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Abstract

Type II diabetes has negatively influenced millions in the United States. Adverse impact of type II diabetes in children is ever increasing and needs some serious strategic and professional input from nurses deployed at schools. Unfortunately, the sensitivity of diabetic issue is never addressed appropriately. Moreover, the lack of research on the topic has also resulted in a significant increase in childhood type II diabetes. The research indicates that controlling type II diabetes in children is possible. School nurses employing the knowledge of physical exercises, dietary plans and emergency response can readily cope with the odd situations emerging in schools. This research aims to obtain a better understanding of the school nurses' role in the management of children's and adolescents' type II diabetes, as well as their beliefs perceptions, and attitudes. It also aims to determine the care and preventive interventions that need to be provided to children with this condition, based on the nurses' perceptions. A qualitative approach will be used and can be effective in conducting exploratory research since it allows for the use of open-ended questions. A collective case study methodology will be used. Data will be collected by interviewing 10 school nurses within the same school district in Riverside County. An interview guide will be used to conduct a semi-structured interview which will contain the main questions that the interviewer will ask the participants. For data analysis, the thematic analysis procedure developed by Zemke and

Kramlinger will be used. This study will initiate a dialogue among school nurses in order to prevent the spread of type II diabetes in the younger generation, hence achieving a positive social change.

Dedication

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Millions of individuals in the United States alone suffer from type II diabetes (National Center for Disease Prevention and Health Promotion, 2010; United States Department of Health and Human Services, 2007). This in itself is alarming, and of great concern to the medical field. However, the fact is that type II diabetes, which is traditionally a disease seen only among individuals above the age of 40 years, is now being observed among younger and younger individuals (National Center for Disease Prevention and Health Promotion, 2010; National Cooperative on Childhood Obesity Research, 2008; United States Department of Health and Human Services, 2007). The American Diabetes Association (2011) reported that about 1 in every 400 children and adolescents has diabetes, which is indicative of the significance of this research in the exploration of how these trends may be controlled and reversed.

Federal legislation requires that children with diabetes be provided the same

educational opportunities as their peers without the disease. In this regard, the school nurse is the most appropriate person to plan, coordinate, and monitor the care of students with this condition. Among the various staff and personnel in the school, the school nurse is the one who has the most skills and knowledge with regards to the detection and management of diabetes. Based on educational experience and leadership skills, the school nurse is capable of motivating the children by (a) acknowledging the difficulties inherent in changing behavior; (b) communicating that ambivalence toward change is both normal and acceptable; and (c) exploring the possibility of engaging in certain healthy behaviors that are in accord with an individual's personal values and goals (Naar-King & Suarez, 2011). This body of research seeks to understand the role of the school nurse in the management and care of children with type II diabetes. The aim is to identify and describe the care and preventive interventions provided to children with diabetes from the perspectives of school nurses. Chapter 1 provides an overview of the framework for this proposed study. Major headings include the Background Overview, the Problem Statement, Conceptual Framework, Research Questions, and Nature of the Study, Definitions, Assumptions, Limitations, Scope, Delimitations, Significance and Summary.

Background of the Study

The general problem this study will address is a gap in the literature related to the role of the school nurse in the management and care of children with type II diabetes. Diabetes is on the rise with an estimated 215, 000 children and adolescents younger than 20 years old being diagnosed with type 1 or

type II (Centers for Disease Control and Prevention [CDC], 2011). Many children have to frequently monitor their blood glucose levels throughout the day and this includes monitoring and calculating the food consumption and carbohydrate intake, as well as the insulin intake. In turn, these ensure that good glucose levels are achieved (Bobo, Kaup, McCarty & Carlson, 2011). Additional research is needed to assess the attitudes and experiences of school nurses in relation to their understanding and responsibility in ensuring the safety of students with diabetes and in meeting the requirements of federal laws.

Type II diabetes is a progressive disease that is associated with a long-term risk of morbidity and mortality (Robertson, 2012). Once described as late onset diabetes, which is usually associated with older adult populations, that is, among individuals older than 40 years of age. Type II diabetes is reaching epidemic proportions among children and adolescents (Adams & Lammon, 2007). With the rampant surge in this disease, diabetes management in children and adolescents requires complex daily management skills (American Association of Diabetes Educators, 2008). More specifically, “ type II diabetes was seen in <1% of Pima Indian children aged 10–14 years and 2–3% of those aged 15–19 in 1967–1976 but increased to 2–3 and 4–5%, respectively, in the two age-groups in 1987–1996” (Bloomgarden, 2004). In addition, the incidence of diagnosed diabetes among 15 to 19-year old American Indians in southwestern United States rose from 3. 2 to 4. 5 per 1, 000 between 1990 to 1997 (Bloomgarden, 2004). Moreover, clinic-based studies showed that the frequency of Type II diabetes among the youth in Cincinnati, Ohio increased by approximately ten times between 1982 and

1994 (Bloomgarden, 2004). In Florida, the proportion of children with Type II diabetes rose from 9.4% to 20% (Bloomgarden, 2004). As well, current statistics showed that a third of the children who have diabetes in Arkansas, Ohio, and among the Hispanics in California have Type II diabetes (Bloomgarden, 2004). Epidemiologic studies showed that these increases were brought about by risk factors such as obesity, positive family history of diabetes, high and low birth weight and increased blood pressure and cholesterol (Bloomgarden, 2004).

