



Community prevention diabetes Development and its impact: a critical study Education Program for School children in Rajasthan

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Abstract-Type 1 diabetes mellitus (T1DM) is one of the most common developing-age chronic incurable diseases in India. T1DM treatment involves insulin therapy with individually adjusted insulin dose, self-monitoring, proper nutrition, physical activity and health education. T1DM-positive children and teenagers will attend public educational institutions. Hence properly structured diabetes treatment in school or pre-school for a child with T1DM is very important for the child's proper person and social growth. A school nurse is one of the people interested with taking care of children with T1DM and ensuring health with school for children with T1DM.

School nurses should ensure a sense of psychological and physical safety, prepare other children to deal with a T1DM schoolmate, teach them how to help with the onset of hypoglycaemia or hyperglycaemia, help a T1DM child accept the disease and provide support. A key part of effective care is good co-operation between the infant, parents and school nurse. The purpose of this analysis of literature was to examine the views of parents and children with T1DM on getting a nurse in school. To identify and assess the education, prevention role of nursing team in Rajasthan. It also assesses the role of nursing team in diabetes care.

Keywords: T1dm, Self-Monitoring, Proper Nutrition, Physical Activity, Nursing.



1. Introduction

Diabetes is a chronically distressing disorder that is a major health struggle of our time. "Diabetes mellitus is a metabolic disorder characterized by chronic hyperglycaemia or high insulin-resistant sugar levels. This is an endocrine condition that is triggered when the body's pancreas either contain little to no insulin. Pancreas, a digestive gland releases into the bloodstream the chemical known as insulin that brings glucose to each cell of the body to produce energy and regulate blood sugar levels to avoid long-term health problems that could be fatal to life. Thus, insulin is a life-giving hormone, and if insulin is insufficient, the stored fat in the body is broken down to generate energy that can lead to to toxic diabetes ketoacidosis, which in turn can lead to coma or even death if no prompt treatment is provided "(American Diabetes Association, 2009). Diabetes is predominantly classified into Type 1, Type 2 diabetes and gestational diabetes that developed during pregnancy [1].

2. IMPROVEMENT OF DIABETIC PATIENTS NURSING CARE BY THE DEVELOPMENT OF EDUCATIONAL PROGRAMS

Diabetes is among the chronic diseases that have major public health consequences and are Europe's leading cause of disability and premature death. Diabetes is a chronic condition that can lead to cardiovascular disease, blindness , kidney failure, limb loss and life loss. It causes misery and deprivation for the nearly 60 million people still living with the disease in the European region, while also straining the health systems. In the European region, the incidence of diabetes is growing, reaching already 10-12 per cent of the population in some countries.

This rise is closely linked to risk factors such as body weight and obesity, unhealthy diets, physical inactivity and socioeconomic disadvantage. These risk factors also contribute to the development of the other three non-communicable cardiovascular diseases (NCDs), chronic respiratory diseases and cancer, making diabetes prevention imperative.

According to the World Health Organization it has diabetes in 346 million people around the world. An estimated 3.4 million people died in 2004 from the effects of high blood sugar. Among low- and middle-income countries, more than 80 per cent of diabetes deaths occur. WHO expects to increase the death rate for diabetes between 2005 and 2030. The development of type 2 diabetes can be avoided or delayed by balanced eating, daily physical activity, maintaining a normal body weight and avoiding tobacco use. Diabetes incidence is estimated at 8 per cent in



Greece. Diabetes is a progressive disease which affects the physical , cognitive, emotional, family and social functions and well-being of the patient.⁵ In recent years , many researchers have shown particular interest in diabetes and have systematically focused their attention on the diabetic patient's training.

Some of the most important advances are that of skilled nurses specializing in the care of diabetics (adults and children) and their families [2].

3. Diabetes nurse specialist

Nursing is a multi-aspect profession which demands a high degree of expertise. Therefore Johnson (1966) suggests that the Specialist Clinical Nurse be added. In the late 1960s, in order to qualify as a specialist clinical nurse in Rajasthan, it became mandatory to have sufficient postgraduate training. Specializing in nursing presupposes a higher degree of professional experience , expertise and abilities required in the particular field than standard general nursing training offers.

Shari describes the specialist clinical nurse as an additionally qualified nurse who provides direct nursing to specific patients in a particular nursing field. The clinical diabetes nurse specialist is described as a health care professional who has basic knowledge and skills in life and social sciences, communication and therapy, and is skilled in diabetic treatment. Owing to the increased occurrence of diabetes in children coupled with increased understanding of the needs these kids have, the number of Specialist Diabetes Clinical Nurses in Great India has steadily increased in recent years.

The Diabetes Clinical Nurse Specialist is responsible for training and careering diabetic children. In close cooperation with other health practitioners, the children themselves, their families and teachers, the nurses work in hospitals and in the community. Harmic and Fenton split the clinical nurse specialist's work into direct and indirect activities [3]

Direct work includes the following:

- i) Providing regular nursing for a small group of patients;
- ii) Analyzing complex clinical problems;
- iii) Selecting and applying methods;
- iv) Participating in clinical meetings;



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- v) Training patients individually or in groups;
 - vi) Creating support groups for patients and their families;
 - vii) Acting in crises;
 - viii) Providing emotional and social support for patients and families.

Indirect work includes the following:

- i) Creating staff support groups;
- ii) Collaborating with nursing staff to produce care plans;
- iii) Developing methods and procedures;
- iv) Participating in activities designed to maintain quality;
- v) Referring patients to other services.

