CHAPTER 1
INTRODUCTION

1.1 Background

Diabetes mellitus (DM) is a chronic non-communicable disease with a significant impact on health, economic, social and psychological status. (International Diabetes Federation, 2018). The impact of diabetes is exacerbated by the presence of other conditions such as obesity, sedentary lifestyle, and demands on quality of life (Azevedo et al., 2017). Diabetes requires a long treatment, so it does not only involve nurses, but also requires the patient's active role in its implementation (Gómez-Velasco, Almeda-Valdes, Martagón, Galán-Ramírez, & Aguilar Salinas, 2019). The ability to self-management is an important thing that must be owned by type 2 DM patients (Cunningham et al., 2018). Good self-management is the basis for realizing self-empowerment in type 2 DM patients(Gómez-Velasco et al., 2019). So far, research on self-management in type 2 DM patients to achieve self-empowerment has been carried out using various methods. However, there is no comprehensive summary regarding the comparison of the effectiveness of these various methods to form self-empowerment in type 2 DM patients.

Globally, the prevalence of DM in the world has doubled since 1980, from 4.7% to 8.5% in the adult age group (Khairani, 2019). According to WHO, DM is the cause of death due to non-communicable diseases, the sixth most in the world, reaching 1.59 million deaths in 2015 (WHO, 2018). The International Diabetes Federation (IDF) states that in 2015 around 415 million adults aged between 20 and

79 years suffered from diabetes and this increased to 425 million in 2017 (Cho et al., 2018; International Diabetes Federation, 2018). In Indonesia, from the results of the 2018 RISKESDAS data, in 2013 the prevalence of DM in people over 15 years of age increased by 2%. The trend of the prevalence of DM which continues to increase, must be balanced with good self-management by the sufferer. Currently, various methods to establish self-management have been implemented, but inadequate self-management still occurs, including non-adherence to treatment, non-adherence to diet and lack of physical activity (Jarvie, Pandey, Ayers et al., 2019). It is estimated that only one-third of patients with DM are able to perform self-management effectively, while more than half of patients with DM report stress about the condition and complex treatments of the disease (Cosentino et al., 2020; P. Zimmet, Alberti, Magliano, & Bennett, 2016).

Success in controlling DM depends on the patient's commitment and his ability to make decisions consistently in leading a healthier lifestyle (Mohammadi, Karim, Talib, & Amani, 2018). In this context, self-management becomes a means of realizing self-empowerment that enables patients to carry out self-care and control health conditions (Albargawi, Snethen, Gannass, & Kelber, 2016). Self-empowerment in patients will increase the ability to think critically and act based on judgment. Self-empowerment directly makes the patient more responsible for himself. Several studies state that patients who have been able to realize self-empowerment, are able to reduce the level of haemoglobin A1c (HbA1c), have a good perception of health conditions and are able to control disease through better psychological control, habits, behaviour and improve the quality of life of type DM patients. 2(Baldoni et al., 2017; Lopes, 2015).

Several methods have been used to improve self-management. Intervening individually and in groups using offline and online methods. Individual interventions were carried out online using myDIDeA (Malaysian Dietary Intervention for People with Type 2 Diabetes: An e-Approach), a 6-month, web-based, personalized dietary intervention. Web content on knowledge of diet, attitude and behaviour (DKAB), stages of diet change (DSOC), fasting blood glucose (FBG) and glycosylated haemoglobin (HbA1c) in patients with uncontrolled HbA1c (Ramadas, Ka, et al., 2018). Group intervention is carried out by forming a support group. Training is provided to patients through handbooks adapted to local cultures(Syndrome, Hailu, Moen, & Hjortdahl, 2019), a diary to record maintenance activities (Jayasuriya et al., 2015), diabetes self-management record sheet (DSMRS) (Bolívar et al., 2016), self-help worksheet (Wichit, Mnatzaganian, Courtney, & Schulz, 2016), educational booklet (Mohammadi et al., 2018), the education module (Butt, Mhd Ali, Bakry, & Mustafa, 2016), and interactive teaching (Gathu, Shabani, Kunyiha, & Ratansi, 2018). The various methods mentioned above require a summary to compare and assess the effectiveness of each method. The most effective method is expected to be an appropriate intervention to be applied in realizing self-empowerment in type 2 DM patients.

1.2 Research Question

The research question in the research was, “How is the effectiveness of different self-management methods given to type 2 diabetes mellitus patients to improve self-empowerment?”

1.3 Research Objectives

1.3.1 General objective

The general objective in this research was to analyse the effectiveness of different self-management methods given to type 2 diabetes mellitus patients to improve self-empowerment.

1.3.2 Specific objectives

The specific objectives in this systematic review include:

1. Analyze summary of various intervention of self-management of diabetes that have been implemented on self-empowerment in patients with type 2 diabetes mellitus.
2. Analyze the comparison of each self-management intervention of diabetes to self-empowerment in patients with type 2 diabetes mellitus.
3. Analyze the effectiveness of self-management intervention of diabetes to self-empowerment in patients with type 2 diabetes mellitus