

Pairing Motivational Interviewing with a Nutrition and Physical Activity Assessment and Counseling Tool in Pediatric Clinical Practice: A Pilot Study

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Abstract

Background: Recommendations to screen and counsel for lifestyle behaviors can be challenging to implement during well-child visits in the primary care setting. A practice intervention was piloted using the Family Nutrition and Physical Activity (FNPA) Screening Tool paired with a motivational interviewing (MI)-based counseling tool during well-child visits. Acceptability and feasibility of this intervention were assessed. Its impact on parent-reported obesigenic behavior change and provider efficacy in lifestyle counseling were also examined.

Methods: This was an observational study in a pediatric primary care office. During well-child visits of 100 patients (ages 4–16 years), the FNPA tool was implemented and providers counseled patients in an MI-consistent manner based on its results. Duration of implementation, patient satisfaction of the intervention, and success of stated lifestyle goals were measured. Provider self-efficacy and acceptability were also surveyed.

Results: The FNPA assessment was efficient to administer, requiring minutes to complete and score. Patient acceptability was high, ranging from 4.0 to 4.8 on a 5-point scale. Provider acceptability was good, with the exception of duration of counseling; self-efficacy in assessing patient “readiness for change” was improved. Parent-reported success of primary lifestyle goal was 68% at 1 month and 46% at 6 months.

Conclusions: The FNPA assessment with an MI-based counseling tool shows promise as an approach to identify and address obesigenic behaviors during pediatric well-child visits. It has the potential to improve provider efficacy in obesity prevention and also influence patient health behaviors, which can possibly impact childhood excessive weight gain. After refinement, this practice intervention will be used in a larger trial.

Introduction

Pediatric obesity is a significant public health concern given that the prevalence of obesity and overweight is already at 17% and 34%, respectively, among

children and adolescents.¹ We recognize that many factors contribute to excess weight gain in childhood. These include diet, physical activity (PA), physical environment, access to healthcare, genetic dispositions, and comorbidities.^{2,3} There is potential for primary care providers to

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prevent excess weight gain and manage youth with obesity, because multiple health supervision visits provide opportunities to influence lifestyle behaviors, which contribute to the development of childhood obesity. Further, helping families understand that abnormally high weight can be a health problem is associated with a large likelihood of making a health behavior change.⁴ The majority of patients want their provider to help with weight issues and feel that they can be helpful and are comfortable discussing this topic⁵; specifically, patient-centered conversations have potential to change health behaviors of families.⁶⁻⁸ Moreover, multiple disciplines and organizations, including the American Academy of Pediatrics, recommend dietary and activity assessments followed by counseling for the prevention and management of excessive weight gain in children in the primary care setting.⁹

Despite concern among physicians about childhood obesity as a health problem¹⁰⁻¹² and clinical recommendations regarding prevention and management of childhood obesity, many primary healthcare providers struggle to follow these guidelines.^{5,12-15} Providers under-recognize excessive weight in their practices, because over 50% do not measure BMI^{5,14,16,17} and 58% seldom track their patients over time for weight-related behaviors.¹⁸ Though many ask general questions about nutrition and PA, few (8% or less) use standardized questionnaires and 65% assess these domains more specifically.¹⁸ Providers feel that time constraints impede implementation of guidelines and¹⁹ that their counseling may be ineffective.^{15,20} Specifically, providers may feel they have inadequate skills in behavior management and parenting techniques to address family conflicts^{12,16} and may feel uncomfortable with counseling patients about weight issues.^{13,16,21,22} Self-efficacy in obesity management is also reduced by a lack of educational materials, support staff, and non-MD staff reimbursement.²⁰ Clinician efficacy may be further diminished by his or her perception that families do not recognize obesity, that patients are not motivated, and parents are not sufficiently involved.^{12,16,23}

Motivational interviewing (MI) is an effective, patient-centered approach to behavior change²⁴⁻²⁶ and represents a collaborative, rather than a prescriptive, style of dialog designed to elicit change. Pediatric literature, though limited, yields promising support in the implementation of MI in pediatric weight management^{6,27} and its use is advocated in pediatric practice guidelines.²⁸ It is an approach that can improve provider efficacy in lifestyle counseling, especially in the face of perceived family resistance.^{7,29} MI can be most useful when paired with healthcare education or proposed health behavior goal setting.³⁰

