

Is It Just A Measurement? Collecting, Tracking, and Reporting BMI in Head Start

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Introduction

Early childhood obesity is a concern for **Head Start [HS]**, the largest federally funded childhood education center.¹⁻² HS Performance Standards require programs to conduct health/nutrition assessments to identify child needs.³ BMI screenings are conducted as part of these assessments and prevalence of overweight/obesity are reported on the Program Information Report [PIR].⁴ Limited research has been conducted around HS BMI screening.⁵ **Objective:** This study explored the processes HS programs in Ohio (OH) and North Carolina (NC) used to measure, track, and report children's weight status.

Methods

A **Phenomenological, qualitative research** design with structured telephone **interviews** was utilized. HS programs were identified in OH (n= 48) and NC (n=52). **HS Health/nutrition managers [HNMs]** to participate in interviews from July 2019 to March 2020. The interview contained 12 open-ended questions with additional probes. A twenty-one item demographic questionnaire was included. Review of the interview questions was used for member checking. Interviews were conducted until data saturation.

Analysis: Interviews were audio-recorded and transcribed verbatim. Transcripts were independently reviewed for understanding; significant statements and experiences relevant to the phenomena were identified, grouped, described, and assigned a code. Codes and descriptions were compared across the two states, agreed upon, and organized into themes. Saturation was reached at N = 13 participants .

Results

Twenty-eight (28) Health and/or Nutrition Managers (HNM) completed interviews (OH-13, NC-15) Table 1 contains HNM demographics. Themes: *Perceptions of BMI; Personnel, Equipment, and Training for Measurements; Usefulness of Software for Classifying and Reporting BMI and Referrals; Professional Development Opportunities; and Resource, Training and Policy Needs to Support BMI Practices.* Most programs obtain BMI measurements on-site by teachers and utilize software to classify/report BMI. There is limited staff and availability of BMI/obesity-specific training opportunities and time to implement internal training on growth assessments, which can impact accuracy of measurements. Caregivers follow-through on the referrals for children with overweight/obesity was perceived by HNM to be low. Some HS staff indicated apprehension around conveying BMI screening results to caregivers.

Discussion

A need for more structured guidance, training, and process standardization for accurate measurements, reporting, and referral follow-up was identified. Communication strategies/training are needed. More research is needed around parent perception of the referral process and parent reactions to BMI communication strategies.

Background

BMI screenings are often conducted as part of Head Start's health/nutrition assessments. Limited research has been conducted on the processes used to measure, track, and report children's weight status.

Findings

HS Health/Nutrition Managers identified a need for more structured guidance, formal training on measurement best-practices, and process standardization for accurate BMI measurements, reporting, and referral follow-up.

They also identified a need for communication training and strategies when discussing child BMI results with families.



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Table 1. Demographic characteristics of 28 Head Start Health/Nutrition Managers participating in semi-structured interviews related to measuring and reporting BMI.

Characteristic	Data
Age*, y, mean± SD (range)	47.7± 12.4 (25-69)
Gender, n (%) Female	27(96.4)
Ethnicity, n (%) Non-Hispanic	27 (96.4)
Race, n (%)	
White	21 (75.0)
African American/Black	4 (14.3)
Asian/Mixed/Other	3 (10.7)
Education, n (%)	
High School or GED	1 (3.6)
Associate's Degree	7 (25.0)
Bachelor's Degree	11 (39.3)
Master's Degree	9 (32.1)
State Counties represented, n (% total counties)	
Ohio	23 (26.1)
North Carolina	33 (33.0)
Number of Children served, m± SD (range)	626.9±654.7 (27-2551)
Number of years at Current HS, m± SD (range)	13.4 ± 8.8 (1–28)

*Missing (n=27)

Table 2. Themes and Supporting Quotes from Ohio and North Carolina Head Start Health and Nutrition Managers' Perceptions around the Measurement and Reporting of BMI.

Themes/	Ohio Quotes	North Carolina Quotes
Perceptions of BMI	"It can be a little misleading. I don't think it necessarily means they're healthy or unhealthy." [#3]	"I don't feel like it truly paints a good picture of the child. . . They may be a little more solid, so we have really to not just look at the numbers but look at the child." [#02]
Process of Measuring BMI		
Individuals Involved in Measuring BMI	"The teachers do it. We also use nurses, students from some of the local programs that they come and do the screenings as well for us." [#4]	"The social workers, teachers, and myself; it is sort of a collaborative effort. We just pick a day and go line them all up and weigh them and measure them." [#01]
Equipment/resources for Measurement	"We have a couple different ones, one's an electronic scale that just has the weight, but then we also use . . . the scale that's got the height thing." [#2]	"We'll, we have a height board and we use digital scales that we can take with us to the various centers that we have and weigh and measure the children that way." [#02]
Internal training on BMI measurement	"We train the teachers when we hire them on how to do it. . . We [HNM] do the orientation part with them (teachers), which we show them how to use the equipment that is needed." [#4]	"[Staff training also referred to pre-service training] is required once a year. And then if one classroom has an abundance of children that are overweight or obese, then we would have them do a little bit more training. Just so they can have more information." [#06]
Usefulness of Software for Classifying, Tracking, and Reporting BMI and Referrals		
Software for Classifying, Tracking, Reporting weight status	"So we use a system called ChildPlus . . . I can run reports showing where that child is falling. You enter height, weight, and it calculates the BMI for you." [#1]	"We also have the ability to pull a growth chart for each child through ChildPlus- that will allow you to see the weights that have been reported for the children from the time that they were enrolled until the present." [#14]
Referrals & Follow-up Communication	"We have to make referrals to a WIC, but most of the children are already on WIC and we make referrals to their physicians, but mainly to WIC. But we do, by way of the letters, we offer that support to the parents and we leave it up to them if they want to pursue it." [#7]	"If a child is overweight . . . I follow up with the family to see if they want to do some kind of nutrition consultation. I provide information on healthy eating through a telephone call, and follow with a letter and nutrition information. Then depending on their desire, I'd meet with the parents to try to develop healthier eating habits." [#09]
Resource, Training, & Policy Needs to Support BMI Practices	"We have a process of sending home all of the growth assessments that we do, the results of them. And we just make it very medical terms, so that parents don't get upset." [#8]	In March we send out the letter to our parents telling them. "They when they started your child was in this percentile, now your child is in this percentile." [#03]
	"So having more staff that really have the education levels and experiences related to health and nutrition could perhaps have an impact on our program." [#10]	"I would like more time, in all honesty, to be able to do things improve the process of training the staff on childhood obesity and give them a lot of specific examples." [#12]