

# Predictors of Short- and Long-Term Attrition From the Parents as Agents of Change Randomized Controlled Trial for Managing Pediatric Obesity

Nicholas D. Spence, PhD, Amanda S. Newton, PhD, RN, Rachel A. Keaschuk, PsyD, Kathryn A. Ambler, MSc, Mary M. Jetha, MD, Nicholas L. Holt, PhD, Rhonda J. Rosychuk, PhD, John C. Spence, PhD, Arya M. Sharma, MD, PhD, & Geoff D. C. Ball, PhD, RD

Nicholas D. Spence, Research Fellow, Harvard Medical School, Harvard University, Boston, MA.

Amanda S. Newton, Associate Professor, Department of Pediatrics, Faculty of Medicine & Dentistry, University of Alberta, Edmonton, Alberta, Canada.

Rachel A. Keaschuk, Psychologist, Pediatric Centre for Weight & Health, Stollery Children's Hospital, Alberta Health Services, Edmonton, Alberta, Canada.

Kathryn A. Ambler, Research Coordinator, Department of Pediatrics, Faculty of Medicine & Dentistry, University of Alberta, and Pediatric Centre for Weight & Health, Stollery Children's Hospital, Alberta Health Services, Edmonton, Alberta, Canada.

Mary M. Jetha, Associate Professor, Department of Pediatrics, Faculty of Medicine & Dentistry, University of Alberta, and Pediatric Centre for Weight & Health, Stollery Children's Hospital, Alberta Health Services, Edmonton, Alberta, Canada.

Nicholas L. Holt, Professor and Associate Dean, Faculty of Physical Education & Recreation, University of Alberta, Edmonton, Alberta, Canada.

Rhonda J. Rosychuk, Professor and Director of Biostatistics, Department of Pediatrics, Faculty of Medicine & Dentistry, University of Alberta, Edmonton, Alberta, Canada.

John C. Spence, Professor and Vice Dean, Faculty of Physical Education & Recreation, University of Alberta, Edmonton, Alberta, Canada.

Arya M. Sharma, Professor and Chair in Obesity Research and Management, Department of Medicine, Faculty of Medicine & Dentistry, University of Alberta, Edmonton, Alberta, Canada.

Geoff D. C. Ball, Professor and Director of the Pediatric Center for Weight and Health, Department of Pediatrics, Faculty of Medicine & Dentistry, University of Alberta, and Pediatric Centre for Weight & Health, Stollery Children's Hospital, Alberta Health Services, Edmonton, Alberta, Canada.

Amanda S. Newton, Rachel A. Keaschuk, and Geoff D. Ball led the development and refinement of the Parents as Agents of Change intervention. Following this research, they collaborated with the Canadian Obesity Network to disseminate the intervention to clinicians and administrators working in the field of pediatric weight management.

Conflicts of interest: None to report.

Correspondence: Geoff D. C. Ball, PhD, RD, 4-515 Edmonton Clinic Health Academy, University of Alberta, 11405-87th Avenue, Edmonton, AB, Canada; e-mail: [gdball@ualberta.ca](mailto:gdball@ualberta.ca).

0891-5245/\$36.00

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<http://dx.doi.org/10.1016/j.pedhc.2016.09.003>

## ABSTRACT

**Introduction:** Attrition in pediatric weight management is a substantial problem. This study examined factors associated with short- and long-term attrition from a lifestyle and behavioral intervention for parents of children with overweight or obesity.

**Method:** Fifty-two families with children ages 6 to 12 years old and body mass index at or above the 85th percentile participated in a randomized controlled trial focused on parents, comparing parent-based cognitive behavioral therapy with parent-based psychoeducation for pediatric weight management. We examined program attrition using two clinical phases of the intervention: short-term and long-term attrition, modeled using the general linear model. Predictors included intervention type, child/parent weight status, socio-demographic factors, and health of the family system.

**Results:** Higher self-assessed health of the family system was associated with lower short-term attrition; higher percentage of intervention sessions attended by parents was associated with lower long-term attrition.

**Discussion:** Different variables were significant in our short- and long-term models. Attrition might best be conceptualized based on short- and long-term phases of clinical, parent-based interventions for pediatric weight management. *J Pediatr Health Care.* (2016) ■, ■-■.

## KEY WORDS

Body mass index, cognitive therapy, family, follow-up studies

## INTRODUCTION

Approximately one third of children in the United States and Canada meet established criteria for overweight or obesity (Roberts, Shields, de Groh, Aziz, & Gilbert, 2012; Skinner, Perrin, & Skelton, 2016). There are several detrimental effects of excess weight that have been documented: increased cardiometabolic risks, such as high blood pressure, hyperinsulinemia, insulin resistance, prediabetes, and dyslipidemia (Kelly et al., 2013; Skinner, Perrin, Moss, & Skelton, 2015); psychosocial issues, like body image, anxiety, depression, executive functioning, weight bias, and stigmatization (Kelly et al., 2013; Must & Strauss, 1999; Puhl & Latner, 2007); and a number of comorbidities, including nonalcoholic fatty liver disease, obstructive sleep apnea, and musculoskeletal problems (Kelly et al., 2013; Must & Strauss, 1999).

Several reviews have highlighted the positive impact that interventions can have on the weight and health of children with obesity (Ho et al., 2012; Oude Luttikhuis et al., 1996; Whitlock, O'Connor, Williams, Beil, & Lutz, 2010), but a high degree of attrition limits the benefits that families can derive from care, leading to inefficient and ineffective use of clinical resources (e.g., personnel, time). Recent reviews have reported that 30% to 40% attrition from interventions for managing pediatric

obesity is commonplace, with up to 83% of families having discontinued care prematurely (Dhaliwal et al., 2014; Skelton & Beech, 2011). Numerous factors have been identified as potential drivers of attrition, across various levels of analysis (e.g., child, family, health services), including demographic, anthropometric (body mass index [BMI]), lifestyle, psychological, and logistical barriers, but there is little consensus in the literature (Dhaliwal et al., 2014; Skelton & Beech, 2011).

Although attrition in pediatric weight management is common, it remains poorly understood. The available literature is heterogeneous, relating to a number of factors, including the conceptualization and operationalization of attrition, assumed homogeneity of factors that drive attrition across different types and phases of interventions, inattention paid to intra- and interpersonal factors within the family unit and to the potential role of multidisciplinary teams using an integrated approach with a variety of health professionals, and a shortage of attrition research performed beyond the United States (Barlow, 2007; Dhaliwal et al., 2014; Skelton & Beech, 2011; Spear et al., 2007; Vos, Huisman, Houdijk, Pijl, & Wit, 2012). Despite the growing evidence in support of parent-based interventions for managing pediatric obesity (Faith et al., 2012), commonly referred to as Parents as Agents of Change (PAC) interventions, we are not aware of any studies that have examined predictors of attrition from interventions designed for parents exclusively in the management of pediatric obesity. This is an important gap in the literature, because the design and delivery of interventions for parents can differ from interventions for both parents and children, suggesting that the factors affecting dropout might also vary. With these issues in mind, we examined predictors of short- and long-term attrition using data from a recently completed randomized controlled trial (RCT) of two 16-week, PAC-based lifestyle and behavioral interventions for parents of children with overweight or obesity.

## METHOD

### Study Design

Families took part in an RCT that included parents and evaluated the relative merits of PAC-based cognitive behavioral therapy (CBT) versus PAC-based psychoeducation (PE) interventions for pediatric weight management (Ball et al., 2012). Both interventions consisted of 16 weekly group-based sessions. Although the content and lifestyle goals of the CBT and PE versions of our PAC intervention were the same, the way in which the interventions were delivered was different.

Although attrition in pediatric weight management is common, it remains poorly understood.

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