Validated dietary and activity screening tools have been recommended for use in the pediatric primary care setting to aid in gathering information for the purposes of obesity prevention counseling. However, the effects of screening tool implementation have not been widely reported in the literature.^{31,32} The Family Nutrition and Physical Activity (FNPA) assessment tool was developed to assess obesigenic behaviors in children regardless of current weight

status and has much potential for use in pediatric primary care, but has not yet been studied in this setting. It is a 20-question survey that was tested in a cross-sectional study among parents of first-grade students with good reliability and validity.^{33,34}

We developed and pilot tested a practice-based intervention that involves implementing the use of the FNPA assessment, a study-developed coaching tool and provider training in MI. This intervention was used during all health supervision visits of children ages 4-16 years. Our primary objective was to assess the acceptability and feasibility of the FNPA tool in one pediatric primary care practice. We also assessed self-efficacy of providers on lifestyle counseling during health supervision after the intervention. In addition, we examined the impact of this intervention on parent-reported obesigenic behavior change.

Methods

Study Design and Setting

We used a prospective, nonrandomized, observational design in one pediatric practice with seven healthcare providers in Peoria, Illinois. This study was approved by the Peoria Institutional Review Board.

Our primary outcomes were provider acceptability and feasibility of using the FNPA assessment counseling system and patient acceptability of the strategy. Secondary provider outcomes included self-efficacy in addressing weight status and discussing obesigenic behavior modification and also fidelity to MI during patient encounters. Secondary patient outcomes included achievement of stated health behavior goals, change in BMI, and improvement in obesigenic behaviors.

Practice and Providers

The practice is a university-based academic pediatric practice with paper-based medical records serving 330 patients per week, 33% of which are health supervision visits. Approximately 54% of the patients receive state insurance and over 50% are Caucasian. The providers comprised six pediatricians and one pediatric advanced practice nurse (6 of 7 were female). They were an average age of 47.5 (± 17) years old with an average of 14.6 years (± 14) postresidency training.

Intervention Tools

The FNPA assessment³³ is a 20-question survey identifying obesigenic behaviors in 10 domains, such as family meal patterns, food choices, restriction/reward, family activity involvement, child activity involvement, family eating habits, beverage choices, screen time, family routines, and healthy environment. Each question is answered on a 4-point Likert scale ranging from almost never, sometimes, usually, and almost always. The lower the total score, the more prevalent obesigenic behaviors are in the lifestyle.

The FNPA Coaching Tool (Fig. 1) is a color-coded menu for change that is used to have an MI-enhanced conversation, which facilitates health behavior goal setting. The surveyed health behaviors are characterized on this menu as impossible (red), could do sometimes (yellow), could do most of the time (light green), and could do almost always (dark green). Items that are scored a “3” or “4” on the assessment tool are marked in the green zones reflecting healthy behaviors that are being done successfully. Items that are scored a “1” or “2” are marked as opportunities for change in a check box. Using this information, an MI-based conversation is made to facilitate goal setting, allowing the family to reflect on which, if any, of the behavior opportunities marked by the check box they would desire to change. The likelihood of changing the behavior is then indicated by marking the corresponding column. If a plan is made, SMART (Specific, Measureable, Attainable, Relevant, Time limited) goals (up to four) are written down along with a documentation of the family’s readiness for change, based on a 10-point Likert scale, for motivation for change and confidence for success (1 being none and 10 being a lot).

Outcome Measurement Tools

Cycle time sheets are documents to record the time (measured by a digital timer) taken to fill out the FNPA

assessment, score the assessment, and have the coaching conversation using the FNPA coaching tool.

The Provider FNPA Satisfaction Survey is an 18-item questionnaire (designed for this study) assessing the acceptability and feasibility of this practice intervention in the office setting. Domains measured are related to the FNPA assessment, coaching portion and its process, and impact on office flow. Responses are measured on a 5-point Likert scale, ranging from strongly disagree to strongly agree.

