Multifactorial Culture-Based Intervention on Improving Self-Management of T2DM Patient: A Systematic Review

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Abstract

Diabetes education is an important aspect of diabetes management. In many countries with minority population, culture-based diabetes education is considered the best strategy to correct gaps in information delivery due to socio-cultural differences in each country. The purpose of this systematic review is to evaluate the effectiveness of culture-based education in improving self-management in type 2 diabetes patient.

We searched Scopus, ScienceDirect, PubMed, CINAHL, and ProQuest for English-language, randomized controlled trials (RCTs), mixed-methods or quasi-experimental (QE) published between 2015-2020 that tested culture-based education to improve self-management in diabetes patients. The Joanna Briggs Institute Guideline was used to assess quality and Prisma checklist guided this review.

Seventeen studies met criteria for inclusion in the review that comprised DM patients with cultural beliefs, have culture-based intervention, and using English language, and which used mixed-methods, randomized controlled trial and a quasi-experiment. We have found that culture-based intervention such as educational video and telehealth based-culture can improve self-management of T2DM patients.

There is multifactorial culture-based intervention that can be applied to improve self-management of type 2 diabetes mellitus patient. The success of providing education can be influenced by several factors, such as patient factors, educator factors, and duration of education.

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Introduction

Diabetes self-management is an effort to prevent increased morbidity and mortality rates in DM patients. In several countries with ethnic minorities, cultural differences in the form of linguistics and physiology affect the ability of DM patients to adapt and manage disease [1]. The American Diabetes Association (ADA) recommends diabetes management education as an effort to increase the knowledge and ability of DM patients in managing disease. Diabetes management education that uses a cultural approach is considered the best strategy to correct gaps in information delivery due to socio-cultural differences in each country [2]. The incidence of DM continues to increase every year; in 2019, around 463 million adults (aged 20-79 years) experienced diabetes worldwide, and in 2045 the figure is expected to increase to 700 million [3]. Therefore, DM management must be done optimally to prevent a further increase in DM cases. In fact, the implementation of self-management in DM patients is not entirely good, only about 46% of the patient's behavior is categorized as having good self-management [4]. The average self-management score was 48.4% with a score of 0-112 (moderate category), consisting of diet, physical activity, medication, blood glucose control, and foot care [5].

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