Childhood obesity has more than tripled in the past 30 years. Obesity prevalence among children aged 6 to 11 years increased from 6.5% in 1980 to 19.6% in 2008, and from 5.0% to 18.1% among adolescents aged 12 to 19 (Ogden et al., 2010; National Center for Health Statistics, 2004). Studies continue to link obesity and diet with morbidities such as type 2 diabetes, cardiac disease, stroke, bone and joint problems, sleep apnea, poor self-esteem, and depression (Freedman et al., 2007; U.S. Surgeon General, 2001). As we continue to seek ways to improve the nation’s health status and manage rising healthcare costs, it is imperative that the individual, family, and community take measures to reduce obesity and overweight status. The four research articles profiled here address different aspects of prevention and intervention. The first write-up describes a study investigating an intervention that may be necessary when prevention and lifestyle modification interventions are not available or are not effective—laparoscopic gastric banding surgery for teenagers. The second article describes an investigation into the potential greater risk for obesity in children of single-parent homes. The third and fourth articles discuss different intervention studies—one focused on really early prevention interventions with 0- to 5-year-olds and the other on reducing media exposure time as a means of prevention. Interested readers are encouraged to read the articles for full information about the interventions and findings.

REFERENCES


The rates of adolescent obesity throughout the world are increasing. We are seeing more and more young adults and teenagers with comorbid conditions associated with obesity (diabetes, heart disease, hypertension, and metabolic syndrome). Adult obesity research has shown that laparoscopic adjustable gastric banding is more effective than lifestyle counseling alone and has long-term benefit. Less research has been completed with the adolescent population. In this prospective, randomized controlled study, the investigators sought to determine whether gastric banding versus lifestyle intervention was more effective on decreasing weight and improving health of adolescent participants.
Patient Recruitment and Eligibility Criteria

The target population was 14- to 18-year-old obese patients (with body mass index [BMI] greater than 35). Participants were recruited from the Melbourne, Australia community via newspaper advertisements. All participants had a significant history of obesity and related comorbidities for a minimum of 3 years. These comorbidities include back pain, hypertension, asthma, diabetes, metabolic syndrome, and physical limitations. Other inclusion criteria were evidence of failed previous attempts at weight loss, self-esteem issues (victims of bullying), and difficulties in achieving activities of daily living. Parental consent for participation was required. Twenty-five patients were randomized to the gastric banding procedure group, and 25 were randomized to the lifestyle intervention group.

Interventions

Gastric Banding Program
- The LAP-BAND Adjustable Gastric Banding system was used on all patients randomized to this group.
- Surgical procedure was completed free of charge at a private hospital.
- Instruction on correct eating regimen—for example, three small meals per day, slower eating, and increased protein intake.
- Thirty minutes of formal exercise per day.

Lifestyle Program
- Provided consultation with an adolescent and sports medicine physicians along with the study nurse coordinator and a dietician or exercise consultant every 6 weeks for 24 months.
- Focus was on healthy lifestyle improvements to reduce weight and control dietary habits, including individualized diet plans, increasing physical activity, limiting computer use to 2 hours/day, and the use of a personal trainer for 6 weeks to work with each participant. Parents were included in instruction classes where appropriate.
- Some formal group outings (e.g., hiking, swimming, biking) were also planned so that participants were encouraged in a peer-group format.

Results

Twenty-four of the gastric banding procedure group and 18 of the lifestyle group completed the study.
- At 2 years, weight reduction of 50% or greater was reported in 84% of the surgical intervention group, and 12% of the lifestyle group.
- Correction of metabolic syndrome occurred in nine of the gastric banding group and four of the lifestyle group.
- A general improvement in quality of life was reported on both groups.
- Seven patients in the surgical group required surgical revisions at least once throughout the study period.
- Surgical and lifestyle instructions interventions can be utilized together in the challenging adolescent population.

Implications for Home Care

Obesity is a major health problem, requiring extensive interventions to overcome food addiction and the stress on emotional and the physical well-being of those affected. Surgical interventions come with risk and should only be considered after other counseling and behavior modifications programs have been tried. Ongoing support is needed even after a surgical procedure. Obesity is a multifaceted illness that requires counseling, education, and community support and follow-up to be successful. The adolescent population is at particular risk for societal isolation related to obesity. The cycle of low self-esteem, pain, and discomfort and food addiction requires community-based nurses, therapists, physicians, and nutritionists to prevent future problems.
Parent education is vital for parent and caregiver involvement to be effective in promoting the health of their children and families. Evidence-based strategies and skills are much needed to support them in guiding and serving as role models for their children. More research is needed for evidence-based interventions that can be used to this population, especially when healthy behaviors are most positively impacted from an early age.