This form of diabetes comprises nearly all of the recorded cases of diabetes, that is, 90% - 95% of diabetes cases are classified as type II (National Center for Disease Prevention and Health Promotion, 2010). It is sometimes caused by factors that are, for the most part, can be controlled by individuals.

Specifically, it is seen among individuals who suffer from obesity, and have low levels of physical activity (National Center for Disease Prevention and Health Promotion, 2010). Studies have shown that type II diabetes results from a combination of genetic and environmental factors. Genetic factors include lowered insulin secretion levels, and insulin resistance (Kaku, 2010); while the environmental factors include overeating, lack of exercise, aging, and stress (Kaku, 2010). In this regard, school nurses play an important role not only in the treatment of Type II diabetes but also in its prevention, especially when it comes to the monitoring and management of the environmental risk factors.

Based on the pathophysiology of type II diabetes, aggressive treatment is necessary and should be given greater attention (Fleury-Milfort, 2008). It is the position of the National Association of School Nurses that the registered

professional school nurse (hereinafter referred to as school nurse) should have the essential skills, knowledge base and statutory authority to address the healthcare needs of students with diabetes in a school setting. It setting. It is also important for the school nurse to be aware of the treatment options available, including weight control through nutrition and physical activity, as well as common pharmacotherapeutic options.

Every student with diabetes is entitled to a school nurse with the knowledge and capacity to provide effective care and with the ability to communicate with teachers, physicians, and families (Bobo & Butler, 2010). The school nurse is positioned to promote healthy lifestyle choices and diabetes self-care. The key premise is that when the school nurse promotes lifestyle behavior change in students, the nurse shifts from simple advice giving to a more counseling-based approach (Jansink, Braspenning, Ban Der Weijden, Elwyn, & Grol, 2010). The latter approach, instead of the traditional modes, was found to be significant in the differences between those who continue to suffer from type II diabetes and those who have managed to change the course of this disease.

According to the National Association of School Nurses (2011), the professional school nurse is the leader in the school community who bears the responsibility of overseeing school health policies and programs (Gibbons, Wesoloski, Lawinger, & Fishman, 2012). School nurses must be prepared to use leadership skills to become positive change agents in their communities (Gobbons, Wesoloski, Lawinger, & Fishman, 2012).

Traditionally, school nurses are charged with overseeing the distribution of medication with informing teachers of the students they serve who are

labeled diabetic.

In general, school nurses are responsible for supporting the students' success through the provision of health care in the forms of " assessment, intervention, and follow-up for children within the school setting" (Board, Bushmiaer, Davis-Alldritt et al., 2011). The school nurse addresses the physical, emotional, social, and mental health needs of the students. Aside from providing for the care and safety of the students and staff, school nurses are also responsible for integrating health solutions into the education setting. Also, aside from Type II diabetes, the school nurse helps in the management of other chronic conditions in children such as obesity, epilepsy, type 1 diabetes, anaphylaxis, asthma, and mental health issues (Board et al., 2011). As well, the school nurse serves as a liaison between the school personnel, community, and family and the health care providers, with the goal of advocating for health care and a healthy school environment (Board et al., 2011).

Because of the increase in the number of school children with health problems and the importance of the role played by school nurses, there is an expected increase in the demand for school nurses (Alloway, 2009). The Healthy People 2020 program has the objective of achieving one nurse for every 750 students in each school. As of 2006, 40. 6% of schools have already reached this goal (Lockett, 2014) and Healthy People 2020 aims to increase this to 44. 7% by 2020 (Lockett, 2014). As of 2013, Lemongello (2013) reported that there were approximately 74, 000 school nurses in the nearly 100, 000 public elementary and secondary schools within the United States.

The general problem this study will address is a gap in the literature related to the role of the school nurse in the management and care of children with type II diabetes. To date, only a few studies have investigated the role of school nurses and their responsibilities in the care of students with this disease. Additional research is needed to assess the attitudes and experiences of school nurses in relation to their understanding and responsibility of ensuring the safety of students with diabetes and meeting the requirements of federal laws. Rapid changes in science and technology that are related to diabetes management require the school nurse to maintain current knowledge and skills in order to fully implement a student's diabetic plan in a school setting. (ADA, 2011; NDEP, 2010).

