Childhood Obesity; Parents Fail to Recognise. General Practitioners Fail to Act

A White 1, B O’Brien 2, T Houlihan 3, C Darker 4, B O’Shea 5
1Chapelizod Medical Centre, Belgrove Park, Chapelizod, Dublin 20
2Blessington, Co Wicklow
3North Strand Surgery, 110 North Strand Road, Dublin 3
4AMNCH, Tallaght, Dublin 24
5The Bridge Medical Centre, Newbridge, Co Kildare

Abstract

General Practitioners (GPs) have an important role to play in recognition of and intervention against childhood obesity in Ireland. Data were collected prospectively on a cohort of children aged 4-14 and their parents (n = 101 pairs) who attended consecutively to a semi-rural group general practice. Parents estimated their child’s weight status. Actual weight status was determined for both parent and child using the United States Centres for Disease Control’s BMI-for-age references. 15(14.9%) of the children and 49(51.6%) of the parents were overweight or obese. While 71(95.5%) of normal weight status children were correctly identified, parents showed poor concordance in identifying their children as overweight 2(18.2%) or obese 0(0%). BMI was only evidently recorded in the clinical records of 1 out of 15 cases of overweight children identified. With parents failing to recognise childhood obesity, GPs have a responsibility in tackling this problem at a family level.

Introduction

Children in Ireland are becoming increasingly overweight and obese 1, in keeping with international trends in the developed world 2. Research has shown that the majority of children who are overweight before puberty will be overweight in adulthood 7. Parents perceptions of their children’s weight tend to underestimate or poorly recognise overweight or obesity 11. Parents who are unaware that their child is overweight are unlikely to instigate lifestyle changes that may halt progression of the problem. The authors believe General Practitioners (GPs) are well placed to identify, monitor and intervene at a family level with children who are overweight or obese. However intervention is less likely to occur without the impetus for diagnosis being driven by GPs on a consistent and accurate basis. There is a paucity of research on this problem in an Irish primary care setting. This study aims to establish the prevalence of childhood overweight and obesity in our study population and to evaluate the concordance of the perceived and actual weight categories of children by their parents.

Methods

In this cross-sectional study data were collected prospectively on children aged 4-14 and their parents who attended consecutively to a semi-rural group general practice (4 GPs) over a three month period in 2009. A total of 101 parents and their children participated. Inclusion criteria included all children in the target age group attending the practice for routine consultation regardless of the clinical reason for presentation. Parents were informed of the scope and purpose of the study, and were advised regarding anonymity of their responses. A questionnaire was developed which explored basic demographics and lifestyle factors regarding family diet and exercise through Likert scale and multiple choice answers. Parents were asked to estimate their child’s weight status. During the consultation height and weight were objectively measured, and actual weight status was determined for both parent and child (n=101 children, n=95 parents). The United States Centres for Disease Control BMI-for-age references were used to define children’s weight status 12,13. Patients with abnormal results had this addressed during the consultation. This included provision of verbal and written information and invitation where necessary for further clinical review. Ethical approval was obtained through the Ethics Committee of the TCD HSE GP training scheme. Analysis and collation were carried out using SPSS 3.0.

Results

A total of 101 parents and their children participated. The children’s age range was 4 to 14 years with mean age 7.9 years. Parental mean age was 39.1. 93(92%) of the children were accompanied by their mother and 56(55.4%) of the children included were male. 24(23.8%) of participants held medical cards, which is in line with the demographics of the practice. In 11(10.9%) of the families at least one parent worked shift work. Calculation of the children’s BMI for age indicated that 15(14.9%) of the children were overweight or obese. 49(51.6%) of the parents were overweight or obese. Interestingly 12(11.8%) of the children...
were underweight. Parents were poor at recognising their children's increased weight. 91.8% of overweight children were perceived as normal weight by their parents. None of the obese children had their correct weight category identified. Parents recognition of their children being underweight was also inaccurate, with 6(50%) of underweight children described as normal and 3(4.1%) of normal children described incorrectly as underweight (see Figures 1 & 2).

Figure 2: Children's weight categories by measured BMI versus parents' perceptions. For example, parents perceived 86.3% of their children to have normal weight versus 73.3% who measured as normal weight.

Important gender differences existed with male children (n=56) having higher rates of both overweight and obesity 9(16.1%) vs. 6(13.3%) and of underweight 8(14.3%) vs. 4(8.9%) than female children (n=45). However parents showed less accuracy in identifying overweight sons than daughters 6(85.7%, n=7) vs. 3(75%, n=4) misconception of weight in male vs. female overweight children. This is demonstrated in Table 1. Parental assessment of their children's exercise practices showed that two thirds 67(66.3%) reported involvement in a team sport or organised physical activity more than once per week or daily. 12(11.8%) never exercise together as a family with 46(45.5%) reporting that they do so more than once per week or daily. A majority 78(81.3%) of children (n=96) travel to school by vehicle on an average school day with only 18(18.7%) actively commuting (17.7% walking and 1% cycling).