A particular risk for societal isolation related to obesity. The cycle of low self-esteem, pain and discomfort, and food addiction requires community-based nurses, therapists, physicians, and nutritionists to prevent future problems. Evaluating the home environment, activities of daily living, medication compliance, follow-up on surgical convalescence, wound care, and compliance can be achieved by the home care nurse in the patient’s home environment. Web-based resources are also available, such as letsmove.gov, a nationwide initiative to increase physical activity, healthy eating, community support, and family nutrition improvements.


The objective of this study on obesity was to determine whether there are any associations between parents and childhood weight status. The hypothesis was that nationally the single-parent status would have greater percentages of childhood obesity. Secondary objectives were to compare cholesterol levels and dietary habits in single- and dual-parent households.

Methods
The investigators used data collected from the National Health and Nutrition Examination Survey (NHANES III) to test their hypothesis. NHANES data are from a stratified multistage sample of the population. Data from 1988 to 1994 were utilized and revealed new variants in the relationships for obesity and family status. Participants were from 6 to 11 years of age. Information was collected from almost 1,000 children comparing race, sex, age, body mass index (BMI), height, and weight. Also reviewed were blood cholesterol and nutrient intake. Height and weight measurements, BMI calculations, and cholesterol testing were completed through local mobile centers. A 24-hour dietary recall was used to tabulate nutrient intake. Obesity was defined as those who had a BMI in the 95th percentile for their age and sex group. The children’s data were matched to their parent survey data. Parental variables included marital status, sex, and level of education. Data collection was statistically analyzed utilizing t tests of dietary recall and BMI. Children in single- and dual-parent households were compared.

Results
The sample included 219 children from single-parent households and 780 from dual-parent households:

- Forty-one percent of children from the single-parent group were obese compared with 31% in the dual-parent group.
- Female Black children were found to have the highest incidence of being obese.
- Total fat and saturated fat intake in the two groups were significantly different with single-parent household at 9.1 ± 6.2 and dual-parent children at 3.3 ± 1.0.
- Single-parent households were recorded as having the highest caloric fat intake but also were found to consume less fruits and vegetables, did not eat together as a family, spent smaller amounts of time together, and the children were more sedentary.
- Mean cholesterol (low-density lipoprotein) level was higher in children of the
single-parent compared with the dual-parent group.

**Discussion and Implications for Home Care**

Data showed that the number of single-parent households have increased from 3 million in 1970 to 10 million in 2003 (US Census Bureau, 2004). Head of households being female was greater than male but the number of male single-parent households increased over the 30-year time frame. Current childhood obesity trends are increasing at the same time as the number of single-parent families increases. This link provides those in contact with these families some insight into children who may be at higher risk and provides some direction for resource use. This study did not specifically investigate the reasons leading to the higher association of obesity in single-parent households, but some factors were more prevalent in single-parent households, such as parents having less time with children. As the single parent often will have the sole responsibility for household finances, the parent may spend more time outside the home for paid employment, leaving less time for meal planning and preparation. The parent would also have less time to act as a role model if fewer meals are taken together.

Community-based initiatives, such as public health surveys or health screenings in schools, that are educationally based can be alternate avenues to help assess, monitor, and intervene with children in this age group for risk. Public health nurses and experts in pediatric nutrition and exercise could be more fully utilized to develop community-based resources and programs to redirect these children to healthier habits. Parents, of course, should be part of this effort to help design and think through options and educational programs. Prevention must start young in this population; habits that are formed will need to be redirected to healthier options.

**REFERENCE**


Treatments to help children lose weight have had only limited success (Oude Luttikhuis et al., 2009), so prevention is key in the effort to reduce the impact of childhood obesity. Creating environments that promote healthy eating and physical activity especially in early life are an important factor to prevention efforts. The authors of the article described here completed an updated literature review with the objective of identifying effective interventions to support parents with 0- to 5-year-olds in promoting healthy eating, increased physical activity, and reduced sedentary behaviors.

**Methods**

Articles were identified based on a search of published, peer-reviewed studies in the English language from 1995 to 2008 using 10 electronic databases. Study quality was assessed using a six-component rating scale. The scale looked at selection bias, study design, confounders, blinding data collection methods, and withdrawals and dropouts. This review aimed to update a previous review conducted by the authors in 2006.

**Results**

Twenty-three studies met the criteria defined for this review. Settings varied, including preschool, childcare, home, group, primary care, and mixed settings, whereas strategies used were multifaceted and widely variant.

- **Preschool/childcare-based settings** were the most commonly targeted settings. Strategies evaluated through the different studies included increasing outdoor free-play time; brief educational sessions on healthy eating and physical activity combined with 20 minutes of aerobic activity three times a week; scheduled walking and aerobic activity; scheduled daily 30-minute activity sessions including warm up then jumping, hopping and skipping, and then cooldown.

