The Relationship between School Nurses’ Self-Efficacy and Interventions Implemented to Prevent Childhood Obesity

Nursing

Faculty Sponsor: Dr. Maranah Sauter

Abstract:

The aim of this study was to discover the relationship between a school nurse’s self-efficacy and the ability to recognize and implement prevention methods and/or educate related to childhood obesity. A 25-item survey was completed by a convenience sample of 12 Georgia public elementary school nurses from two counties using the application Survey Monkey. The survey examined school nurses' responses to childhood obesity regarding prevention and intervention in their school setting, and how nurse self-efficacy related to the implementation of these strategies. Two likert-type scales, the General Self-Efficacy scale (GSE) and the School Nurses' Interventions in Childhood Obesity scale (SNICOP), were used as instruments to measure self-efficacy and childhood obesity intervention implementation, both with a maximum total score of 40. A Pearson r coefficient was calculated between SNICOP and GSE values, resulting in a correlation coefficient of r=0.68. This showed that as total SNICOP values went up, so did total GSE values. A Pearson Chi-Square analysis was conducted and the total GSE versus the total SNICOP value resulted in P=64.5. This analysis showed that although the two variables were positively correlated, there was no significant dependence of one variable on the other. It was concluded that most school nurses feel that they can make a positive impact and feel optimistic in their abilities to do so. However, most of them agree that they are not doing enough to make this happen and feel that they need more resources in order to successfully implement interventions in childhood obesity prevention.
Introduction

This study examined the relationship between a school nurse's self-efficacy and the interventions used to prevent and reduce childhood obesity. Childhood obesity has become a serious health epidemic that can predispose children to adverse health conditions later in life. Many factors are known to play a direct role in obesity in children, such as poor exercise and unhealthy eating. However, what is not widely known is what is being done within the scope of a school nurse’s practice to decrease the prevalence of this disease in the school setting and whether or not these interventions correlate with the nurse’s self-efficacy.

1. Self-Efficacy—one’s belief that he or she is capable of executing a particular action that will positively influence the benefits of a program along with negatively affecting the perceived barriers (Bandura, 1998).

Theoretical Framework

Bandura’s (1998) Social Cognitive Theory was used as a guide to conduct and interpret the results of this study. In this framework, Bandura theorizes that an individual’s perceived self-efficacy is a motivating factor in whether or not one participates in a particular activity to promote health and create change. Bandura states that a person’s belief in their ability to make a difference plays “a key role in the policy and public health perspective to health promotion and disease prevention” (p. 1).

Literature Review

Research has concluded that the majority of school nurses are aware that childhood obesity is an increasing health issue and believe that taking action could make an impact on the epidemic. However, because of the high prevalence of barriers within the school setting as well as the level
of self-efficacy of the nurse, childhood obesity continues to remain a problem. Quelly (2014) determined that there were barriers when providing childhood obesity prevention (COP) practices within the school setting, including “community resources, lack of time, potential for stigmatization, and inadequate or appropriate parental responses” (p. 298). Barriers such as these can negatively affect the self-efficacy that a school nurse may have in his or her ability to impact such a huge health problem. Similarly, Boyle and Anderson (2014) stated that there was a lack of “standardized package of care…making it difficult to deliver effective care” (p. 339). These findings suggest that barriers that school nurses often face need to be addressed before improvement can be made in the healthy daily habits and level of physical activity of these children.

**Methodology**

A descriptive correlational quantitative design was used to conduct this study. Using this design, the relationships between two or more variables in a single group were examined. This study took place in 29 Georgia public elementary schools in Coweta and Troup Counties. A survey was emailed via Survey Monkey, to a convenience sample of 29 elementary school nurses in three Georgia public school systems. Responses were received from a total of twelve nurses from Troup and Coweta counties; a third county did not reply to the survey. The sample of school nurses included a combination of Licensed Practical Nurses and Registered Nurses.

**Data Collection and Instrumentation**

The General Self-Efficacy Scale (GSE) created by Brandeis University was used to measure school nurses’ levels of self-efficacy. This is a self-report ten item scale to measure self-efficacy with a Cronbach’s alpha between 0.76 and 0.90 when measured for internal reliability. The validity for this scale is correlated to emotion, optimism, and work satisfaction with negative
coefficients found to be depression, stress, health complaints, and anxiety (Schwarzer, R., & Jerusalem, M., 1995). Subjects scored between 10 and 40, with a higher score indicating a greater level of self-efficacy. The researcher developed scale, School Nurses’ Interventions in Childhood Obesity Prevention (SNICOP), was utilized to measure interventions used by the school nurse. The items included within this scale focus on interventions to prevent childhood obesity that include nutrition, physical activity, BMI scale, and health education. On this scale subjects can score between 0 and 40 with a higher score indicating a greater use of interventions.

Results

The IBM Statistical Package for the Social Sciences (SPSS) statistical analysis program was used extensively for analyzing the resulting data. The total SNICOP mean value was 22.17 and the standard deviation mean was 7.578. The total GSE mean was 32.25 with a standard deviation mean of 3.415 (see Figure 1). The Pearson r coefficient between SNICOP and GSE total scores was r= 0.68 (see Figure 2). This is significant at the 0.05 level, and indicates significant test-retest reliability of the surveys because as SNICOP total values increased, so did GSE total values. Pearson r coefficient between SNICOP total values and nurses feeling like they have enough resources to reduce childhood obesity was r= 0.906, which is considered highly significant at the 0.01 level (see Figure 3). This indicates that total SNICOP values increased when nurses felt like they had resources available to them. The Pearson r coefficient examined between nurses having enough resources available to them and the feeling that they are doing enough to impact childhood obesity rates was r= 0.908 (see Figure 4). This signifies that as available resources increased, so did the nurses' feelings of doing enough to impact this problem.

The years in the school nurse position and feelings of support from administration were negatively correlated with a coefficient of r=-0.598. Nurses with 0-5 years and 5-10 years in their work position felt like they had more support from administration than those with 15 or more years of experience.
The Cronbach's Alpha coefficient for the SNICOP was 0.885 and the GSE Cronbach's Alpha coefficient was 0.885. This determines the degree to which all items are measuring the same construct and both represent a high value of both reliability and internal consistency. The total GSE versus the total SNICOP Pearson Chi-Square Analysis was P=64.5, which was not statistically significant. This measures the degree of independence between the two variables, and confirms that there is no significant dependence of one variable on the other (SNICOP values vs. GSE values) (see Table 1).

Figure 1. Comparison of case summaries between SNICOP and GSE values.

Figure 2. Pearson r coefficient between SNICOP and GSE total scores: r = 0.68.
Figure 3. Pearson r coefficient between SNICOP total values and nurses feeling that their resources are adequate to prevent childhood obesity: $r = 0.906$.

Figure 4. Pearson r coefficient between nurses having enough available resources and feeling that they are doing enough to impact childhood obesity rates: $r = 0.908$
Figure 5. Amount of support received from administration based on the number of years in the current position.

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Table 1: Degree of independence between the two variables
Conclusion

Although a positive correlation was found between total self-efficacy scores and interventions implemented in childhood obesity prevention, the statistical analysis indicates that one of these variable is not dependent on the other. Based on conclusions, most school nurses feel confident in their own self-efficacy and believe that they have the internal motivation and ability to reduce childhood obesity. However, most agree that they are not doing enough to truly impact this epidemic and direct the reasoning toward lack of available resources rather than internal capability.

References


