

Fathers are critical to understanding childhood obesity

Abstract

Childhood obesity is a serious health issue in the United States (US) as it places children at higher risk for a range of chronic diseases and poor health outcomes CDC. After decades of rapid increases, (the percentage of children and adolescents aged 2-19 years who are obese in the US more than tripled (4.6 to 18.1 percent) from 1963 to 2007), the national childhood obesity rate has stabilized around 17 percent since 2007 CDC. The increasingly recognized role that the parents play has led to ample research on parenting practices and family factors that may decrease the prevalence of obesity among very young children Barlow. Although parents are recognized in this way, the influence of fathers is missing from the childhood obesity research literature.¹⁻⁵ Fathers offer unique experiences as caregivers and their contributions should not be overlooked. Understanding the relationship between father engagement and childhood obesity risk would make a significant public health contribution.

Keywords: childhood obesity, fathers engagement, opinion

Volume 1 Issue 2 - 2017

Lorenzo N Hopper

Department of Maternal and Child Health, University of North Carolina at Chapel Hill's, USA

Correspondence: Lorenzo N Hopper, Department of Maternal and Child Health, University of North Carolina at Chapel Hill's, Gillings School of Global Public Health, USA, Tel 7044720158, Email lhlorenzo@live.unc.edu

Received: August 08, 2017 | **Published:** September 22, 2017

Abbreviations: CDC, centers for disease control and prevention; FV, fruit and vegetable; UNC, university of north carolina at chapel hill

Introduction

Obesity is a critical health condition that has become increasing problematic worldwide. According to the National Institutes of Health (NIH), overweight and obesity is responsible for nearly 300,000 deaths each year resulting in the second leading cause of preventable death in the United States⁶ NIH, 1998. Furthermore, childhood obesity is of major public health concern due to approximately one in five of the nation's youth suffering from obesity, as defined as a weight to height ratio, Body Mass Index, at or above the 95th percentile for age and sex.⁷ Further, obesity persists from childhood into adulthood^{8,9} resulting in substantial individual, interpersonal and financial consequences. An exhaustive amount of literature highlights overweight and obesity as major causes of co-morbidities, including type 2 diabetes, cardiovascular diseases, several cancers and other health problems, which can lead to further morbidity and mortality.¹⁰

Obesity is a multifaceted disorder that is affected by many modifiable and non-modifiable factors at various ecological levels.¹¹ Risk factors for childhood obesity range widely from the individual level to the interpersonal, environmental and societal levels.⁷ Diet and level of activity influence an individual's risk for becoming obese, including the built environment or access to fresh fruits and vegetables and safe spaces to exercise and play.¹² Further investigation into the built environment lead to the home, which is a well-studied complex food environment.¹² Early childhood obesity not only compromises current health, but also predicts health-compromising outcomes later in life, which have serious public health implications. Emerging research is interested in the mechanisms by which improving early childhood health results in better long-term health.¹³ A better understanding of the primary determinants of early childhood obesity is important given that obese children are more likely to become obese adults, and therefore experience increased risk chronic illnesses such as diabetes, hypertension and cardiovascular disease. There is

ample support in the literature emphasizing the importance of fathers' engagement and its impact on child development.^{14,15}

Drawing on an ecological framework and role modeling, fathers may influence child behavior through observational and social learning processes. Growing evidence on children with involved fathers demonstrates better cognitive and emotional outcomes Baker as well as higher economic and educational attainment.¹⁵ However, a major shortcoming in the study of father engagement is the lack of research geared towards exploring fathers' engagement in health-related behaviors. Fatherhood is a multidimensional concept that has seen changes and growth in the ways in which we understand and operationalize the meanings.¹⁶ Often researchers use such terms as fatherhood, father involvement, and father engagement, interchangeably, even though they are referring to different constructs with varying definitions.¹⁷ Involvement implies doing to; in contrast, engagement implies doing with. Previous research conceptualized involvement through father engagement, accessibility, and responsibility; with engagement referring to the one-to-one interaction with the child.^{17,18}

The first dimension gathered from the literature highlights the financial responsibilities of the fathers; the second, drawn from developmental psychology, focuses on the direct interactions between fathers and children in the provision of care, play, supervision, etc.¹⁷ the third dimension of fatherhood from the literature explores the family climate by focusing on the relationship between mother and father. Because of the growing interest in fathers, a substantial amount of literature has surfaced to understand father-child relationships, paternal influences on children and families and the impact of father engagement on children and families. For example, Watterworth & colleagues¹⁹ explored how food preparation practices are associated with young children's dietary intake in Canada. Findings suggested that both mothers' and fathers' engagement of children in meal preparation were associated with lower child nutrition risk and fathers' modeling of healthy behaviors was associated with lower nutrition risk^{19,20} using the same ECLS-B study sample found that fathers' reports of eating out with their child was significantly and positively associated

with children's fast food and sweetened beverage consumption in a gradient manner and that physical interactions were not associated with weight status or fruit and vegetable consumption. These findings, however, only included fathers who lived with their children. This study will expand the work of Guerrero and colleagues to examine the associations of father-child feeding and physical interactions with dietary practices and weight status in children with resident fathers.²⁰ Conducted a systematic literature review of observational studies on family correlates of child adolescent f & v consumption and found positive relationships between parents' and child f & v consumption. The study concluded that children vastly mirror the behaviors of their parents. Additionally, fathers' health status will be assessed as children with obese fathers have a higher risk for unhealthy weight status.²¹

Efforts to explore father engagement have been met with numerous challenges.²² These challenges include, but are not limited to: defining engagement, measurement issues, sampling/representativeness issues, and same-informant bias. These challenges limit how the role of the father is conceptualized and measured. Allen, Barlow SE et al.^{22,23} highlight how further research and theory can build the father engagement literature by being attentive to these limitations. In conclusion, the role of the father has been long overlooked in childhood obesity research. Moving forward more emphasis should be placed on asking questions surrounding both parents together as well as both parents individually.^{24–26}

Acknowledgements

I would like to acknowledge the Maternal and Child Health Department at UNC's Gillings School of Global Public Health for their continued support as a doctoral student. I would also like to thank Dr. Jon Hussey for his continued guidance and support.

