Innovative Tools Help Counselors Discuss Childhood Obesity with Parents

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Abstract

Background: Childhood overweight and obesity pose potential health risks for many children under the age of 5 years. Women, Infants, and Children (WIC) nutritionists are in a unique position to help reduce this problem because of their frequent counseling contacts with clients during certification visits. Therefore, four new tools to facilitate nutritional counseling of parents of overweight children during certifications were developed and systematically evaluated.

Methods: The Nutrition and Activity Self-History (NASH) form, Report Card/Action Plan (ReCAP), Talking Tips, and Healthy Weight Poster were evaluated by WIC nutritionists via an online survey. Anchors on the Likert scale were 0 for Strongly Disagree to 6 for Strongly Agree. Four regional focus groups were also conducted. Data were analyzed descriptively.

Results: The response rate on the survey was 83% ($n=63$). Focus groups were comprised of staff that volunteered to participate ($n=34$). The NASH form, which replaces a food frequency questionnaire for identifying nutrition risk, had a mean rating of 5.20 as “Helpful when counseling about weight.” The ReCAP, Talking Tips, and Healthy Weight Poster achieved mean ratings of 5.70, 4.75, and 5.30, respectively, in this category. Focus group responses were very positive about the usefulness of the ReCAP and Healthy Weight Poster to visually convey the concept of BMI percentile for age using a green, yellow, and red color-coded “traffic light” approach to showing healthy versus unhealthy BMI values.

Conclusions: WIC programs and other pediatric health care settings may want to consider adopting these innovative tools to better serve their clients and address pediatric overweight in the populations they serve.

Introduction

In the United States, rates of pediatric obesity are high, with 31.8% of children 2–19 years of age either overweight or obese.¹ To help reduce this problem, healthcare professionals are actively seeking ways to effectively communicate to parents the weight status of children who are overweight or obese and the associated health risks their children may face.

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is a federal program that provides nutrition counseling and supplemental food to children from low-income families who are at nutritional risk, including risk for becoming overweight. WIC nutritionists interview mothers and children as part of the WIC certification and recertification process, which occurs every 6 months or more frequently if deemed necessary due

to higher health risk. During these interviews, many WIC nutritionists ask parents to complete a food frequency questionnaire (FFQ) to assess dietary intake of the child. The topic for the brief counseling session is usually determined by risk factors noted by the nutritionist as he or she reviews the FFQ or medical data. This is an opportunity to provide counseling that can help prevent and monitor pediatric overweight at an early stage in a child’s development. However, prior studies have identified a number of challenges faced by WIC staff as they provide counseling about pediatric overweight-related topics.^{2,3} These challenges include differing perceptions of weight status that are related to the WIC clients’ culture and ethnicity, parents who do not acknowledge the health risks of their overweight children, and WIC staff that do not want to offend parents by discussing a child’s weight.

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Over the past 3 years, the New Mexico WIC Program participated in a United States Department of Agriculture Food and Nutrition Service funded project called Get Healthy Together: WIC Staff and Clients Moving toward Healthier Lifestyles (GHT). As part of this project, four tools were developed or adapted from previous studies to assist WIC staff in assessment and counseling of WIC clients.^{4,5} This article uses data from the New Mexico GHT project to document staff tool use and evaluate the acceptance and perceived usefulness of the innovative counseling tools.

Methods

Counseling Tools

The counseling tools evaluated included the Nutrition and Activity Self-History form (NASH), the Report Card/Action Plan (ReCAP), Talking Tips, and a Healthy Weight education poster. The NASH form was developed to assess the child's medical history, family medical history, food choices, meal patterns, nutrition habits, physical activity and sedentary behaviors, and concerns of the parents or guardians of children during the WIC certification interview. Previously, the NASH form was shown to be useful for clinicians in primary care facilities to improve management of pediatric overweight.⁴⁻⁶ In the WIC setting, the NASH form presents the WIC nutritionist with an overview of a client's dietary patterns, self-reported positive behaviors, and possible risk factors for pediatric overweight. This form also provides an opening to begin discussing behavior change.⁵ The NASH was developed to replace food frequency questionnaires that are commonly used to identify nutritional risk in WIC settings.

