



REVIEW ON DIABETES SELF MANAGEMENT EDUCATION: A FOCUS ON THE NEED TO ASSESS NURSES KNOWLEDGE AND PRACTICE AND PLAN FOR A TRAINING PROGRAMME.

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ABSTRACT

Diabetes Self Management Education (DSME) is crucial in the prevention of disease and promotion of health in a diabetes patient. This literature review is a step towards identifying the need to assess the knowledge and practice of nurses in Diabetes Self Management Education and explore the need to design training programme for nurses in this aspect. In order to prevent and control diabetes related complications, there is an urgent need for self-care behaviors in patients, thus a need to provide training to nurses in imparting this education.

Keywords: Diabetes Mellitus, Diabetes Self Management Education, Training Programme.

INTRODUCTION

Diabetes Mellitus is a chronic lifestyle disease with major implications for the health of patients living with the condition. Until a decade ago, diabetes was not considered a major public health problem in developing countries like India but the situation has now dramatically changed. According to World Health Organization (WHO) report, India lead the world with over 32 million diabetic patients and the number is projected to increase to 79.4 million by the year 2030. (Wild S et al, 2004) Diabetes has thus become a great economic challenge as it drains between 5– 25% of the family income of an average Indian. (Shobhana R, 2000)

Self-management forms the best path to lessen the burden of Diabetes Mellitus, it is imperative that patients are able to understand the condition and all the implications regarding their health and to take the responsibility to change their lifestyle. The nurse should facilitate self-management skills in patients living with Diabetes Mellitus.

Identifying the knowledge and practice of nurses and patients regarding diabetes self management education is the first step in formulating training programme for nurses and patients. This literature review aids in understanding the need to study the knowledge and practice of nurses regarding Diabetes Self Management Education and a need to a design training programme for nurses in this aspect.

REVIEW OF LITERATURE

Diabetes mellitus (DM) is a chronic progressive metabolic disorder characterized by hyperglycemia mainly due to absolute (Type 1 DM) or relative (Type 2 DM) deficiency of insulin hormone. (World health organization, 1999) One of the biggest challenges for health care providers today is

addressing the continued needs and demands of individuals with chronic illnesses like diabetes (Wagner EH, 2001)

There are seven essential self-care behaviors in people with diabetes which predict good outcomes. These are healthy eating, being physically active, monitoring of blood sugar, compliance with medications, good problem-solving skills, healthy coping skills and risk-reduction behaviors. (American Association of Diabetes Educators, 2008) Diabetes self-care requires the patient to make many dietary and lifestyle modifications supplemented with the supportive role of healthcare staff for maintaining a higher level of self-confidence leading to a successful behavior change. (Shobhana R, 1999) This implies that the patient's knowledge on these behaviors has to be enhanced through imparting training to health care providers.

While different models of self management/education create appropriate strategies for changing behavior, researchers have paid little attention to application of self management models in diabetic patients' education. The need for investigating the impact of the self management diabetes education delivery format on diabetes health-related outcomes has been highlighted. (Tang et al., 2006) Thus the outcome of the educational intervention also needs to be measured to apply this program to a larger population.

Diabetes Self-Management Education is an interactive, collaborative, ongoing process involving the person with diabetes and the educator(s). This

process includes 1) assessment of the individual's specific education needs; 2) identification of the individual's specific diabetes self-management goals; 3) education and behavioral intervention directed towards helping the individual achieve identified self-management goals; 4) evaluation of the individual's attainment of identified self-management goals. (*Report on Diabetes Self-Management Education*, 1999) Diabetes self-management is a complex task that needs to be integrated into the patient's daily life. Successful integration requires the individual to manage this chronic illness in the context of the goals, priorities, health issues, family demands, and personal concerns that make up their lives. (Anderson RM., & Robins LS, 1998) Effective care, treatment and control of diabetic patients depend on the participation of the patients and their families in self management programs. (Ghavami H, 2004)

For a diabetic patient, self-management forms the core of any effective treatment regime. In order to achieve optimal self-management, the patient has to implement a number of strategies which include the responsibility to monitor blood glucose levels, adjust the diet appropriately, adjust medication doses according to requirements and exercise regularly. (Sigurdardottir AK, 2005) Hence Diabetes Self management Education requires utmost attention in health care organizations.

Educational programmes over longer intervals were evaluated in a systematic review which stated that more frequent contact between the educator and patients resulted in better glycaemic control. (Loveman E. et al, 2008) A structured educational programme intended to enhance self-efficacy and health-related behaviour was evaluated in a clustered randomized study. The intervention was complex, using a structured manual, work book, goal setting, stress management and personal consultations. The authors found no effects on glycaemic control at 6 months' evaluation, but the intervention led to small improvements in diabetes-related distress and confidence in self-management. (Sturt JA et al, 2008) A meta-analysis of self-management education for adults with type-2 diabetes revealed improvement in glycemic control at immediate follow-up. However, the observed benefit declined one to three months after the intervention ceased, suggesting that continuing education is necessary. (Williams GC et al, 1998) There arises a need to

develop structured educational programme for the patients.

At the start of the trial in a study, the occupational nurse in charge explained to the clients how to check blood glucose at home. The subjects were provided with a pedometer, a home blood-glucose-monitor, and test strips. They were instructed to check their fasting blood glucose level before breakfast, together with body weight, and average pedometer reading once a week for five months. They were also instructed to send the data to the ad hoc computer system at the Matsushita Health Care Center by telephone. During the study, two physicians in the Center checked the reported data and sent back the data with short comments to the subjects every month. (Yasumitsu et al, 2002) In a study designed to offer support for diabetes self-management, a telehealth nurse monitored blood glucose values and insulin doses using the web. Patient data were reviewed and the telehealth nurse telephoned participants as needed based on the data to recommend changes in the treatment plan or follow-up with the primary health care provider. (Turner J 2009) Use of adequate educational technology also makes a difference in the outcomes.

To evaluate the effect of education, diabetes knowledge is often measured in nursing intervention studies. A nurse-developed and implemented study that included 52 contact hours over 12 months of support and instructional sessions on diabetes basics and self-management found significant increases in diabetes knowledge compared with a wait-listed control group. (Brown SA, 2002) An intervention that emphasized family participation provided individual and group educational sessions and monthly telephone discussions, while the control group had usual care. Knowledge scores for the intervention group were significantly higher than for the control group. (Kang CM et al, 2010) Testing the knowledge is the foremost step prior to any educational intervention.

A randomized study of 179 patients showed that the participation of a diabetes team (nurse educator and endocrinologist) significantly reduced readmissions by more than half compared with usual care. (Koproski J et al., 1997) At large educating the patient on self management of diabetes can lead to less complications arising from the disease and decrease the readmission rate.

RESULTS AND DISCUSSION

Literature showed the essential self care behaviours of patients in management of diabetes and monitoring of blood glucose values. Review also indicated the importance of self management education, Diabetes Self Management Education process, role of teaching and educational programmes, and the effect of Diabetes Self Management Education interventions. The review shows the need for measuring the knowledge and practice of health care professionals in self management of diabetes. It is also a future direction towards training nurses in these aspects, so that they can educate the patients on diabetes self management and thus help in the prevention and control of diabetes.

CONCLUSION

To prevent and control diabetes related complications, there is an urgent need for self-care behaviors in patients. In order to achieve this, there is a need to assess the knowledge and practice of nurses regarding Diabetes Self Management Education and train them to impart education to the patients. Realizing the multi-faceted characteristic of the problem, a systematic structured training programme for nurses has to be designed.

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