Conflict of interest

There is no financial interest or any conflict of interests.

References

1. Davison KK, Gicevic S, Aftosmes Tobio A, et al. Fathers' Representation in Observational Studies on Parenting and Childhood Obesity: A Systematic Review and Content Analysis. *Am J Public Health*. 2016;106(11):e14–21.
2. Vollmer RL, Adamsons K, Foster JS, et al. Association of fathers' feeding practices and feeding style on preschool age children's diet quality, eating behavior and body mass index. *Appetite*. 2015;89:274–281.
3. Khandpur N, Blaine RE, Fisher JO, et al. Fathers' child feeding practices: a review of the evidence. *Appetite*. 2014;78:110–121.
4. Vollmer RL, Adamsons K, Gorin A, et al. Investigating the relationship of body mass index, diet quality, and physical activity level between fathers and their preschool-aged children. *J Acad Nutr Diet*. 2015;115(6):919–926.
5. Blissett J, Meyer C, Haycraft E. Maternal and paternal controlling feeding practices with male and female children. *Appetite*. 2006;47(2):212–219.
6. Stein CJ, Colditz GA. The Epidemic of Obesity. *The Journal of Clinical Endocrinology & Metabolism*. 2004;89(6):2522–2525.
7. Ogden CL, Carroll MD, Fryar CD, et al. Prevalence of obesity among adults and youth: United States, 2011–2014. *NCHS Data Brief*. 2015;219:1–8.
8. Dixon B, Pena M, Taveras EM. Life course Approach to Racial/Ethnic Disparities in Childhood Obesity.^{1–3} *Adv Nutr*. 2012;3:73–82.
9. Chan RS, Woo J. Prevention of Overweight and Obesity: How Effective is the Current Public Health Approach. *Int J Environ Res Public Health*. 2010;7(3):765–783.
10. Biro FM, Wien M. Childhood obesity and adult morbidities. *Am J Clin Nutr*. 2010;91(5):1499S–1505S.
11. Han JC, Lawlor DA, Kimm SYS. Childhood Obesity. *Lancet*. 2010;375(9727):1737–1748.
12. Story M, Kaphingst KM, Robinson O'Brien R, et al. Creating Healthy Food and Eating Environments: Policy and Environmental Approaches. *Annu Rev Public Health*. 2008;29:253–272.
13. Hawkins JD, Catalano RF, Kosterman R, et al. Preventing Adolescent Health-Risk Behaviors by Strengthening Protection During Childhood. *Arch Pediatr Adolesc Med*. 1999;153(3):226–234.
14. Dick G. Review of Fathering and child outcomes. *Social Work in Health Care*. 2007;46(1):96–100.
15. Flouri E, Buchanan A. Early father's and mother's engagement and child's later educational outcomes. *British Journal of Educational Psychology*. 2004;74:141–153.
16. Cabrera NJ, Tamis Le Monda CS, Lamb ME, et al. Measuring Father Engagement In The Early Head Start Evaluation: A Multidimensional Conceptualization, USA; 1999. p. 1–14.
17. Marsiglio W, Day RD, Lamb M.E. Exploring fatherhood diversity: Implications for conceptualizing father involvement. *Marriage and Family Review*. 2000;29(4):269–293.
18. Lamb ME, Pleck JH, Charnov EL, et al. A biosocial perspective on paternal behavior and involvement. In: JB Lancaster, J Altmann, et al, editors. *Parenting across the life span: Biosocial dimensions*. Hawthorne, Aldine Publishing Co, USA; 1987. p. 111–142.
19. Watterworth JC, Hutchinson JM, Buchholz AC, et al. Food parenting practices and their association with child nutrition risk status: comparing mothers and fathers. *Appl Physiol Nutr Metab*. 2017;42(6):667–671.
20. Guerrero AD, Chu L, Franke T, et al. Father Involvement in Feeding Interactions with Their Young Children. *Am J Health Behav*. 2016;40(2):221–230.
21. Berge JM, Wall M, Bauer KW, et al. Parenting characteristics in the home environment and adolescent overweight: a latent class analysis. *Obesity (Silver Spring)*. 2010;18(4):818–825.
22. Allen S, Daly K. The Effects of Father Involvement: An Updated Research Summary of the Evidence. Father Involvement Research Alliance, Canada; 2007. p. 1–58.
23. Barlow SE, Expert Committee. Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*. 2007;120(Suppl 4):164S–192S.
24. Centers for Disease Control and Prevention. *Childhood Obesity Facts*. 2017.
25. Healthy People 2020 (HP2020). Nutrition Physical Activity and Obesity.
26. Lamb ME. The History of Research on Father Engagement: An Overview. *Marriage & Family Review*. The Haworth Press Inc, 2000. 29(2):23–42.