The ReCAP is a modification of a previously developed prescription tool called the "Rx Pad," which served as a behavioral contract between the parent/guardian, the child, and the clinician.⁵ The ReCAP is a small, double-sided card that provides a visual summary of the child's health status. The front side titled "Your Child's Health Report Card" contains health data, including height, weight, hemoglobin level (current and previous values), and BMI percentile-for-age (current and previous values). Using a "traffic light" approach, there is a horizontal color-coded bar that graphically shows the spectrum of BMI percentile for age values. Values from the 5th up to the 85th percentile are in a green section that the nutritionist will describe as "healthy range," values below the 5th and between the 85th and 94th percentile-for-age are in a yellow section. The yellow section indicates a caution zone, meaning the child is not in a "healthy" weight zone. This requires clinical judgment of the WIC nutritionist to help the parent interpret the health consequences of the child's BMI, whether it is addressing failure to thrive or obesity. Values above the 95th BMI-for-age percentile fall in the red section, which indicates greater health risk. The nutritionist places a dot in the appropriate color range corresponding to the child's current BMI percentile value and visually shows the parent

how the distance away from the healthy green range represents increased health risks. The back side titled "Action Plan" contains a checklist for possible referrals, behavioral goal options, follow-up appointment date, and a signature line for parents to sign the "contract" about the agreed upon goal for improving the child's health. The parents or guardians keep the ReCAP to remind them of the health measures discussed during the appointment (BMI and hemoglobin), the agreed upon goal, and the follow up appointment.

The Talking Tips tool is a visual prompt for WIC clients. It contains colorful images of seven behaviors associated with achieving healthy body weight and/or better health. Targeted behaviors include choosing healthy beverages, enjoying family meals, watching less television, offering child-sized portions, family physical activity, eating fruits and vegetables, and eating a healthy breakfast. When time is limited or a client is reluctant to identify a goal, the Talking Tips tool allows the client to point to a picture showing a topic that is of interest to them to help facilitate discussion. The WIC nutritionist can use the evidence-based recommendations for each behavior written on the backside of the tool as "talking tips" to assist the client with goal setting on the behavior of interest.

The Healthy Weight Poster is a tool used to visually communicate the concept of healthy weight in preschool aged children. The poster displays 2 boys approximately the same age, one a healthy weight and the other an obese toddler who has experienced accelerated growth. Similar to the ReCAP, the poster also has a horizontal bar of green, yellow, and red to help convey the concept of increasing health risk as the child's BMI increases into the yellow and red zones. The phrase "Is your child's weight healthy? Ask your WIC nutritionist" is prominently displayed. Typically, the Healthy Weight poster is displayed in the WIC clinic waiting area and the area where the scale is located so that it is easily visible to visiting WIC participants.

These tools were introduced during a 6-hour training session that included an update on the health implications of childhood obesity and a refresher on charting protocols. Trainings were provided regionally across the state and all staff attended training before the tools were implemented in the clinics.

Procedures

An online survey consisting of open- and close-ended questions was developed by the GHT research team. The close-ended questions used a Likert scale of 1 to 6, with 6 being the most positive; the open-ended questions included comment boxes. The survey was sent to all WIC nutritionists and eligibility interviewers in New Mexico ($n = 76$) at the conclusion of the study period. The survey took less than 15 minutes to complete and WIC staff were given 2 weeks to complete it. Reminder e-mails were sent out four times to nonresponders to increase the response rate. Participants' identification was removed from the data. In addition, volunteers were solicited online for four regional

focus groups to provide additional feedback. The focus groups were comprised of all staff that volunteered to participate ($n=34$). The University of New Mexico Institutional Review Board approved analysis of the data that had been collected by New Mexico WIC as part of program evaluation; survey respondents and focus group participants provided written informed consent.