Problem Statement

The National Association of School Nurses [NASN], 2012) posited that students with diabetes have different developmental and intellectual abilities and may require different levels of assistance with regard to managing the disease. The goals of the Diabetes Medical Management Plan (DMMP) are to promote normal or near normal blood glucose levels with minimal episodes of hypoglycemia or hyperglycemia, normal growth and development, positive mental health, and academic success (Kaufman, 2009).

A key responsibility of the school nurse is to develop the Individual Health Plan (IHP) from the DMMP (medical records) in collaboration with the child's family. This means conducting the student's health assessment and outlining the diabetes management strategies needed to meet the student's health goals in school (NDEP, 2010). The IHP identifies the

student's daily needs and management strategies for the disease while in the school setting. The setting. The responsibilities also include coordinating the development of an Emergency Care Plan (ECP) which will be implemented by school personnel in the event that symptoms of hypoglycemia and hyperglycemia occur. However, with the shortages in school nurses throughout the country, a workaround that's usually implemented is for school nurses to train administrative staff who then administer care for children when a school nurse is not available (Tumolo, 2013). This solution can lead to potential problems, though, as a school's administrative staff is not in a position to make decisions on things such as whether a student's lungs sound clear or if they're having an asthma attack. This can result to life-threatening situations and even death. According to Nwabuzor (2007), the main reason for the shortage of school nurses is the lack of legislation that mandates school nursing. As a result, schools either have no nurses or the nurses are overloaded with very high nurse-to-student ratios (Nwabuzor, 2007).

Moreover, Although the responsibilities and the role of the school nurse are vital to the management of diabetes, research that is dedicated to the practices of school nurses in the care of children with diabetes is scarce. Therefore, this study will address the gap in the literature related to the role of the school nurse in the management and care of children with type II diabetes. Effective strategies must be developed to improve the health outcomes for students with this disease while promoting lifestyle behavior changes for these students and their families.

Purpose of the Study

The purpose of this proposed qualitative case study is to explore and describe the beliefs, perceptions, and attitudes of school nurses in the care and management of children with type II diabetes. This will enable education leaders to make the necessary changes or enhancement in the nursing curricula .

Once described as late onset diabetesIn addition, tType II2 diabetes, once described as late onset diabetes, is reaching epidemic proportions.

Theproportions. The phenomenon of interest in this study is diabetes management in children and adolescents from the perspective of school nurses. Schoolnurses. School nurses play a crucial role in managing routine care, such as insulin injections and recognizing emergency situations (NDEP, 2010). School nurses also educate students, teachers, and staff on how to prevent this chronic disease.

Nature of the Study

This qualitative research study will be a case study using a theoretical framework. Thisframework. This research study is intended to provide an in-depth understanding and exploration of nurses perceptions for working with school-age students diagnosed with type II diabetes. Creswelldiabetes.

Creswell (2007) stipulated that case study research involves the study of an issue explored through one or more cases within a bounded system.

Thisssystem. This case study will involve several extensive interviews of individuals as a unit combined into a single study. Forstudy. For this reason, it is considered a collective case.

A quantitative design is deemed inappropriate for this particular study as the data will be best gathered and the results best discussed in qualitative form,

that is, through observations, interviews, and discussions, rather than in quantitative form such as through surveys, questionnaires, and statistics. For the purpose of this study, a qualitative design will also allow the researcher with more flexibility in the gathering and analysis of data whereas a quantitative design may be too limiting or restrictive.

The basic qualitative tradition was described by Merriam (2009) simply as an approach used to discover and understand a phenomenon, a process, or the perspectives of world views. Merriamviews. Merriam explained that a qualitative researcher has many options available, such as grounded theory or case study, to approach an investigation. The key characteristic that all qualitative researchers have in common is that they are striving to understand the meaning people have constructed about their experiences and that these researchers are the primary instruments for data collection and analysis. Asanalysis. As such, data will be derived from structured face-to-face interviews of school nurses. Nursesnurses. Nurses selected for this study will be those working with primary school aged students with type II diabetes.

Research Questions and Hypotheses

The leading research questions that are constructed to address the problem and purpose of this study are:

- How do school nurses perceive their role and responsibilities in the care and management of children with type II diabetes?
- What strategies do school nurses use to promote education and counseling for children with type II diabetes?
- What barriers, if any, do school nurses encounter in the management and

care of school-aged children with type II diabetes?