The Patient FNPA Feedback Survey is a parent-reported survey designed for this project to measure three areas of patient-level outcomes. The first comprises 11 items assessing the acceptability and ease of use of the FNPA assessment and satisfaction of the coaching tool and encounter experience and two items assessing the degree to which the discussion motivated the child and family. Responses are on a 5-point Likert scale, ranging from “strongly disagree” to “strongly agree.” The second inquires about family and child readiness for change on a 10-point Likert scale, ranging from “strongly disagree” to “strongly agree.” The last asks about the degree to which documented goals have been initiated. Responses are on a 4-point Likert scale, ranging from “impossible” to “could do almost always.” A rating of 3 or 4 was viewed as successful.

FNPA COACHING TOOL				
MENU FOR CHANGE	Impossible	Could Do Sometimes	Could Do Most of Time	Could Do Almost Always
	1	2	3	4
<input type="checkbox"/> 1. Eat breakfast every morning				
<input type="checkbox"/> 2. Eat once daily as a family				
<input type="checkbox"/> 3. No TV or computer during eating				
<input type="checkbox"/> 4. Eating out/ordering in ≤ 1/week				
<input type="checkbox"/> 5. Prepackaged foods ≤ 2x/week				
<input type="checkbox"/> 6. Fruits/Vegetables ≥ 5 servings/day				
<input type="checkbox"/> 7. Sweetened beverages ≤ 1/day				
<input type="checkbox"/> 8. Calcium rich foods ≥ 3 servings/day				
<input type="checkbox"/> 9. Keep mostly healthy snacks in house, but don't overly restrict highly palatable foods				
<input type="checkbox"/> 10. Food/candy is not used as a reward				
<input type="checkbox"/> 11. Limit screen time to ≤ 2 hours/day				
<input type="checkbox"/> 12. Remove TV's from the bedroom				
<input type="checkbox"/> 13. Encourage 1 hour of daily physical activity				
<input type="checkbox"/> 14. Family physical activity ≥ 1 hour/week				
<input type="checkbox"/> 15. Scheduled bedtime				
<input type="checkbox"/> 16. Nine hours of sleep/night				
<input type="checkbox"/> 17. Other:				
<input type="checkbox"/> 18. Other:				

Figure 1. FNPA coaching tool. FNPA, the Family Nutrition and Physical Activity Screening Tool.

The FNPA Behavior Change Survey is a 20-item questionnaire using lifestyle questions from a pilot study conducted by Ariza and colleagues.³⁵ This tool assesses a variety of parent and child dietary, PA, and sedentary health behaviors, including the level of success in implementing the goals set at the initial encounter. Responses are dichotomous (yes and no) with room for qualitative comments to specify changes made. Success in implementing the stated primary goal was rated on a 4-point Likert scale, ranging from “not at all, some of the time, most of the time, or almost always.” Success was defined as selection of two responses, “most of the time” or “almost always,” indicating more participation in healthy behaviors.

The Provider Self-Efficacy Questionnaire is a 7-item questionnaire, developed by our group to assess the provider’s perception of his or her competence in certain pertinent areas. This was adapted from a 12-item survey examining provider self-efficacy by Perrin and colleagues,³⁶ which asked providers their perception of their competence in counseling families about obesigenic behaviors. Areas of efficacy included discussing BMI percentile, modification of eating and activity practices, behavior change, facing resistance, assessing readiness for change, and facilitating goal setting. Responses were rated on a 7-point Likert scale, ranging from “highly ineffective” to “highly effective,” and the questionnaire was completed at baseline before training and after the intervention period.

The Motivational Interviewing Treatment Integrity coding tool^{37,38} was used to code for fidelity to MI. One random encounter for each provider was recorded and coded by a certified coder who was blinded to the provider participants.

Focus group interviews of office staff and clinicians were conducted for purposes of process evaluation at the end of intervention.

Procedure

Provider and staff training. Before the start of the patient enrollment component, medical providers participated in two 1.5-hour training sessions, during which they learned MI skills. They also learned how to interpret the FNPA assessment and use the coaching tool to facilitate an MI discussion focused on goal setting. The staff learned to score the FNPA assessment tool and demonstrated three accurately scored tools during one 30-minute training session. In addition, staff were trained on the process for timing each activity with digital timers and how to accurately document them.

Patient subjects. Parents/guardians who accompanied their children (ages 4–17 years) to health supervision visits were asked to participate in the study during a 14-week period that started in February of 2012. Parents gave written consent to participate and those 12 years and older assented to enrollment. Children with medical conditions

that affected their ability to have age-appropriate nutrition and PA were excluded (*e.g.*, children with developmental delays or complex medical conditions).