- **Home-based studies.** Interventions included the use of a pedometer for parent and child along with a log book and age-appropriate diet and exercise educational information; “community mothers” matched with first-time parents for educational and support purposes; participation...
Although the responsibility lies with all healthcare providers to identify and educate regarding the impact of obesity on health, the home care nurse is in the ideal position to evaluate lifestyle, family life, and home environment and identify factors contributing to the potential for or actual obesity.

in three annual sessions—separate sessions for parents and children.

• Other studies. One study randomized church groups with the intervention group having cooking demonstrations/discussion focused on healthy eating. A primary care-based study provided intervention parents with repeated dietary counseling focused on the reduction of the child’s saturated fat intake.

One third of the studies reported success in reducing fat intake, increasing physical activity, and reducing sedentary behavior. The authors noted an increase in publications in recent years demonstrating increased attention to the need for intervention in this age group; however, the evidence base supporting different interventions is still limited, especially when compared with interventions geared to the school-age population.

Limitations in many studies included the quality and reporting of data. The highest quality was found to be in the preschool/childcare setting, probably related to the structured nature of these settings, whereas home-based settings are less predictable. Many of the studies had insufficient sample sizes to detect meaningful changes. Significantly, a number of studies lacked a parental component, possibly given the school settings in which many of the studies were conducted.

**Implications for Home Care**

The limited evidence of success noted in these widely variant studies may underscore the importance of parental and caregiver involvement in facilitating lasting change in early childhood. Parent education is vital for parent and caregiver involvement to be effective in promoting the health of their children and families. Evidence-based strategies and skills are much needed to support them in guiding and serving as role models for their children. More research is needed for evidence-based interventions that can be used with this population, especially when healthy behaviors are most positively impacted from an early age. Home care nurses are the ideal vehicle for family education regarding healthy eating habits and physical activity. Studies to find cost-effective interventional programs that can be implemented in the home can be an ideal bridge to interventions currently promoted in the school settings for the school-age child.

**REFERENCE**


Although there is a body of literature indicating the growing prevalence of childhood obesity globally, only recently have studies begun to emerge assessing childhood interventions promoting healthy eating, increasing physical activity, and reducing behaviors that promote obesity. The Fun Families study described here sought to reduce media consumption among elementary school age children. In children, obesity is most often the result of eating too much and exercising too little. Media usage such as video games, computer usage, and television watching are theorized to be a contributor to childhood obesity. A study of children in the Women, Infants and Children Feeding Program found that on average, the children spent more than twice as much time watching television and using computers as they did engaging in physical activity.
Activity (Nelson et al., 2006). The Family Fun study put into place an intervention called “Family Fun” and hoped to see a decrease in behaviors that increase media watching.

Study Population
Parent–child dyads were recruited mainly from a large medical practice in Houston, TX. Flyers, letters, telephone calls, and other strategies were used to accrue the study group. The sample included 202 families with children ages 6 to 9 years; 101 families were randomized into the intervention group while 101 families were randomized to the control group. Baseline and 6-month evaluations were completed.

Behavioral Objectives
1. Reduce TV watching
2. Turn off TV when nobody is watching
3. No TV with meals
4. No TV in the child’s bedroom
5. Engage in fun nonmedia-related activities.

Intervention
The intervention was developed through a process incorporating theory, empirical evidence, and community input, with the behavioral objectives of reducing media watching.

- Two-hour workshop for parent/child dyads—comprising an educational puppet show, interactive discussions, parent–child discussions regarding the positive aspects of reducing media consumption, and guides for alternative activities and skills for behavior modification.
- Six newsletters sent out monthly—included facts about the risks of media consumption and additional tips and strategies for alternative activities to reinforce the workshop education.

Results
At 6-month follow-up, the intervention group was less likely to report the TV being on when no one was watching, less likely to snack while watching, and less likely to have a TV in the child’s room. However, the overall media consumption was not statistically significant. Despite lack of statistical significance in specific behavioral objectives, the study group felt the Family Fun intervention did promote an element of empowerment for parents to pursue behavioral change, in alignment with American Academy of Pediatrics recommendations to decrease media consumption. Limitations of the study were small sample size and reliance on self-report for data.

Implications for Home Care
Home care nurses are generally expected to address the comprehensive needs of their clients, providing interventions ranging from acute clinical management to education regarding behavior and lifestyle modification to manage health. Although the responsibility lies with all healthcare providers to identify and educate regarding the impact of obesity on health, the home care nurse is in the ideal position to evaluate lifestyle, family life, and home environment and identify factors contributing to the potential for or actual obesity. Home education is especially important for the 0- to 5-year-old group as they typically have less access to formalized education and school settings. Education must begin in the home and evidence-based strategies are needed to support parents and caregivers to improve success of lifestyle changes. Often, the educator’s challenge is not the “what” or “why” of assessment but the “how” of intervention. Parents are powerful role models in their own eating and activity behaviors and the home is an ideal place to educate and promote lifestyle change throughout the life continuum.

REFERENCE

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