Theoretical Base

The theoretical framework for this study will be the Health Belief Model (HBM). It is one of the most widely used models in public health theoretical framework (Baghianimoghadam, et al., 2013). which key premise, One of the key premises of the Health Belief Model, as it applies to this study, is that health care professionals can play an important role in building awareness and instilling positive beliefs and attitudes in the management of type II diabetes in school aged children.

Aligned with the HBM concept, this study is designed to determine the perceptions of school nurses based on their health beliefs and attitudes that are relevant to the care and management of type II diabetes among school age children. The HBM will be used qualitatively to better understand the roles and functions of school nurses in the care of children with type II diabetes from their perspectives. The HBM proposes that a person's health-related behavior or attitudes depends on the person's perception of four critical areas: the areas: the severity of a potential illness, the person's susceptibility to that illness, and the benefits of taking preventive action, and the barriers to taking that action. Although action. Although the HBM has been used mainly to understand the patient's beliefs, it can be used for understanding a school nurses' perspectives, specifically their behaviors and attitudes, with regards to school children's severity of a potential illness, susceptibility to that illness, the benefits that the students will receive from their administration of preventive care, and the barriers they encounter when taking that action. It may also be applied in this study, especially in

addressing research questions that focus on nurses preventive strategies and management barriers (Croyle, 2005). A detailed explanation and discussion will be presented in Chapter 3.

Definition of Terms

The following terms will be used throughout this study and are defined as follows:

Diabetes: Characterized by high levels of blood sugar (National Center for Disease Prevention and Health Promotion, 2010).

Because insulin is impaired, the use of sugar is hindered. The hindered. The sugar, which an individual consumes, remains in his or her bloodstream, resulting in high levels of blood sugar (National Center for Disease Prevention and Health Promotion, 2010).

Insulin: A hormone that regulates the entry of sugar into the body's various cells, where it is converted into energy and is harnessed by the organism (National Center for Disease Prevention and Health Promotion, 2010).

Hypoglycemia: A condition characterized by an abnormally low concentration of blood sugar (glucose) in the circulating blood (Stedman's Medical Dictionary, 2005).

Hyperglycemia: A condition characterized by abnormally high concentration of glucose in the blood (Stedman's Medical Dictionary, 2005).

Type II Diabetes: A condition where the body develops a resistance to insulin and fails to properly use insulin (Centers for Disease Control and Prevention, 2013). As the need for insulin increases, the pancreas slowly loses its

capability for producing sufficient amounts of insulin, which is needed for the regulation of blood sugar (Centers for Disease Control and Prevention, 2013).

Assumptions

The study will explore school nurses' perceptions of their role and responsibilities in the care and management of children with type II diabetes.

Asdiabetes. As with any research study, there are assumptions.

Itassumptions. It is assumed that all participants will hold the necessary credentials (Board Certified Nurse) and expertise to provide rich and credible information when answering the interview questions. Itquestions. It is also assumed participants will answer the questions honestly, fully, and without bias.

Limitations

This study will be limited to a purposive sampling of 10 school nurses in a large metropolitan school district in one western state. A school district usually has between 3 and 10 public elementary schools on average and according to Rosales (2014) of the National Education Association, a single public school nurse is usually assigned to care for 2. 2 schools. In this regard, obtaining 10 participants will mean including about 4 to 5 schools in the study. This would be a realistic number of target participants as it cannot be guaranteed that all of the elementary schools in the district will agree to participating in this study. Therefore, In addition, the findings inof this study may not be generalized to a different school district in a different state. Thestate. The scope of this study is within the geographical region of one western state.

Delimitations

The gender and age of participants are not factors. Although factors.

Although many care and management factors relating to type II diabetes were identified in the literature, this study will specifically focus on the care and management of school age children.

Significance of the Study

The significance of this study is to promote awareness that diabetes mellitus, specifically type II diabetes, is no longer a chronic illness that is limited to adults as it is now increasingly becoming predominant even among children and adolescents. Despite this though, the public tends to accept other diseases more readily as public health issues example of which include AIDS and various types of flus. However it is clear that more research is needed to meet the growing demand that diabetes is placing not only on individuals, but also on families, communities, and societies in general. This general. This study is a step in that direction.

The professional school nurse is the leader in the school community who oversees school health policies and programs (Gibbons, Wesoloski, Lawinger, & Fishman, 2012). School nurses have treated many children with various types of chronic diseases, but it is unclear how often or to what degree they have managed the care of children with type II diabetes. Effective strategies must be developed to improve the health outcomes for students with type II diabetes. Children and adolescents in America are facing an epidemic threat of acquiring not only the disease, but also of being subjected to a young life that's full of potential complications and which can significantly affect their

quality of life. This study will initiate a dialogue among school nurses in order to prevent the