Practice intervention. At the start of the encounter, the FNPA assessment was completed by the guardian (or the child if 12 years or older). Practice staff scored the assessment tool, obtained patient weight and height using the same calibrated scale and stadiometer, and BMI was calculated by standard formula³⁹ and documented. At the end of the encounter, providers reviewed the FNPA assessment results with the family and administered the FNPA Coaching Tool to address identified obesigenic behaviors. This was followed by an MI-enhanced conversation, which may have resulted in targeted goal setting of a behavior change and an assessment of the patient’s or patient’s guardian’s readiness to change. Staff and providers recorded the timing of each process.

Outcomes measures. Three to 4 weeks after their encounter, guardians completed the Patient FNPA Feedback Survey by their preferred method of phone, e-mail, or paper. Six months after their encounter, participants returned for anthropometric measures and completion of an FNPA assessment and FNPA Behavior Change Survey. They were offered a \$10 gift card for their participation at both measurement points. BMI was measured at baseline by practice staff and at 6 months by research staff who had been trained according to CDC National Health and Nutrition Examination Survey procedural standards.⁴⁰

Providers completed the Self-Efficacy Questionnaire to assess perceived proficiency in discussing weight status and lifestyle behavior topics before training and again after the practice intervention was completed. A graphic illustration of the intervention procedure is depicted in Figure 2.

Statistical Analysis

The sample size was estimated based on other similar pilot studies assessing the acceptability and functionality of similar tools.^{41,42} Univariate analysis of variance was applied to all continuous variables, and descriptive statistics were applied to appropriate variables. SAS software (9.3; SAS Institute, Inc., Cary, NC) was applied to all analyses, and a *p* value < 0.05 was considered significant.

Results

The intervention was successfully applied during 14 weeks at the practice. During that time, 129 qualifying patients (ages 4–17 years) of the seven providers were approached. One hundred patients (ages 4–16 years) agreed to participate; 8 were excluded because of no guardian being present, 1 was excluded for age, and 20 declined to participate (stated reason was patient time constraint). The measured time of the intervention components revealed that the FNPA Assessment was