The survey results were analyzed with SPSS (SPSS Inc. Chicago, Ill, version 14.0). Descriptive statistics were calculated for all Likert scale answers. Answers to open-ended questions were categorized into common themes. Focus groups were recorded and transcribed verbatim. Themes were identified using manual coding by a single reviewer.

Results

Of the 76 staff members receiving the survey, 63 (83%) responded to the survey. Some questions were not answered by every respondent; the range in number of responses for each question was 51–63. The majority of the participants (86%) indicated they were nutritionists and 14% were either eligibility interviewers or managers. Of the participants who completed the survey, 57% self-identified as only Hispanic, 27% as white (non-Hispanic), 8% as mixed Hispanic and American Indian, 2% as mixed Hispanic and white, 2% as African American, and 4% identified themselves as “other.” All of the participants indicated they were fluent in English and 49% were also fluent in Spanish. Ninety-four percent of the participants were female; 73% of participants had a bachelor’s degree, and 22% held graduate degrees. The average length of employment at WIC or the New Mexico Department of Health was 8 years and 6 months for the respondents.

The NASH form was used at each certification by 55 out of 56 respondents to this question (98.2%), whereas the ReCAP, Talking Tips, and Healthy Weight Poster were routinely used by 96.4%, 55.4%, and 73.2% of the coun-

selors, respectively. The majority of respondents gave the tools very positive ratings in all areas of counseling clients and helping clients set weight-related behavior change goals. Table 1 shows the staff ratings of the four tools.

When compared to a food frequency questionnaire, 94.6% reported the NASH form was more helpful for determining nutritional risk, and 92.8% felt it was easier to use. Typical responses to the open-ended question on the survey were, “The tool is a very easy, quick and useful tool to assess information about health and nutrition.” Focus group comments about the NASH form were similarly positive as shown by the following quotes: “It is much easier for parents to fill out and it gives so much more information compared to a food frequency questionnaire.” and “There is always something on the NASH form that can be used to start a discussion with the parent.”

Typical survey responses to the open-ended questions about the ReCAP were “The report cards are a tangible tool that recaps what we talked about in the nutrition counseling” and “Clients have said they used the report card as a tool to talk about family change/habits with members of the family that were not at the appointment.” Nutritionists in the focus groups were enthusiastic about using the ReCAP so parents could see where their child’s BMI percentile is on the continuum in relation to the healthy range. There were many quotes similar to “They (parents) can interpret by the location of the child’s BMI percentile on the color-coded bar that their child is in the overweight range and that this is unhealthy without me having to tell them something they do not want to hear.” Focus group participants also reported that parents liked having the child’s height and weight on the form that they could take home.

In response to open-ended questions about the Talking Tips, the majority of respondents said they used it as a conversation starter, especially when the client seemed uninterested and/or quiet. Typical responses were similar to the following: “It is an excellent tool because it allows

Table 1. Mean (SD) Staff Rating of Counseling Tools on a 6-Point Scale (6 = Strongly Agree, 1 = Strongly Disagree)

	Nutrition and Activity Self-History Form (NASH)	Report Card/Action Plan (ReCAP)	Talking Tips	Healthy Weight Poster
Helpful when counseling about weight	5.20 (0.93)	5.70 (0.54)	4.75 (0.98)	5.30 (0.96)
Helpful when counseling about diet	5.41 (0.95)	4.83 (1.20)	5.03 (0.86)	4.86 (1.17)
Helpful when counseling about physical activity	5.48 (0.69)	4.70 (1.17)	4.97 (0.90)	4.91 (1.16)
Helpful when setting goals related to weight	5.04 (0.88)	5.26 (0.85)	4.72 (1.00)	5.16 (1.10)
Helpful when setting goals related to diet	5.39 (0.71)	5.15 (0.87)	4.95 (1.00)	5.02 (1.12)
Helpful when setting goals related to physical activity	5.25 (0.81)	5.15 (0.87)	4.88 (0.99)	5.02 (1.09)

parents to think about the environmental factors that are involved in healthy eating” and “It is a good visual tool.” During the focus groups, the Talking Tips tool was reported to be useful when no concerns had been identified during the certification visit and parents were difficult to engage in conversation.