4. The diabetes nurse specialist and training

The specialist in professional nursing plays a decisive role in hospital, community and education. Clinical specialist nursing is a modern concept that aims at increasing the standard of the care obtained by a diabetic. The Clinical Diabetes Nurse Specialist has unique duties surrounding diabetic patient evaluation.

Assessment is not only about how educated people are about their disease, but also about what they need to do about the way they practice and how prepared to learn. Specific instruction on medication, equipment, and diet / nutrition should be included in all patient education programmes. Both of those interventions ought to result in evidence so the patient and family understand what was learned.

Depending on your child's age, the responsibility of handling diabetes is on the parents to a greater or lesser degree. Therefore continuous parent and child preparation is an essential factor in the successful management of the disease. Education should not be limited to the patient alone but should be expanded to include at least one more family member.

Nonetheless, the consensus that emerges from realistic research seems to suggest more and more that children and adolescents who are more responsible for managing their diabetes care make more errors in maintaining the routine treatment plan, are less likely to stick to the regimen and have less control over their metabolism than those whose parents are more active in it



Type 1 diabetes mellitus is a chronic condition that results from the degradation of the cells in the pancreas that contains insulin. Destruction is believed to be autoimmune in nature, although certain infections such as rubella, measles, and mumps may also be the trigger. It is otherwise known as insulin-dependent diabetes mellitus, and is commonly found in children and adolescents. The other age ranges aren't special. Insulin plays a significant role in the metabolism of glucose and helps the body cells get the energy they need. Without or without insulin the body cells are deprived of energy to work normally. Insulin that is to be transferred to the cells remains in the blood. The person slowly begins to experience the symptoms of the illness. When treatment is not taken at the right time the blood sugar level continues to increase which may lead to serious disease complications.

Because type 1 diabetes requires life-long treatment, the self-care activities need to be taught and trained to children and adolescents with the illness. The World Health Organization (WHO) had the theme 'BEAT DIABETES' for the year 2016, considering diabetes as one of the major health problems globally. The aims were to increase prevention, reinforce care and improve surveillance [4]

5. Self-care among children with type 1 diabetes

Type 1 diabetes self-care includes an array of complex behaviors. It may be difficult for younger children to understand the meaning and this may result in lack of self-care. The mean scores of diabetic awareness (1.6), self-care practice (2.7), insulin injection procedure (2.5) and blood glucose monitoring (2.8) were small in both the experimental and the control groups in a quasi-experimental sample of 176 children aged 10 to 18 years. A survey of 61 children in the six to 11 year age group and their parents showed poor ability to identify hypo or hyperglycemia. The result was badly read by 50 per cent of parents. In 40 per cent of the cases, the children were unable to recognize hypoglycemia. It caused serious hypoglycemia.

A descriptive study among 28 children under 12 years of age showed that there were more incidents of nocturnal hypoglycemics ($p < 0.005$). The nocturnal hypoglycemia has been linked to the child's younger age. A secondary qualitative analysis among 28 adolescents between the ages of 10 and 15 showed that it was difficult for parents to trust the ability of their children to care for them.

Childhood learning



Teenagers are curious and have a wide array of interests. Our thoughts focus on subjects of personal significance. They are capable of creating, analyzing and synthesizing the content. Their sense of the construct is based upon what is already understood. Teenagers learn through repeated contact.

Cognitive preparation such as learning helps the self-care develop. A research was performed to measure the effect of cognitive behavioral therapy in six children who were having medication adherence issues. Between five kids, though, improvement was seen. Psycho-educational therapy leads to the development of children and parents' problem-solving skills and thus increases glycemic control [5].

6. Conclusion

There are several studies conducted on compliance with treatment among adolescents with type 1 diabetes on various factors such as the relationship between type 1 diabetes and self-care, the relationship between self-care and self-efficacy, self-efficacy and glycemic regulation, education and self-efficacy, and the use of technology such as cell phone and e-mail reminders, web-based reminders, etc.

Several researches that have been analyzed offer a clear indication of the need to educate and prepare children with type 1 diabetes on different aspects of disease management. This study focuses on promoting the perceived self-efficacy, attitude, and practice of adolescent compliance with Type 1 diabetes treatment through education and reminders. This aims to help them gain an awareness and competencies to maintain glycemic regulation. This can be seen as a greater achievement not only for adolescents but also for their families, because when the child achieves glycemic control he / she will be prevented from the various possible complications of the disease and thus reduce the unnecessary financial burdens. This also lets the kids live a more positive, quality life.

At a global scale, diabetes has become an increasingly important health problem with the number of people living with diabetes growing dramatically over the past 35 years. 422 million adult diabetics (1 in 11) are now reported internationally, the majority of them having type 2 diabetes. The largest rise, according to the World Health Organization (WHO), is among low- and middle-income countries such as South Sudan, where an estimated 7.43 per cent of the population has diabetes. It is proposed that the rise in diabetes in developed countries is due to population



growth, aging and urbanization: urbanization appears to result in physical inactivity and an increased risk of obesity.

Most people with diabetes are in the age group of 45-64, while the rest are aged 64 and above in developing countries. By 2030 the number of people with diabetes in developed countries, aged 64 and over, is expected to be over 82 million. In comparison, by this time the number of people with diabetes in developing countries aged 64 and over is estimated at just over 48 million. The human and economic costs of the diabetes epidemic are large, particularly for developing countries where screening facilities may be weak. Diabetes care also has restricted access, and there is a lack of knowledge and comprehension of the disorder and its related complications. Poorly regulated diabetes can lead to serious problems in the safety, resulting in the need to include other specialist fields. This means more strain on services and greater financial burden on the health care system.

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