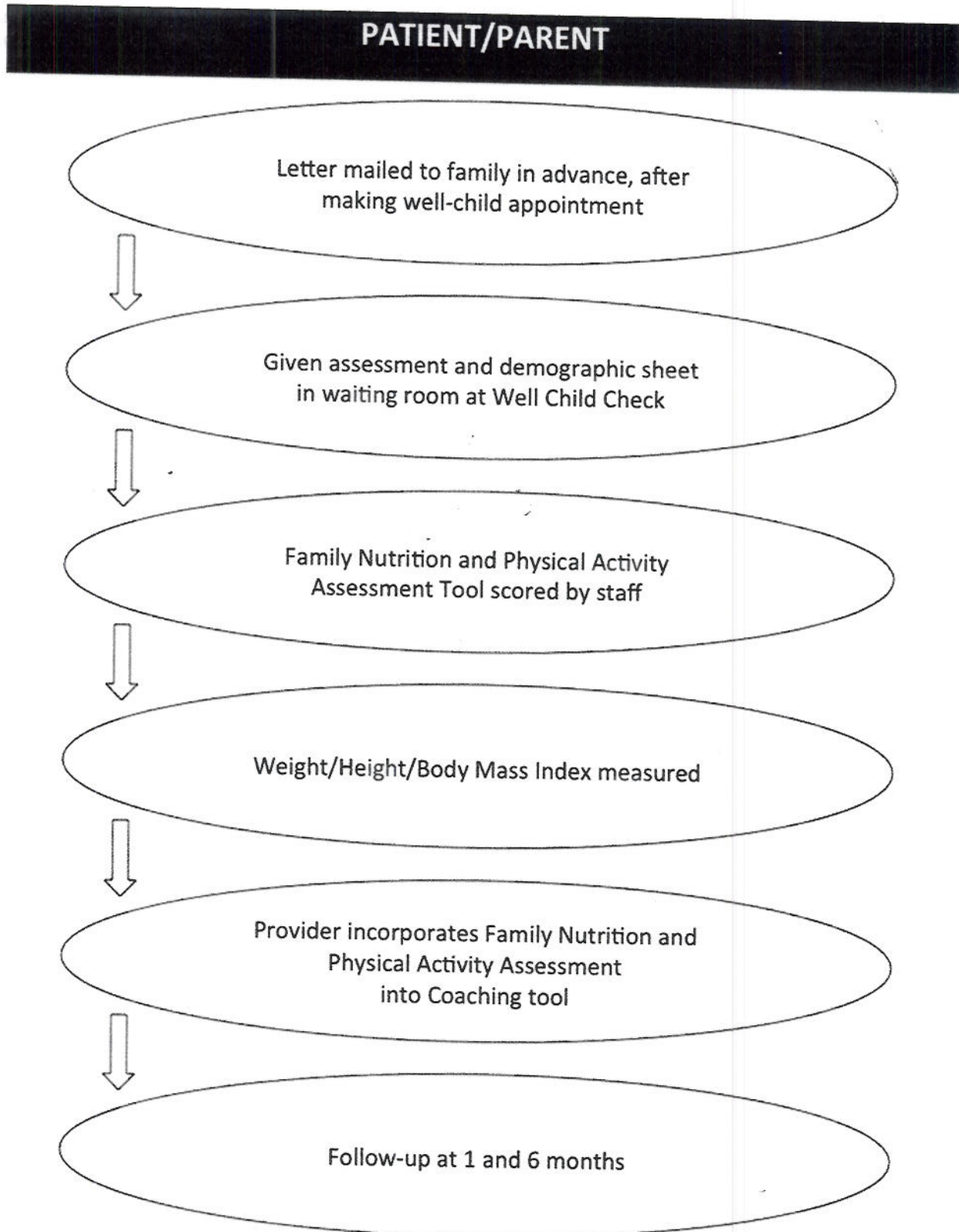


Figure 2. Flow diagram of methods.

efficient to administer with a mean length of time to complete of 1.9 (± 0.62) minutes and 1.3 (± 0.41) minutes to score. However, implementing the coaching tool with MI-based conversation took an average of 7.5 minutes (± 3.86).

Primary Outcome Related to Feasibility and Acceptability

Provider acceptability was good, with a median rating of 4 on a 5-point Likert scale in 10 of 18 questions related to

usefulness of the assessment and coaching tool. Lower satisfaction scores were assigned to the time spent to use the assessment and coaching tool, impact on work flow, and overall duration of patient appointment (Table 1). Focus group discussions with staff confirmed results of the survey. It was indicated that the FNPA was useful, but the scoring format of the assessment section was a little laborious and that completing the coaching portion took a long time considering the average length of a well-child encounter. The providers felt that the coaching tool might be better suited for a more focused obesity visit.

Secondary Outcomes Related to Provider Performance

After the intervention period, the provider self-efficacy score improved in the domain "discussing patient readiness for change," increasing from 4.6 (± 0.89) to 6.00 (± 0.00 ; $p = 0.025$). Though the mean scores increased in

all domains assessed (completed responses from only five of the seven providers), the provider numbers were too low to establish significance (see Table 2 for list of domains). Five of the seven providers had a recorded encounter that was MI adherent. Patient motivation was higher (score $\geq 7 = 64.4\%$) for MI-adherent provider patients than for non-MI-adherent providers (score $\geq 7 = 47.1\%$; $p = 0.04$). However, patient behavior achievement and encounter satisfaction were not different between the two groups.

Secondary Outcomes Related to Patient Behavior Change and Anthropometrics

The demographics of study patients are described in Table 3. There was no demographic difference in the subjects who were available for 1- and 6-month measures, compared to those lost to follow-up, except that more overweight and obese and subjects with a higher mean BMI were available for 1-month surveys. This trend was

