Screening for Overweight and Diabetes in Rural Hispanic and Caucasian Fifth-Grade Children


Much has been published in the scientific and lay literature about the dramatic rise in childhood obesity. There is also the conviction that there is an “epidemic” of type 2 diabetes in children, yet minimal data are available on the incidence and prevalence of the disease in pediatrics. Because type 2 diabetes, unlike type 1 diabetes, can be undetected for some time, there is a question of whether children, particularly those from racial groups at risk, should be screened for type 2 diabetes.

Body mass index (BMI), waist circumference, and random blood glucose levels were measured in 280 white and Hispanic fifth-grade children. Survey data were also obtained on sugary beverage consumption and activity. Hispanic children had a significantly higher mean BMI percentile, waist circumference, and soda consumption and reported less activity. Although 44% of the children screened had a BMI > the 85th percentile, no children were found to have type 2 diabetes. It is critical to screen children for obesity and educate children and parents about the importance of a healthy diet and daily activity. As nurses, however, we must understand that there are racial and socioeconomic disparities in childhood obesity, as demonstrated in this study and others.

Public health issues impede healthy diet and exercise, such as lack of time to prepare family meals and the unavailability of safe locations to play outdoors. Pediatric nurses should lobby for policy changes to improve the environment of all children. This study also demonstrates that understanding the epidemiology of a disease is crucial. It seems that the prevalence of type 2 diabetes in fifth-grade children is too low to merit invasive screening.

Comment by Terri H. Lipman

Effectiveness and Cost-Effectiveness of Height Screening Programmes During the Primary School Years: A Systematic Review


Growth assessment is the hallmark of pediatric screening and is recommended by the American Academy of Pediatrics as a routine aspect of pediatric healthcare, because growth failure may be the first sign of an organic illness. Some researchers argue that the number of children with growth failure is low, however, and such screening in a busy pediatric practice is not cost effective. This study was a meta-analysis of published studies reporting height assessment of children aged 4 to 11 years in Western Europe, North America, and New Zealand to determine the identification of height-related conditions.

Results showed a diagnosis of growth hormone deficiency, Turner syndrome, hypothyroidism, and other disorders at a rate ranging from 0.22 to 1.84 per 1000 children screened. Diagnosis of these conditions via height screening also led to children being diagnosed before the development of more serious symptoms and the worsening of the condition. Economic modeling indicated that height screening is cost effective.

Growth is the single most important indication of the health of a child. It is striking that financial analyses are needed to justify growth screening, but it is affirming that this meta-analysis demonstrated the importance. Pediatric nurses in all settings should incorporate ongoing, accurate growth assessment into their practice. In the United States, growth failure is defined as (a) height < the third percentile, (b) a deceleration of growth percentiles over time, or (c) growth less that 4 cm/year. In addition to being the sign of an undiagnosed disorder, growth failure can result in a child being bullied and teased. This issue should be addressed with all children who have growth disorders.

Comment by Terri H. Lipman
Temper Tantrums in Healthy Versus Depressed and Disruptive Preschoolers: Defining Tantrum Behaviors Associated With Clinical Problems


Dealing with childhood tantrums is difficult for parents and healthcare professionals, and parents often ask for guidance from pediatric nurses. When are tantrums “normal” development, and when should they cause concern? The purpose of this study was to investigate whether differences in the tantrum behaviors of healthy versus mood-disordered preschool-aged children can be detected.

Caregivers of 279 preschool-aged children (3–6 years old) completed a psychiatric assessment tool that was used to determine preschoolers’ diagnostic classification and measure tantrum behaviors. As a result of the survey, children were placed in one of four diagnostic groups: (a) healthy, (b) pure depressed, (c) pure disruptive, and (d) comorbid depressed/disruptive. Disruptive preschoolers displayed violence during tantrums significantly more often than the depressed and healthy groups. The disruptive group had significantly more tantrums at school/daycare than the depressed and healthy groups and had a more difficult time recovering from tantrums than healthy preschoolers. Depressed preschoolers also demonstrated more aggression toward objects and other people than healthy children. Self-harmful tantrum behaviors were more evident in depressed children than preschoolers in the healthy and disruptive groups.

This is an important study that provides preliminary guidelines for identifying tantrum behaviors that may be indicators of a psychiatric disorder and would require referral to a mental healthcare professional. Pediatric nurses can use these data for evidence-based practice when advising parents and school nurses. Caregivers of preschoolers should be mindful that the demonstration of violence, slow recovery from tantrums, aggression, and self-harmful behaviors are concerning and may warrant further evaluation.