Survey respondents indicated in the open-ended questions that they used the Healthy Weight Poster as a visual aid to explain BMI and discuss the relationship between weight, BMI, and growth. The Healthy Weight Poster was also praised in the focus groups as an excellent visual tool that parents noticed and then started a conversation about the child’s weight with the nutritionist. Although all focus group participants reported how helpful the poster was in beginning a dialog about healthy weight with clients, a few expressed a desire to have more information about the health risks of being overweight on a handout that could be given to parents during the discussion.

Discussion

The New Mexico WIC GHT project provided new tools to assist health professionals as they counsel parents and caregivers of overweight children. After more than 3 years in use, a survey of WIC staff indicated widespread positive ratings of the various tools used during counseling sessions with parents. In particular, the ReCAP was rated very highly when counseling about weight. The average rating of 5.7 (on a 6-point scale) was the highest of the new tools introduced specifically to assist nutritionists with their counseling about childhood obesity. This tool was also rated the highest as helpful when setting goals related to weight with the client. Nutritionists said the feature most useful on the ReCAP was showing parents where their child’s BMI percentile-for-age was on a visual, color-coded spectrum. This allows the parent to view their child’s weight status without the counselor having to verbally describe the child as overweight or use terms such as “obese,” which parents may perceive as stigmatizing.⁷ Nutritionists were trained to use motivational interviewing techniques and ask the parent his or her reaction to the location of their child’s BMI percentile for age on the spectrum. This opened the discussion in a manner that was perceived as less judgmental by the nutritionists and allowed the parent to describe his or her feelings in a non-threatening context. It also ensured that the discussion would be family-centered and based on the family member’s reaction and not on the counselor’s priorities. This type of approach not only allows open and honest communication between patients, their families, and health care staff, but also recognizes that each child and family is unique.

Numerous studies have reported that parents of overweight children underestimate their child’s weight status, which is a barrier to implementing healthier lifestyle choices.^{8–10} One way to inform parents of the child’s weight status is the use of a report card. The use of a BMI

report card is controversial and research to date has not proven its efficacy in changing weight-related behaviors.^{11–13} However, one study reported that the use of a personalized weight and fitness health report card intervention did significantly increase awareness and help parents of overweight children to correctly identify their child’s weight status.¹³ To date, there has not been any information published about the use of BMI report cards for preschool children. Parents in the GHT study were receptive to the ReCAP, and nutritionists reported that parents were receptive to a discussion about weight when the ReCAP was used as a visual aid. One nutritionist at a focus group said “I haven’t had a parent upset with a BMI because I’ll show them the ReCAP and show them the yellow or red area where their child’s BMI percentile falls and compare that to the green zone where a healthy BMI is.” Nutritionists are then able to use motivational interviewing skills to guide the counseling session toward setting small goals to help reduce the health risks associated with childhood overweight.

The NASH form was also highly rated as helpful during counseling sessions. This form facilitates a quick review of health, nutrition, and environmental factors and provides an opportunity to discuss behavior change. Previously, a food frequency questionnaire was used to give the nutritionist insight into a typical diet for the client and assess possible nutritional risk. Despite being widely used, the limitations of food frequency questionnaires are numerous, including measurement error.^{14,15} In the WIC setting, where the exact nutrient intake is less important than a broad knowledge of usual intake, the food frequency questionnaire usually required several minutes of the clients’ time to complete, and staff reported many clients carelessly filling out the questionnaire, leading to low confidence in the accuracy of the results. Compared to a food frequency questionnaire, the NASH form was reported as being easier to use as well as more helpful in determining nutrition risk. The NASH form also takes less time to complete by the client and it provides information about physical activity. The last section of the NASH form assesses readiness to change by asking about the parents’ concerns about their own weight or their child’s weight, as well as concerns about nutrition and activity habits and financial resources. Counselors report that reviewing the NASH with parents leads right into a discussion of any concerns identified in the last section of the form, ensuring the session will be family-centered. The very positive ratings of the NASH by the staff, especially when counseling about diet and physical activity, show the usefulness of this tool in a time-limited setting. Additional investigation is warranted on the use of the NASH form to replace a food frequency questionnaire in similar settings.