Table 1. Results of Provider Satisfaction Survey

Domain	Question	Mean (SD)	Median (range)
Assessment	Easy to score	3.29 (1.38)	4 (1-5)
	Easy to interpret	3.29 (1.60)	4 (1-5)
	Little time to use ^b	3.00 (1.29)	2 (2-5)
	Is accurate ^a	3.86 (0.90)	4 (2-5)
	Is useful ^a	4.14 (0.38)	4 (4-5)
Coaching tool	Easy to use ^a	3.86 (0.38)	4 (3-4)
	Little time to use ^b	3.14 (0.69)	3 (2-4)
	Facilitates behavior change discussion ^a	4.00 (0.00)	4 (4-4)
	Facilitates targeted discussion regarding obesigenic behaviors ^a	3.57 (0.53)	4 (3-4)
	Increases efficacy in counseling ^a	3.71 (0.49)	4 (3-4)
	Emphasizes pertinent behavior change ^a	3.86 (0.38)	4 (3-4)
	Assesses readiness for change	3.43 (0.79)	4 (2-4)
	Helps families develop realistic goals ^a	4.00 (0.00)	4 (4-4)
Training and work flow	Training was adequate ^a	3.86 (0.38)	4 (3-4)
	I like this tool. ^a	3.64 (0.94)	4 (2-5)
	I would continue to use this tool. ^b	3.21 (0.91)	3 (2-5)
	This caused little disruption in work flow. ^b	1.86 (0.69)	2 (1-3)
	Did not significantly increase the duration ^b	1.71 (0.49)	2 (1-2)

^aIndicates good satisfaction (mean ≥ 3.5 and median ≥ 4).

^bIndicates low satisfaction (mean < 3.5 and median < 4).

SD, standard deviation.

Table 2. Provider Self-Efficacy Domains

BMI percentile
Modification of eating practices
Modification of physical activity
Behavior change
Behavior change in the face of resistance
Assessing readiness

not sustained during the 6-month measurement group because weight status was not significantly different; however, fewer lower-income participants were available for measurements at 6 months.

Parent-reported patient success of primary behavior goal was 68% ($n=62$) at 1 month and 46% ($n=28$) at 6 months, with a mean increase of 4.2 (± 5.7) in the FNPA score from baseline to 6 months ($p < 0.001$). The mean BMI change of 0.28 kg/m² (± 0.86) and z-score change of 0.04 (± 0.28) were not significant at 6 months. The z-score change of children in the obese category was -0.04 (± 0.18); though not significant, it could be clinically important. A higher proportion of children in the overweight category (91%) were successful in achieving their goals at 1 month, but not significantly different than those in the healthy weight (62.2%) and obese (61.5%) categories. In addition, 60% of children in the obese category were successful at achieving their goals at 6 months and 47.8% of children in normal and overweight categories were successful ($p=1.0$). Though insufficiently powered to indicate statistical sig-

nificance, there may be a trend of increased success in higher-weight categories.

Patient satisfaction with the tool was high ($n=62$), ranging from 4.04 to 4.78 on a 5-point Likert scale in 11 questions. Perceived influence of the provider discussion on motivating the child or family to change was modest (Table 4).

Discussion

The FNPA tool practice intervention pilot was designed to examine the feasibility and acceptability of pairing a screening tool with an MI-enhanced coaching tool for prevention of obesigenic behaviors during all health supervision visits, irrespective of weight status. Validated and efficient health behavior screening tools have been recommended, but not widely studied, in the pediatric primary care setting. Two adult-focused primary care tools—the Weight, Activity, Variety, Excess and Rapid Eating and Activity Assessment for Patients—have been demonstrated to be valid, efficient, and feasible, but have yet to be tested in the pediatric population.^{41,43} Two tools used in pediatric and adolescent populations, the Healthy Home Survey³² and The Patient Centered Assessment and Counseling for Exercise plus Nutrition program, both had feasibility issues within the office setting.³¹ In this pilot, the use of the FNPA assessment was facile, efficient, and acceptable among patients and providers.

The MI-enhanced conversation using the FNPA Coaching Tool was very acceptable to families; however, the providers felt that this portion of practice intervention should be shorter. In future applications, two tools may be useful: a brief tool to help promote healthy weight behaviors during health supervision visits and a longer

Table 3. Demographics of Study Patients

Demographics	Total sample (N=100)	1-month surveys (n=62)	p value	6-month surveys (n=28)	p value
Age, years	7.4 (3.7)	7.6 (3.7)	0.53	7.4 (3.6)	0.94
Gender: female (%)	55 (55.0)	36 (58.1)	0.43	19 (67.9)	0.11
Race: White (%)	55 (55.0)	37 (59.7)	0.44	19 (67.9)	0.11
Black (%)	26 (26.0)	15 (24.2)		3 (10.7)	
Hispanic (%)	7 (7.0)	3 (4.8)		2 (7.1)	
Other (%)	10 (10.0)	5 (8.1)		4 (14.3)	
Missing (%)	2 (2.0)	2 (3.2)		0 (0.0)	
BMI (SD) kg/m ²	18.2 (4.5)	19.0 (5.1)	0.01*	18.2 (3.2)	0.99
Overweight (%)	32 (32.0)	25 (40.3)	0.02*	12 (42.9)	0.15
Obese (%)	15 (15.0)	13 (21.0)	0.03*	5 (17.9)	0.76
Low income (%)	27 (33.3) n=81	18 (35.3) n=51	0.63	3 (13.6) n=22	0.02*

