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Research Article

**EFFECTIVENESS OF NURSING CARE TOWARDS DIABETES
SELF-MANAGEMENT EDUCATION**

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Article Received: September 2021 **Accepted:** October 2021 **Published:** November 2021**Abstract:**

Diabetes mellitus is a chronic disease characterized hyperglycemia due to metabolic disorders that prevent patients from producing sufficient amounts of insulin. And Thus, diabetes self-management is an important part of patient care for those with diabetes. We search literature through medical databases, for all studies that were published up the first quarter of 2021. The goals of diabetes education are to optimize metabolic control, prevent acute and chronic complications, and optimize quality of life while keeping costs acceptable, as its obvious worldwide that the primary care are likely to increase the role of primary health care nurses in diabetes, education, and management.

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INTRODUCTION:

Diabetes mellitus (DM) is a serious potentially life-threatening disease, although it can be extremely well managed with careful treatment and control. Diabetes self-management education and training are critical components of diabetes management [1]. It is critical for diabetes patients to understand the nature, therapy, risk factors, and complications of the condition in order to provide appropriate modality to mitigate the following issues. A study to determine the relationship between health literacy, complication awareness, and diabetic control in patients with type 2 diabetes mellitus found that patient awareness scores and health literacy were negatively connected to diabetes control [2].

Diabetes self-management education can be provided by many members of the healthcare team. Many studies assessing the effectiveness of discipline-based education have found no discernible variations in the quality of services provided by various healthcare professions [3]. However, published evidence suggests that registered nurses, pharmacists, and registered nutritionists should serve as members of the multidisciplinary team responsible for designing the curriculum and assisting in the delivery of education, as well as the primary instructors for diabetes education [2,3]. Nurses are the most numerous and trusted group of health professionals. By serving as the link between theory and practice, nurses are well positioned to inspire positive change and alter healthcare delivery [4]. In diabetes self-management education (DSME), close collaboration between patients and carers is encouraged. Practice nurses are uniquely positioned to provide self-management monitoring, targeted feedback, and instruction [5].

Diabetes management focuses on several aspects, including education, meal planning, lifestyle changes, physical activity, and habits [6]. According to one study, educational interventions have an impact on knowledge, physical activity, food intake, self-efficacy, and health literacy [7]. Diabetes self-management education (DSME) is critical in empowering persons with diabetes to engage in and maintain healthy lifestyle changes, which have been shown to improve health outcomes. DSME is the process of facilitating the knowledge, attitudes, and abilities necessary for self-management [8].

METHODOLOGY:

In This review, we used a variety of sources by searching through PubMed, EMBASE, Scopus and directory of open access journals (DOAJ). The search was performed by using combinations of the following key words and or their equivalents; Diabetes mellitus,

awareness and knowledge about diabetes and its management, diabetes education programmes, nursing roles in education about self-management. We only included studies that were published in English language to the beginning of 2021.

DISCUSSION:

A systematic review was conducted to estimate the global age- and gender-specific diabetes prevalence between 2010 and 2030 [9]. Studies from 91 countries were included, and the review findings revealed that the incidence of diabetes among people aged 20-80 years will be 6.5% in 2010, with 286 million adults affected. Diabetes prevalence will rise to 7.8% by 2030, with almost 440 million persons affected. It has been predicted that the prevalence of diabetes in adults will rise by 70% in developing countries and by 21% in industrialized countries. According to the CHASE study, a cross-sectional survey of over 4800 children aged 9-10 years old drawn from London, Birmingham, and Leicester, it is found that South Asians adults, residents of UK are 3 times more prone to develop type 2 diabetes than white Europeans [10,11].

Better diabetic education and knowledge to control and treat diabetes at the appropriate time might lower the likelihood of developing complications and hence morbidity and mortality in diabetics [12,13]. It suggests that, as the number of people diagnosed with diabetes rises in the United Kingdom, independent research teams will conduct a randomised clinical trial to assess the effectiveness and cost effectiveness of CASCADE (Child and Adolescent Structured Competencies Approach to Diabetes Education) for children and young people taking part in this trial. We know that if diabetes is detected in childhood and aggressively managed, the odds of developing long-term problems decrease. The CASCADE is a multi-centre randomised control trial involving 26 clinics randomly selected as control/intervention groups, including 572 children and young people [12]. Despite of the advanced medications and their delivery systems there is less improvement in control of diabetes in children and young people in the United Kingdom in last decade [13].

Diabetes education can improve the quality of life of diabetic patients and can also prevent the costs of long-term complications of diabetes in the patients [14]. As amputation of lower limb in a diabetic patient, a long-term complication of diabetes is a costly intervention, the diabetes education can help in reducing the amputation rate that can lead to large cost savings [14]. Diabetic foot ulcers can develop in both type 1 and type 2 diabetic individuals [15]. It has been discovered that 10% of diabetics will develop a foot ulcer during

their lifetime. Foot ulcers are common in patients who acquire peripheral diabetic neuropathy, as well as in those who wear tight shoes, exercise on a treadmill, have cuts, blisters, and have restricted arteries; atherosclerotic peripheral artery disease. Diabetic foot ulcers should not be avoided, and diabetic feet require special treatment; otherwise, diabetic foot ulcers might result in amputation of the foot or potentially the entire lower limb [12]. The risk of lower limb amputation in diabetic patients is 15 to 45 times more than in people with no diabetes [14]. About 25% of hospital admissions of diabetic people in United States and Great Britain are due to diabetic foot complications [16]. The annual incidence of diabetic foot ulcers and amputation are 2.5% to 10.7% and 0.25% to 1.8%, respectively [17].

It is clear that diabetes self-management training has evolved from the primarily didactic interventions of the 1970s and 1980s into the collaborative, more theoretically based “empowerment” models of the 1990s [18]. Didactic interventions focusing on the acquisition of knowledge and information demonstrate positive effects on knowledge but mixed results on glycemic control and blood pressure and no effect on weight. Collaborative interventions focusing on knowledge tend to demonstrate positive effects on glycemic control in the short term and mixed results with follow-up >1 year. Effects of collaborative interventions on lipids, weight, and blood pressure were mixed.

It is apparent that factors other than knowledge are needed to achieve long-term behavioral change and that this may account for the lack of a consistent positive relationship between knowledge and glycemic control. It has been suggested that 1) although intensive treatment can improve metabolic control, the role of patient education in that process is uncertain; 2) changes in attitude and motivation are needed to achieve metabolic control ; 3) integrating education with other therapies, such as intensified insulin treatments, is important in improving glycemic control ; 4) a minimum threshold of diabetes knowledge is required; and 5) improved personal attitudes and motivations are more effective than knowledge in improving metabolic control [19,20]. Many have also noted the lack of a relationship between SMBG and glycemic control for subjects with type 2 diabetes, although several randomized controlled trials have shown a relationship in type 1 diabetes [21,22,23].

CONCLUSION:

Impaired diabetes awareness increases the chances of developing diabetes complications, as severe

hypoglycemia is becoming more common in insulin-treated type 2 diabetes than previously recognized, and with extended duration of insulin therapy, the risk of developing type 1 diabetes increases. With reduced awareness of hypoglycemia, the risk of severe hypoglycemia rises. The scientists concluded that diabetes-related problems and psychological insults are common in diabetics. Any diabetic service should offer a well-organized diabetes education program. Despite sophisticated drugs and delivery technologies, there has been less improvement in diabetes control in children and adolescents over the last decade. Improved diabetic education and knowledge to control and treat diabetes at right time can reduce the risk factors and minimize the chances to develop complications of diabetes and thus reduce morbidity and mortality in diabetics.

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