Figure 3: Family eating patterns reported by parents

Parents reported that a majority 56(55.4%) of children watch 1-2 hours of television on an average school day with 27(26.7%) watching television for 2-3 hours or more. Three quarters 66(75%) of parents stated their child (n=88) spent less than 1 hour playing computer games on an average school day. When parents were asked to address their family's eating habits a majority 76(79.8%, n=99) stated they eat together as a family daily. Failure was most commonly due to work commitments or shift work 22(22.2%), children's activities 11(11.1%) and commuting 4(4.0%). Almost a quarter 23(23.2%) of parents stated that each family member did not usually eat the same food at dinner with 31(31.3%) of parents cooking separate meals for different family members more than once per week or daily. Almost half of the families reported eating pre-prepared foods once per week, with 15(15.1%) using these products more than once per week or daily (see Figure 3).

Review of previous medical records for those with abnormal results demonstrated that neither BMI nor medical concerns regarding overweight nor obesity was routinely documented by the GPs. In only 1 of the 15 cases of overweight or obesity identified had a BMI or a previous medical concern been noted in their records. In comparison 5(41.6%, n=12) of the underweight children had documentation of low weight as a problem, often with involvement of paediatric outpatient services.
Discussion

Childhood obesity is currently and will remain a major challenge for both Irish primary care and public health. Perry et al. demonstrated a disproportionate increase in weight over height in Irish children over the last 60 years with an average increase of 24kg weight amongst 14 year old boys between 1948 and 2002. The North South Survey of Childrens' Height, Weight and BMI 2002, found a prevalence of overweight and obesity of 23% in boys and 25% in girls, age 4 to 16 years, in ROI. These proportions are consistent with those demonstrated in the Growing Up in Ireland Study, which provides a current and nationally representative sample of 9 year olds and also with similar international cohort studies. In these studies significant rates of overweight and obese children were observed, with more than half of their parents being affected. This study's prevalence 14.9% of overweight and obese children may reflect the socioeconomic location of the study as well as the younger exclusion age (14 vs. 16 years) with obesity typically increasing later in adolescence.

Both the effects of obesity to the individual during childhood and the impact on future adult health have been widely studied. Whitaker et al showed that parental obesity is important, with the same study demonstrating that it more than doubles the risk of adult obesity among both obese and non obese children under 10 years of age. Childhood obesity has been linked to lower overweight and obesity in this study were 51.6%. Childhood obesity has been linked to lower perceived self worth and competence in sports, physical appearance and peer engagement and strongly linked to risk factors for cardiovascular disease, diabetes mellitus, orthopaedic problems and mental disorders.

In international studies parents showed poor ability to recognise weight problems in their children. A seminal Canadian study of 355 child-parent pairs showed significant inaccuracy by parents in recognising or showing concern about overweight and obesity in their children. Non-white and overweight parents demonstrated less awareness of their children's weight problem although these results are not consistent in other studies. Although smaller, the findings of our study were comparable with 81.8% of overweight children perceived as normal weight by their parents. Parents had lower rates of perception of overweight in their sons than daughters despite boys being more frequently overweight or obese. Research has demonstrated that parents are more likely to both recognise and have concerns regarding increased weight in female children. GPs play a vital role in the recognition, monitoring and intervention of childhood overweight and obesity. This was discussed by Wake (10) who highlighted both the potential for and the barriers against meaningful secondary interventions at primary care level for childhood obesity. Alteration of unhealthy dietary and exercise habits at a family level is vital in terms of tackling the developing epidemic of childhood overweight and obesity.

This study provided self reported information from parents on family diet and exercise routine, highlighting areas where interventions can be best directed. Risk factors for childhood obesity have been shown to include parental obesity and more than eight hours spent watching television per week by age 3 years. With half of this study's parents overweight or obese and one quarter of children watching 2-3 hours or more television on an average school day red flags should be raised. Studies have shown a correlation between children who actively commute to school and overall physical activity. Further work is needed on identifying and changing barriers to this practice. In the literature the role of parental power to influence their children eating habits has been highlighted. Children do not have economic independence around their choice of diet and so healthy and consistent familial dietary practices and meal time routine is of paramount importance and within parental control. There should be concern therefore, that in one third of families, separate meals are being prepared for individual members more than once per week or daily. A large proportion of families reported regular consumption of pre-prepared or convenience foods, products which are often high in salt, sugar and fat.

A very significant prevalence of childhood and parental obesity was demonstrated within our study population. Parents in this study frequently underestimated their children's actual weight. Despite anticipated parental sensitivities regarding discussion of children's weight, it was observed that most parents responded positively as many had been unsure how to broach the topic themselves. It was clearly acceptable and possible for this to be constructively and systematically raised in consultation with the families surveyed. GPs had failed to routinely document medical concerns in the overweight or obese children. Interestingly, there was both greater parental recognition and medical intervention occurring in the children found to be underweight. This study demonstrates that it is paramount for GPs to raise the issue of obesity with parents or it is likely to be overlooked. As a result of this research the authors suggest that GPs adopt a policy to include routine documentation of BMI for age in all children on an annual basis. GPs are
ideally placed for this pivotal role which presents the opportunity to provide feedback to parents and children about their weight and to discuss BMI in the context of simple and sustainable lifestyle changes. Early intervention is crucial based on exercise and diet at a family level. Further research is required by expansion to a multi-centred study, with larger sample size, covering a variety of socio-economic groups and urban or rural environments to identify the most effective interventions possible for those identified to be at risk.

Correspondence: A White
Chapelizod Medical Centre, Belgrove Park, Chapelizod, Dublin 20
Email afric@ireland.com

References

Comments: