

RESEARCH ARTICLE

Communicating with Head Start Parents about Their Child's Weight Status

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Head Start provides children with healthy, nutritious meals, physical activity opportunities, and health screenings, all of which are critical components of combatting early childhood obesity. Communicating health screening information about a child's weight status to parents is one way to engage families in childhood obesity prevention efforts. The purpose of this article is to describe a multi-phase, iterative, and collaborative process that was used to develop and evaluate strategies for communicating with Head Start parents about their child's Body Mass Index. This article aims to inform other Head Start programs about acceptable, effective approaches that can be used to deliver height and weight screening results to families.

Keywords: obesity, Head Start, body mass index, health screening

Early childhood obesity is an important health concern for preschool children, and particularly those served by Head Start. Nationally, 22.8% of preschoolers are overweight or obese (Ogden, Carroll, Kit, & Flegal, 2014) and there is a higher prevalence among children from low-income families and some racial and ethnic groups (Cunningham, Kramer, & Narayn, 2014; Ogden et al., 2014; Whitaker & Orzol, 2006). For example, in the spring of kindergarten, 6.6% of children in the fifth (highest income) socioeconomic quintile were obese compared with 12.6% and 17.4% of children in the first and second (lowest income) socioeconomic quintiles, respectively

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(Cunningham et al., 2014). Additionally, the prevalence of obesity among non-Hispanic white kindergarten students was 9.3% compared to 13.7% among non-Hispanic black students and 18.8% among Hispanic students (Cunningham et al., 2014). Recent data demonstrate that being identified as overweight or obese in kindergarten is a key predictor of later obesity (Cunningham et al., 2014). Therefore, the promotion of healthy weight in early childhood is critical.

With its comprehensive focus on children's healthy physical, cognitive, and emotional development, Head Start is well positioned to engage in early childhood obesity prevention. Head Start programs are required to comply with performance standards that are directly relevant to obesity prevention efforts, including opportunities for children's physical development such as gross and fine motor skills, nutrition education for parents, and providing healthy meals and snacks (Head Start Program Performance Standards and Other Regulations, 2006). In a national survey of Head Start programs, most programs reported going beyond federal performance requirements in their practices and environments related to healthy eating and physical activity (Whitaker, Gooze, Hughes, & Finkelstein, 2009).

Height and weight screenings are potentially effective practices that Head Start programs can implement to promote healthy weight in early childhood (Davison, Jurkowski, Li, Kranz, & Lawson, 2013). Head Start programs are required to ensure that children are participating in a system of ongoing preventative health care (Head Start Program Performance Standards and Other Regulations, 2006). Although Head Start programs have 90 days after children enroll to obtain health information from children's health care providers, many programs choose to perform some health screenings on-site. These screenings can include measurement of children's height, weight, vision, and hearing. Providing on-site screenings prevents delays in obtaining the health data necessary to conduct the developmental assessments that must be completed for each child (Head Start Program Performance Standards and Other Regulations, 2006). Head Start's screenings also provide an opportunity to collect information that can be shared with parents about their child's health, including their child's weight status, which can range from underweight to obese.

Parental Perceptions of Young Children's Weight Status

As a number of studies have demonstrated, many parents of overweight and obese preschool children consider their children to be at a healthy weight (Baughcum, Chamberlin, Deeks, Powers, & Whitaker, 2000; Carnell, Edwards, Croker, Boniface, & Wardle, 2005; Hudson, Cherry, Ratcliffe, McClellan, 2009). For example, in Baughcum et al.'s (2000) study, only 29% of mothers with obese children believed that their child was obese. Additionally, culture and socio-economic status may influence the way in which parents view their children's body size. Killion, Hughes, Wendt, Pease, and Nicklas (2006) found that two-thirds of Hispanic and African-American mothers whose children were overweight or obese were satisfied with their children's body size or desired them to be heavier. In one study that focused on Hispanic mothers of young children, Crawford et al. (2004) found that participants did not perceive overweight in young children to be unhealthy as long as the child looked and felt good. These mothers also believed that young children would grow out of being overweight, and reported that parenting concerns (e.g., time, multiple children's needs, unsafe neighborhoods) competed with prioritizing nutrition and feeding issues (Crawford et al., 2004). In another study, low-income mothers with overweight preschoolers did not believe their children to be overweight as long

they were active and had a healthy diet (Jain et al., 2001). These mothers described their children as “thick” or “solid.” Additionally, some mothers believed that inherited tendencies to be overweight would prevail regardless of environmental factors (Jain et al., 2001). Together these findings demonstrate that many parents of young children who are overweight or obese do not view their child as being at an unhealthy weight; parents’ perceptions may also influence their level of concern and their beliefs about whether they can change their child’s weight status.

Parent Reactions to Receiving Weight Status Information

Parental reactions to learning from school professionals that their child is overweight or obese vary. Bennett Johnson, Pilkington, Lamp, He, and Deeb (2009) found that most parents (and ethnic-minority parents in particular) viewed school-based Body Mass Index (BMI) screening programs favorably and reported taking action in response to a BMI result that was outside of the normal range. Chomitz, Collins, Kim, Kramer, and McGowan (2003) found that a BMI report card was associated with increased parental awareness of the weight status of obese children and that most parents who read the materials requested annual screening information. In contrast, Grimmett, Croker, Carnell, and Wardle (2008) found mixed results regarding parents’ reactions. Although many parents viewed the information as helpful, some parents found it distressing, which highlights the importance of delivering this information in a sensitive manner, particularly for families with overweight children. Kubik, Fulkerson, Story, and Rieland (2006) found that parents of overweight children were more likely to report discomfort with weight status reporting than parents of children who were not overweight. Although there is evidence for parental support and appreciation for learning about their child’s weight status from their child’s school, this information is not always well-received.

Study Purpose

Head Start is a national program that provides children with healthy, nutritious meals, physical activity opportunities, and health screenings critical to combating early childhood obesity. Communicating health screening information about a child’s weight status to parents is one way to engage families in childhood obesity prevention efforts. The range of parental responses when hearing that their child is overweight or obese points to the importance of developing ways to sensitively but effectively inform parents of their child’s weight status. At present, effective strategies for such communication are not well developed. Drawing from the implementation science literature, parent understanding and acceptability of interventions are important factors to consider when designing interventions (Allen & Warzak, 2000; Kazdin, 1980; Perepletchikova & Kazdin, 2005; Reimers, Wacker, & Koepl, 1987; Solish & Perry, 2008). These theoretical constructs were used by Head Start staff to guide the refinement of BMI communication strategies and by university-based researchers to develop the focus group guide and the survey questions used in this mixed methods study. This study fills a gap in the literature by providing the field with a school-home communication tool that can be used to communicate children’s BMI screening information in an understandable and acceptable format.

METHODS

Study Design

A sequential mixed methods research design (Creswell, Klassen, Plano Clark, & Smith, 2011) was used in this study to revise and evaluate a letter communicating Head Start BMI screening results to parents. First, a series of parent focus groups was used to gather qualitative data regarding the understandability and acceptability of a draft of the BMI letter. Next, the BMI letters were revised, incorporating parent feedback, and the letters were sent out to families (see Appendix). Finally, quantitative, survey data were obtained from a large group of parents to evaluate their perceptions of the revised letter.

Participants and Setting

This study was conducted in a large city in the northeastern United States in collaboration with a community-based agency. Head Start parents ($N = 27$) participated in four focus groups about the BMI letter. The focus groups consisted of a convenience sample recruited via fliers and staff at four program sites. Parents were given a \$10 gift card for their participation. The 27 parents that participated in the focus groups had 28 children enrolled in Head Start. Child BMI screening data collected by Head Start staff indicated that 10.7% of the children ($n = 3$) whose parents participated in the focus groups were underweight, 60.7% ($n = 17$) were a healthy weight, 3.6% ($n = 1$) were overweight, and 17.9% ($n = 5$) were obese. After the BMI letters were revised using feedback from the focus groups, an updated version of the letter was sent out to parents of children at Head Start sites across the city. A total of 1,913 parents with children enrolled in the city-wide Head Start program were administered a survey which included questions about the updated letter; 887 parents returned completed surveys (46.4% response rate).

Procedures

Background. Each year the Head Start agency begins the process of communicating with parents about their child's BMI by raising awareness around healthy eating during home visits prior to and just after children's enrollment in Head Start. Nutrition Services staff measure children's height and weight twice a year. Following these measurements, a BMI letter is sent home to notify parents about their child's height, weight, BMI, and weight status. The letter is sent as part of a packet that includes resources to increase parents' awareness about healthy eating and physical activity and the role that they play in maintaining a healthy weight.

To improve the agency's efforts to address childhood obesity, including communicating with parents about their child's BMI screening results, an internal quality improvement working group was formed. The BMI Communication Working Group consisted of over 20 members, including Head Start staff from a variety of program sites and departments, and was facilitated by university-based researchers and the Head Start Nutrition Services Coordinator. The group identified several challenges with the existing BMI communication system and the role of the letter in conveying BMI information to parents, which included: (a) staff numbers and time are

limited and staff are not able to follow-up with parents individually about the contents of the BMI letter; (b) parents may not understand the BMI letter and may have added difficulty understanding it because of the emotions it can elicit; (c) parents may receive conflicting information from health professionals and Head Start staff about how concerned they should actually be if their child is identified as overweight or obese in the BMI letter and may be told that their child will “grow out of it [overweight or obesity]” or that “it’s not a big deal”; and (d) competing demands related to other issues the family is facing may make it challenging for parents to prioritize their child’s overweight or obesity status as a key health issue to address. The group acknowledged that parents often do not follow-up with Head Start staff if their child is identified in the BMI letter as overweight or obese.

Given the challenges identified by the working group, Head Start staff made a first round of revisions to the BMI letter to make it easier for parents to clearly and easily identify their child’s BMI and weight status, to understand what BMI is and how their child’s BMI and weight status were determined, and to encourage them to follow-up with Head Start Nutrition Services staff if their child’s weight status was not in the healthy range. Initial revisions to the BMI letter included the addition of a visual spectrum (called the “healthy weight bar”) (see Appendix) on which a child’s weight status could be marked, a detailed explanation of how BMI is calculated, a growth chart accompanied by an explanation of how to read the chart, and specific information about contacting a Head Start nutritionist for follow-up.

Parent Focus Groups. A series of four focus groups was conducted to gather parent feedback regarding the BMI communication letter after these initial revisions were made. The focus group guide was developed by university researchers to ascertain parents’ acceptability and understanding of the letter. Parents were given a sample letter of a child whose BMI fell into the overweight category. They were asked to read the letter and to imagine they were receiving this letter regarding their child. In addition to providing general feedback about the letter, parents were asked to provide specific feedback regarding their comprehension of the healthy weight bar, the concept of BMI, the BMI data and growth chart contained in the letter. They were also asked to comment on the tone of the letter, and how they might feel about and respond to receiving a letter indicating that their child was overweight. Finally, parents were asked to indicate how likely they would be to read the full letter in detail, if they would contact anyone regarding the letter after they received it, and if there could be anything changed in the letter to make it more likely that they would contact a professional following receipt of the letter.

The focus groups were facilitated by two of the authors and were transcribed by a professional transcriptionist. In order to help parents feel comfortable and to encourage them to provide their honest opinions, parents were informed that the information they provided would be anonymous. Emergent themes were analyzed by the third author in collaboration with the first and second authors. The theoretical constructs of acceptability and understandability were used to guide the qualitative analysis. Feedback from the focus groups was used by Head Start Nutrition Services staff to conduct a second round of revisions to the BMI communication letter, which was then sent out city-wide to all parents with children in the program.

Parent Survey

A four-item survey was administered to Head Start parents to assess their response to the final BMI letter after revisions based on the focus group data were incorporated. The survey was embedded into an annual parent survey administered by the Head Start agency. Because questions about the BMI letter were embedded into an existing survey, the number of questions that could be asked was limited. Initially, six questions were developed by the university-based researchers and were shared with Head Start Nutrition Services staff for their feedback. The final four questions were selected collaboratively by Head Start staff and the research team. Parents were asked: (1) to recall what the BMI letter they received indicated about their child's weight status, (2) whether they shared the information in the letter with other individuals (e.g., Head Start staff members, their physician, friends/family); (3) to report how helpful they thought the letter was; and (4) to describe how they felt about the information they received about their child's weight status. Parents completed paper copies of the survey in their preferred language. The survey was available in English, Spanish, Haitian-Creole, and Chinese-Mandarin.

RESULTS

Parent Focus Groups

The focus groups revealed a range of reactions (positive, negative, and mixed) among the 27 parent participants when discussing the letter as a whole. There were eight positive reactions. Some parents mentioned that the letter was helpful because it shared key information about a child's weight status, allowing parents to determine if they should be concerned about their child's weight. Several participants agreed that all of the pieces of the letter (i.e., healthy weight bar, BMI explanation, and growth chart) were useful in facilitating understanding. Although there were fewer negative reactions to the letter as a whole, some parents noted that receiving weight status information through the mail is difficult to understand and that they are aware of their child's weight status but do not know how to change it. Parents proposed adding the child's name to personalize the letter, making it more likely to stand out among the many papers children bring home from school to be read by parents.

Discussions of the individual components of the letter followed, and revealed that certain components of the letter elicited more negative reactions. Parents' comprehension and perceptions of the growth chart in the letter were mostly negative. There were 16 negative reactions to the growth chart, four neutral/mixed reactions, and four positive reactions. The majority of negative comments focused on the difficulty of interpreting the growth chart, even after reading the instructions on how to do so and reviewing the chart as a group. Parents reported that they preferred a simpler visual representation of their child's weight status. Examples of parent feedback regarding the growth chart included:

"It looks like a doctor's chart but it's like to the naked eye what is it saying? I don't get it."

"It's like I was just put into algebra class or geometry class and I'm trying to figure out... where's my child's place on this and it's like I'm not doing a math equation."

“The doctor would first show you where his height is plotted compared to other heights and where his age is plotted compared to other age, and then the third graph puts both together...but this is showing you the final graph it’s not giving you the other two. Maybe you shouldn’t use a graph.”

When asked how parents would hypothetically feel if they received a letter indicating that their child was overweight, 12 parents reported that they would have a positive reaction (i.e., they found the information helpful), eight parents reported that they would have a neutral or mixed reaction, and five reported that they would have a negative reaction. Of the five parents who indicated they would have negative reactions, two noted that they would be motivated to help their child achieve a healthy weight, despite it being hard to hear that their child was currently at an unhealthy weight. The letters seemed to achieve their purpose of informing parents about their child’s weight status and encouraging them to make changes when needed. The following are examples of parent reactions to the letter:

“I think [the letter is] helpful because if my child is underweight I want to fix it and if he is overweight I would want to fix it, just put him on the right track for his age, where he should be at.”

“I think at the moment I’d probably be like really? I didn’t know he was overweight and then [I] would...want to call up the school and find out, sit down with the people and find out exactly what’s going on because sometimes what...we think is not overweight, is overweight for them.”

“I am going to feel bad, but the first thing I am going to do is [ask], is it too late? If it’s not too late I am fine by that.”

There were also some interesting discussions in the focus groups about the extent to which parents feel they have agency in managing their child’s weight. The major place this came up followed the question, *“Is there anything we could do on this letter to make you more likely to speak to the nutritionist here? Is there anything that would make it seem friendlier or easier to contact her?”* The theme also emerged when parents were asked about their general feeling about the letter. Although 11 parents reported that their child’s weight was something they could change, seven parents reported that they felt their child’s weight was not something they had any ability to change, either because they felt the child would be naturally overweight or underweight regardless of their diet or activity level or because other family members (e.g., grandparents) controlled meals.

“You can’t really stop how they grow ‘cause they’re going to grow and they’re going to go up and down and it’s like you can’t control what they do at this point right now.”

“My daughter’s been overweight since she was a baby. She’s seven years old and she’s still overweight and she does all that...she’s very active. She play[s] football and basketball, all types of stuff.”

“[The children’s grandparents] would give them another plate because my mom faithfully does it and I’ll just watch them like really? She just had a plate and you’re about to give another and I can’t say nothing.”

“Grandmas let them [the children] do what they [the children] want to do.”

Parent focus group feedback was used to further revise the BMI letter (see Appendix). Revisions included adding the child’s name, removing the growth chart, adding more information about what to do if the child was identified as not being at a healthy weight, and adding a Frequently Asked Questions (FAQ) section. FAQs were derived from information that arose during the parent focus groups and included basic information about BMI, a note emphasizing the positive role that parents can play in helping their child achieve a healthy weight, and a warning about avoiding dieting in children.

Parent Questionnaire

When asked to recall their child’s weight status from the BMI letter they received previously in the mail, 68.6% of parents reported their child was a healthy weight, 3.3% reported their child was underweight, 8.1% reported their child was overweight, and 1.9% reported very overweight. An additional 18.6% of parents reported they did not know or did not answer the question. The majority of parents reported that in general the BMI letter was “very” (58.4%) or “somewhat” (24.8%) helpful. The majority of parents also reported that receiving specific information about their child’s weight status was “very” (59.2%) or “somewhat” (22%) helpful. Parents reported sharing information in the letter about their child’s weight status with a family member (30.7%), their child’s Head Start teacher (20%), their child’s pediatrician or nurse (18.9%), a WIC nutritionist (17.7%), their child’s Head Start nutritionist (13.7%), a friend (12.4%), their child’s Head Start family advocate (8.4%), someone else (5.3%), and someone else at Head Start (4.1%), while 23.3% reported that they did not share information in the letter with anyone.

DISCUSSION

This article describes a process undertaken by Head Start staff working in collaboration with university-based researchers to improve communication with parents about children’s BMI and weight status. The final BMI letter was revised twice using staff and parent feedback. First, Head Start staff provided feedback as part of an internal quality improvement process, informing the initial round of revisions to the letter. Then parents were engaged in providing feedback on the letter via a series of focus groups, which led to a second round of revisions. Last, a survey was utilized to ask parent about their perceptions of the final letter and how they utilized the information it contained.

Initial modifications to the letter added detailed information for parents to promote understanding about what BMI is and why certain BMI scores indicated that a child was overweight/obese. Despite Head Start staff feedback that this new information was easy to understand, parents reported that the growth chart was confusing. Instead, parents preferred a clear message that focused on whether their child was at a healthy weight, and if not, what they could do about it. Consistent with Jain et al.’s (2001) findings, some parents in our focus groups

reported that there was nothing they could do to change their child's weight status, either because they believed their child's weight was biologically pre-determined or because they felt they did not have agency in shaping their child's eating habits. These findings present an area of opportunity for Head Start, as promoting parent education around these issues could be beneficial. Based on parent focus group findings, the final BMI letter was revised to remove the growth chart, to present simpler information about what BMI is, to draw parents' attention to the letter by personalizing it through the inclusion of their child's name at the top, and to add two key pieces of information, one warning parents about the dangers of dieting in children and another emphasizing that parents can impact their child's weight by modifying their child's diet and physical activity levels.

After the BMI letters were revised for the second time and sent to Head Start parents, we were able to gather information about parents' perceptions of the letters and whether they shared the information in the letters with anyone. Consistent with previous research (Bennett Johnson et al., 2009), the majority of parents reported that it was helpful to receive the letter as a whole, and particularly to receive information about their child's weight status. Most parents reported sharing the information in the letter with someone. Interestingly, the individuals that parents shared the letter with most frequently were family members and their child's Head Start teacher, followed by their child's pediatrician/nurse and WIC or Head Start nutritionist. These results revealed that one in five parents reported sharing information with their child's Head Start teacher, which underscores the critical role of teachers as agents in the BMI communication process. Teacher "buy in" about the importance of healthy weight in preschoolers and teacher comfort and preparedness to respond to parents' questions and concerns about the weight status screening information when it is sent home are critical to consider when delivering this information to families.

Interestingly, only 10% of parents reported that the BMI letter they received indicated that their child was overweight or obese and nearly 20% of parents reported that they did not know what the letter said about their child's weight status (12.03%) or did not answer the question (6.58%). As screening data indicated that 34% of Head Start children in the city were overweight or obese during the 2013-2014 school year when this survey was administered (S. Carter, personal communication October 8, 2014), it appears that parents underreported this health issue in their children. Although this was consistent with the literature regarding parental underreporting of children's overweight status (Baughcum et al., 2000; Carnell et al., 2005; Hudson et al., 2009), we expected better awareness because the Head Start parents we surveyed had received a BMI letter specifically informing them of their child's weight status.

This study was limited in two main ways. First a convenience sample was used to assemble the focus groups. Focus group participants may have had a particular interest in their child's height and weight status. Although it was helpful to collect feedback on the BMI letter from parents who were interested in this topic, the parent views expressed in the focus groups may not have been representative. A second limitation was that the parent survey was anonymous, so we were unable to link measured weight status to parent reports. Future evaluations of the BMI letter should examine the extent to which the letter improves parental awareness of the weight status of children specifically identified in the screenings as overweight/obese.

Summary and Implications for Practice

Head Start can play an important role in the promotion of healthy weight in preschoolers because of its national reach and performance standards involving nutrition and nutrition education, healthy physical development, and parent engagement (Story, Kaphingst, & French, 2006). This article describes a sequential mixed method approach collaboratively undertaken by Head Start and university-based research partners to improve communication with parents about their child's weight status. The process started with an internal quality improvement working group; parent input was ascertained using focus groups and a survey. The process also involved external collaboration between Head Start and university and hospital-based community partners. Trust that was already established through the Head Start-university-academic medical center partnership was a key part of allowing this collaboration to happen (Agrawal et al., 2012). The process resulted in a revised BMI communication letter that was easier for parents to understand, and it was well-received. Communicating health screening information to parents about their child's weight status is one way to engage families in childhood obesity prevention efforts. This systematic approach to communication with parents is an ongoing process that must occur each year, as new children enroll and existing students grow. There is much more to be done in this area, however, to make significant and lasting changes in parents' beliefs and understanding about childhood overweight/obesity as an important health issue.

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Appendix Final BMI Letter



Dear Parent of _____:

My name is _____ and I am your Head Start Nutritionist. The Head Start Nutrition Services Department measures your child’s height and weight twice a year. I had the pleasure of measuring _____ today. One of our goals at Head Start is to ensure that we work with our families to help keep them healthy. We want all our children to be at a healthy weight, for their physical, social, and educational development. Our most recent measurements for your child are:

Date of Measurement: _____ **Height (inches):** _____ **Weight (lbs):** _____

Body Mass Index (BMI): _____ **BMI Percentile:** _____

Based on these measurements, your child falls within the following weight category:


Underweight	Healthy weight	Overweight	Very Overweight
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- Underweight; the 5th percentile or below
- Healthy weight; 6th percentile up to the 84th percentile
- Unhealthy weight, (overweight); 85th to the 94th percentile
- Unhealthy weight, (very overweight); the 95th percentile or above


Please note that this is a screening and not a diagnosis. If you have questions or concerns about this result, please contact your Head Start Nutritionist.

What should I do if my child is not at a healthy weight?

As your Head Start Nutritionist, I am here to answer any questions you may have. Please give me a call at the number below. You can also speak with your pediatrician or your WIC nutritionist. However, please know that I am happy to help and more than willing to answer any questions you may have!



Name of Program Nutritionist
Phone number _____



Frequently Asked Questions

What are Body Mass Index (BMI) and BMI Percentile?

Body Mass Index (BMI) is calculated using a child’s weight and height and estimates how much body fat the child has. *For children, the BMI number alone cannot tell you whether a child is at a healthy weight.* The BMI must be compared to the BMIs of other children of the same age and gender, which gives you a BMI percentile.

Body Mass Index (BMI) Percentile tells you how your child’s weight compares to other children of the same age and gender. For example, a 3 year old girl in the 25th percentile is heavier than 25 out of 100 girls her age. A four year old boy in the 90th percentile is heavier than 90 out of 100 boys his age.

If my child is not at a healthy weight, is there anything I can do?

Yes! Children’s weight is determined in large part by what they eat and how active they are. As a parent, you can make changes in both of these areas. Preschool is the perfect time to make changes that will last a lifetime.

If my child is overweight, should I put him or her on a diet?

No! Placing children on a diet without a doctor’s or nutritionist’s guidance can be dangerous. Speak to your Head Start nutritionist or your doctor for more information about how to help your child reach a healthy weight.