Data are reported as mean and \pm standard deviation (SD), unless reported otherwise.

*Significant at the $p < 0.05$ level.

Table 4. Results of Patient Satisfaction Survey

Domain	Question	Mean score (SD)
Screening questionnaire	Easy to read	4.76 (0.43)
	Easy to fill out	4.67 (0.56)
	Took little time to fill out	4.39 (0.90)
Discussion with provider	Was helpful	4.43 (0.71)
	Was important	4.46 (0.85)
	Made us feel comfortable	4.74 (0.56)
	Provider listened to us	4.78 (0.48)
	Right amount of time	4.68 (0.65)
	Motivated family to change	3.79 (0.90)
	Motivated child to change	3.47 (1.02)
Menu for change	Would want to have this again	4.04 (1.26)
	Helped us decide on goals	4.14 (0.95)
	Was easy to understand	4.56 (0.77)

SD, standard deviation.

intervention to be implemented during weight management visits. Suggestions were also made to have the assessment tool and coaching tool integrated into electronic health records, which could automate the calculation of the assessment and also autopopulate the coaching tool for ease of use.

Provider and Patient Outcomes

Provider perception of self-efficacy in the area of obesity prevention was improved in the area of assessing patient readiness for change. The practice intervention's impact on self-efficacy, as it correlates to the degree of overweight of the patient, was not examined in this study and would be interesting to examine in the future. Though most demonstrated fidelity to the MI process, more fidelity testing might have been beneficial before intervention to be assured that all providers demonstrated the skills to adequately implement the MI approach during encounters.

Sixty-eight percent of participants successfully initiated their goals at 1 month and nearly 50% of them reported sustained behavior change at 6 months. Further, FNPA scores increased, which shows promise of improved health behaviors after this intervention and may be correlated

with improved trajectory of growth.³⁴ Though z-score change of the subjects increased during the 6 months, those available for measurement were small in number and over-representative of overweight patients (43% compared to 32% at baseline). A larger sample would be needed to understand its significance and compare this change with previously reported trends, which correct for BMI percentile distribution of the subject population.

Study Limitations

BMI classification of the study population was not compared to the clinic population in order to verify that they were representative of the overall clinic population. Participant success may have been overestimated given that only 28% of the study population returned for outcomes measures at 6 months. This group, which was more motivated to return for follow-up measures, would have been more likely to have achieved success of their goals. Fewer lower-income participants returned at 6 months for measurements, which may have skewed the population toward success because lower-income families might have faced more barriers to health behavior change. Also, both 1- and 6-month surveys were parent reported; hence, the level of success might be skewed as a result of the influence of social-acceptability bias, potentially overestimating their level of sustained success. Longer-term follow-up (perhaps 1 year later at the subsequent well-child visit) with more subjects would be necessary to adequately evaluate impact of this intervention on the trajectory of weight status in healthy weight and overweight children. Provider outcomes were limited by the small sample size of providers.

Conclusion

A practice-based intervention that includes pairing motivational interviewing training of clinicians and the use of the FNPA (Assessment and Coaching) tool shows promise as an approach to help identify and address obesigenic behaviors during pediatric health supervision visits. It has the potential to improve provider efficacy in the area of obesity prevention and also to influence patient health behaviors, which could impact the rising weight trajectories of children. A future similar intervention including a larger number of practices and longer patient follow-up would aid in evaluating its benefit for weight trajectories of children with different weight classes, especially in children who start out in the normal or overweight range. Further evaluation of the utility of this practice intervention will require refinement of the coaching tool and MI approach, followed by a randomized, controlled trial involving a larger number of practice sites, providers, and patients.

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Author Disclosure Statement

No competing financial interests exist.

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