants for participants who are unable to come to health services such as hospitalization, and health status monitoring activities to control the health history of prolanis participants. The implementation of prolanis based on the activities carried out certainly involves a team consisting of health workers such as doctors, nurses/midwives and health counselors so that the management of Type 2 DM carried out in Indonesia has similarities with other countries which involve teams in various forms of activities.

Monitoring of health status is also carried out in prolanis as well as in studies in other countries that the patient's physiological development is monitored from the indicators of blood sugar and blood pressure of the patient. Monitoring of HbA1c/blood glucose and blood pressure are indications of physiology seen in the article Noel et al. (2020), JC Zgibor et al. (2014) King et al. (2020) Khan et al. (2015). Group education activities in the form of a prolanis club that provide knowledge to prolanis participants in an effort to improve status and prevent complications are carried out in the management of Type 2 DM in Indonesia. The provision of education in the management of Type 2 DM in other countries is seen in the study of JC Zgibor et al. (2014 J) and T Campbell et al. (2013). The collaboration in the management of Type 2 DM with mental health treatments such as depression was seen in the study of Beck et al. (2018) and Khan et al. (2015)

was not implemented in prolanis held in Indonesia. Patients with Type II DM are more likely to have anxiety disorders or increased anxiety symptoms than people who do not have diabetes (Smith et al., 2013). A study in 142 Type II DM patients whose anxiety scores were measured showed high results in female sex, older participants, longer duration of diabetes, experienced neuropathy and nephropathy and leg ulcers (Khan et al., 2019). The existence of a relationship between insulin signaling and depression-related brain mechanisms suggests insulin resistance in Type II DM can develop in the brains of depressed patients (Lyra e Silva et al., 2019).

4. CONCLUSION

Management of Type 2 DM has been carried out in Indonesiathrough prolanis activities organized by primary health services with BPJS Health. Through this scoping review, it shows that there are similarities in the management of Type 2 DM, namely the involvement of a team consisting of health workers who work together as partners in caring for patients to achieve optimal health. Measurement of health status was seen from the decrease in blood sugar (HbA1c) and blood pressure levels as well as the involvement of educators who provided education and skills for patient self-care. The difference in the management of Type 2 DM is the collaboration in handling mental health such as depression

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