Comment by Terri H. Lipman

Neighborhood Deprivation and Preterm Birth Among Non-Hispanic Black and White Women in Eight Geographic Areas in the United States


We all learned as nursing students the four aspects of human health: physical, emotional, social, and spiritual. Physical and emotional aspects of health and preterm birth have been well studied. Recently, a growing body of research has focused on the influence of societal factors on human health. This research by O’Campo and her research team examines the impact of neighborhood factors on preterm birth. They scrutinized birth certificate and US Census data from eight geographic areas in four states (Maryland, Michigan, North Carolina, and Pennsylvania). In brief, they created a neighborhood deprivation index using income/poverty, education, employment, housing, and occupation factors in each of the neighborhoods. Because preterm birth varies by race and ethnic group (with black women having the highest rates), special attention was also paid to racial differences in these neighborhoods.

Not surprisingly, a significant association was found between neighborhood deprivation and the risk of preterm birth (birth before 37 weeks) among non-Hispanic white women and non-Hispanic black women. The mechanisms that cause this to occur, however, were not studied, so we don’t know which factors in neighborhoods (e.g., environmental pollutants, high-risk health behaviors, violence, stress) may be responsible. Another challenge posed by this social research is that interventions are beyond the individual, are broader, and are harder to imagine. If the social environment does contribute to preterm birth, the implication is that to “fix” preterm birth we must focus not only on the individual but also on the larger social environment. Income/poverty, education, employment, and housing are also pieces of the preterm birth puzzle. It is time we attend to them.

Comment by Linda Beth Tiedje
Induced Abortion: Estimated Rates and Trends Worldwide


Abortion is such a “hot topic” that we sometimes forget that information on incidence of safe and unsafe abortion rates is crucial for public health programs aimed at reducing unintended pregnancy and monitoring progress on the health of women and children. This report documents the rate and number of abortions globally from 1995 to 2003. The absolute number and rate of abortions have slightly declined since 1995, but nearly one-half of abortions are still performed illegally in potentially dangerous conditions. The procedure seems to be no less prevalent where it is prohibited, according to this study—it is just more dangerous. “The legal status of abortion seems to predict not the number of abortions that occur, but the safety,” according to this report.

About one-half (48%) of the 42 million abortions performed worldwide in 2003 were performed illegally by unskilled individuals or in unhygienic conditions (labeled “unsafe” in this article). More than 97% of all of these “unsafe” abortions were in developing countries. Hence, although abortion rates are similar in the developing and developed world, unsafe abortion is concentrated in developing countries, resulting in the death of about 70,000 women annually (13% of maternal mortality).

The conclusion seems to be that the legal status of abortion does not dissuade women and couples who seek to end their pregnancies. Whatever your political or religious persuasion, prevention of unsafe abortion seems an imperative public health goal. The way to prevent unsafe abortion, according to this article, is not to make it illegal but to work to prevent it and respond to its causes. The root cause of abortion is unintended pregnancy. It is there that our efforts should be focused. “Meeting the need for contraception and improving the effectiveness of use among women and couples who are already using contraception are crucial steps toward reducing the incidence of unintended pregnancy” (p.1345).

Comment by Linda Beth Tiedje

Preterm Delivery and Later Maternal Cardiovascular Risk


We are all familiar with studies of infants born prematurely and the long-term health consequences for them, such as learning and physical disabilities. This recent study is unique in its focus on mothers who deliver preterm and the long-term health consequences for these women. Catov and her team investigated a group of 446 older women (mean age, 80 years, 47% black) who had a history of preterm birth (before 37 weeks) and their subsequent cardiovascular disease (CVD) status. Analysis focused on first births not complicated by hypertension or pre-eclampsia. Hospital records and self-report were used as data sources.

Women who delivered a preterm infant (an average of 57 years previously) had a higher prevalence of CVD, a relationship not altered by smoking history, other risk factors, and demographics. The association with CVD was even stronger when women who delivered both preterm and small infants were compared with women who delivered at term and had normal weight infants. Because women who survive to old age (like the women in this study) are obviously healthier than women in general, the generalizability of these findings may be limited. Nonetheless, this study alerts us to the possibility of preterm birth as a marker for women at risk for later CVD and suggests that hidden maternal vascular disease may contribute to preterm delivery. This hidden vascular disease may, over the course of that woman’s lifetime, lead to hypertension or arteriosclerosis and increase the risk for CVD. Although more information is needed regarding these CVD pathways, the results imply that delivering a preterm infant may help identify women who would benefit from further CVD risk screening and interventions.

Comment by Linda Beth Tiedje

Terri H. Lipman is an Associate Professor, University of Pennsylvania School of Nursing, Philadelphia; Pediatric Nurse Practitioner, Division of Endocrinology/Diabetes, The Children’s Hospital of Philadelphia; and an Editorial Board Member of MCN. She can be reached via e-mail at lipman@nursing.upenn.edu

Linda Beth Tiedje is an Adjunct Associate Professor, Department of Epidemiology, School of Human Medicine, Michigan State University, East Lansing, and an Editorial Board Member of MCN. She can be reached via e-mail at Tiedje@msu.edu