The colorful Healthy Weight Poster, showing 2 boys of similar age dressed identically with one in a healthy weight category and one in the obese category, is reported to be a great conversation starter. Parents can see the poster in the waiting room and begin to think about how their child

compares to these 2 boys. Many clinics have placed the poster near the scales where the children are weighed, thus giving parents a chance to view the poster and ask about their child's weight right at the time the measurement is taken. Although parents sometimes comment on the smaller boy as being "too thin," this gives the counselor a chance to talk about his BMI in the 60th percentile-for-age being healthy, and that the image is appropriate for a healthy child. Messages such as this may help to persuade parents that "bigger is not better" for their child's health. The poster had high ratings from the staff in all areas assessed, but was rated highest for being helpful when counseling about weight and when setting goals related to weight.

The Talking Tips was identified as a helpful visual aid during counseling if a parent had not expressed any concerns and the counselor was not able to engage the parent in a client-centered discussion based on review of the NASH form or ReCAP. Although Talking Tips was not used as often as the NASH and ReCAP, participants rated it very positively as being helpful at setting goals related to diet, physical activity, and weight.

The very high reported use of each tool at certification visits indicates the staff preference for these new tools. The tools previously used, such as food frequency questionnaire and handouts on portion control and meal planning, were still available, but nutritionists chose to use the new tools in their counseling sessions instead, indicating more satisfaction with the new tools.

For a counseling session to be effective, parents need to be receptive to discussion about their child's weight status. Previously, WIC nutritionists had noted that many parents were not interested in this discussion when the subject of their child's weight was introduced.^{2,3} Although not designed specifically to elicit input about the new tools, results of GHT client satisfaction surveys during the course of the project showed consistent positive ratings of the WIC staff and counseling practices throughout the GHT program. In addition, analysis of client satisfaction while the tools were only being used in half of the state's clinics indicated that client satisfaction was higher with care provided by nutritionists in clinics where the new tools were used compared to clinics where the tools had not been introduced yet. This effect was more pronounced when the client's child had a low or high BMI.¹⁶

Despite the overwhelmingly positive response of the WIC staff to the new tools, there were a number of limitations to this study. The sample size of the study was small; the online survey was sent to 76 WIC staff members with 63 responding to the survey. Although a larger sample size would have been desirable, this was not possible because the sample represented the entire pool of WIC nutritionists and eligibility interviewers in New Mexico except for the two clinics used for pilot testing. Another limitation of GHT was the inability to assess WIC client outcomes, including impact on weight status and influence of staff counseling on specific pediatric overweight-related behaviors in families due to the relatively short duration of

the project. An important next step will be to collect objective outcome data such as change in weight status, goals kept, and changes in dietary and physical activity practices when these tools are used in the counseling sessions. It will also be important to solicit client satisfaction specific to the use of the new tools.

Conclusion

Early intervention is an important mechanism for addressing and preventing pediatric overweight. The GHT tools used in this study in New Mexico have been shown to be a valuable component of the WIC counseling session with children under the age of 5 years. One nutritionist said "Previously it was difficult to bring up the obesity issue. I did not feel I had the appropriate tools for discussion." With the introduction of the NASH form, the Report Card/Action Plan, Healthy Weight Poster and Talking Tips, "I now have tools that help me give parents a visual about what I am talking about" and "Rather than lecturing on what we know, usually the client will ask what they can do" to improve the child's weight status.

WIC programs and other pediatric health care settings in other states may want to consider adopting the GHT tools to better serve their clients and address pediatric overweight in the populations they serve. The tools are available in English and Spanish for free download at www.nal.usda.gov/wicworks/Sharing_Center/gallery/healthytogether.html

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Author Disclosure Statement

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