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Original Research

A pilot study to determine if pediatricians will use a multimedia parenting program

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Abstract

Background: Cost-efficient and brief interventions to address behavioral concerns are needed in the primary care setting. This pilot study looked at pediatric providers' interest and willingness in using the evidence-based, multimedia parenting program, Parenting Wisely-Young Children© (PWYC).
Methods: Between June to October 2010, 32 pediatric providers from 13 community and academic pediatric practices completed a short demonstration of PWYC and provided opinions on its use in primary care practice by survey and verbal feedback. Bivariate analyses was performed using the Fisher's exact test to determine predictors of providers' willingness to use PWYC. Summary of themes from provider feedback were reviewed.
Results: All providers reported a general need for brief parenting interventions for primary care and were interested in PWYC. No provider characteristic was significantly associated with reported willingness to use PWYC. There was a negative trend between years of training and willingness to use the program (p=0.06). Concerns were raised about using PWYC during clinic visits; however, almost all would recommend the online PWYC format to supplement recommendations made at the visit.
Conclusions: While providers are in need of brief parenting interventions to handle behavioral and mental health issues in primary care practice, there were potential concerns raised as to how PWYC would affect workflow and its cultural relevance to families they serve.

INTRODUCTION

Behavior problems are a common concern for any parent of a young child. Pediatricians are in an optimal position to address these issues during well child visits. Behavioral concerns, if brought up early, can be remedied with parental education about basic child behavior strategies [1]. However, providing parenting education takes time. Given the time constraints of outpatient practice, brief parenting interventions are needed if pediatricians are to efficiently address these concerns in practice.

Parent-training is a widely used model for treating challenging disruptive behaviors because of the strong evidence of their efficacy [2-6]. Parent training is traditionally offered in a group format or through one-on-one visits with a trained therapist. Pediatricians will often refer families to a community-based provider for such treatment. However, transportation, time, and cost barriers exist for families accessing these programs [7]. Moreover, these treatment options are typically provided outside of the pediatric clinic setting and not necessarily offered as part of an integrated treatment plan alongside the advice provided by the pediatrician. Parenting Wisely-Young Children© (PWYC) is a parent-training program for adults with children three to nine years of age. The program can be viewed in their home, and completing it takes as little as four hours. PWYC has been successfully used in other disciplines (social work, juvenile justice and family

services agencies); however its use and potential application has not been explored for pediatric practice [8-10].

As implementation of clinical guidelines into medical practice is often difficult and relates to the need to address potential barriers at both the practice- and provider-level, we were interested in understanding perceived and real barriers to the incorporation of PWYC into practice [11-13]. This first step is critical to implementation and sustainability of this intervention in pediatric clinics. As all pediatric providers (pediatricians, internal medicine-pediatric & family medicine physicians and social workers working in pediatric clinics) face the growing need to identify and treat disruptive behaviors in primary care, we were interested in determining if PWYC could be used by pediatric providers in practice. In addition, we sought to ascertain specific provider characteristics that would predict the likelihood of using PWYC in practice.

METHODS

Design, Setting, and Subjects

A general email was sent inviting practicing pediatric providers at 13 community and academic pediatrics clinic in the Indianapolis area to participate in a multimedia parenting program demonstration and survey. Only those providers who expressed an interest in response to the original email were contacted by phone to schedule the parenting program demonstration at their clinical practice site between June and October 2010. Prior to the initiation of the study, institutional review was secured for all study procedures. All subjects provided verbal consent for participation.

PWYC Demonstration

PWYC educates parents in effective parenting skills through video demonstration, quizzing, repetition, recognition, and feedback for correct and incorrect answers. It was filmed in the United Kingdom and is currently available in CD-ROM format. There are seven video cases in the PWYC program: interrupting telephone calls, acting up in public, conflict with other children, sibling conflict, refusing to go to bed, homework and poor marks, and getting ready for school. The program offers advantages over other traditional formats because it presents a variety of diverse, effective models of parenting techniques, allows parents to access the program at their convenience, can be reviewed as often as needed, and provides feedback with regards to learning [9, 10]. Participants were given a brief introduction about PWYC and a quick tutorial on how to use the program. They were then instructed to choose one case module to review. In the interest of time, providers were allowed to do the demonstration as a group if more than one provider was available to participate. Upon completion of the case module, participants completed a one-page survey and provided informal verbal feedback regarding its potential application in practice.

Data Collection

A written survey was developed to ascertain providers' demographic characteristics, self-reported practice patterns, opinions regarding the PWYC module viewed, and the feasibility of incorporating PWYC into their own practices. Demographic data included practice setting (teaching or non-teaching site), the year residency training was completed (if applicable), gender, and patient insurance mix. Provider patterns and beliefs were measured with 6 items using a 5-point Likert scale ranging from "strongly disagree" to "strongly agree." Survey items examined potential barriers towards managing behavioral concerns in practice (time constraints, the provider's ability to offer families treatment other than medications for behavioral concerns, reimbursement, cost of PWYC, and previous training in handling behavioral issues), as well as self-reported competency in handling behavior concerns. One item (yes/no) asked whether the provider would recommend the online version, once available, of PWYC to their families. Participants provided specific feedback about the case module viewed and the length of time it took to complete. Lastly, participants provided specific suggestions or comments on how PWYC could be used in practice.

Data Analysis

Univariate and bivariate analyses was examined for the entire sample. For descriptive statistics, survey item responses were collapsed from the 5-point Likert scale to "agree", "neutral" and "disagree." For bivariate analyses, the data was further dichotomized so responses were coded as "agree" (coded as 1) or as "neutral/disagree" (coded as 0). Bivariate associations between whether the provider reported whether they would use PWYC and each provider demographic or characteristic was compared using the Fisher Exact Test ($p<0.05$). Items left blank were treated as missing and excluded from analysis. All data were analyzed using Stata11 (StataCorp, College Station, TX, 2010).

Open-ended comments or suggestions were collected by the researcher (NB or MM) and then transcribed verbatim during informal feedback sessions at the conclusion of each demonstration. A summary of comments was extracted from participant feedback by one author (MM).

RESULTS

Of the 13 community practices we sent an email invitation to participate, a total of 32 providers (general pediatric, internal medicine-pediatric, and family medicine physicians and one pediatric social worker) expressed interest in participating and had the time to complete the demonstration on site. Participants were eligible if they were practicing providers. No medical residents were surveyed in this study.

Of the 32 pediatric providers who agreed to participate in the PWYC demonstration, all agreed to complete the written survey and provided informal verbal feedback. Sixty-nine percent (22/32) worked in a primary care teaching clinic. The remainder worked at private non-teaching primary care clinics. Among the entire sample, 78% (25/32) were female. Thirty-one percent of the sample completed training less than 5 years ago, 38% between 6 to 10 years ago, and the remainder greater than 10 years ago. The majority of providers reported serving a patient population where less than a quarter of families were private insurance or self-pay; the remainder of families had public insurance. See Table 1.

Table 1. Characteristics of Pediatric Providers

Subject Characteristics	N=32 (%)
Years out of Training	
0-5 years	9 (31)
6-10 years	11(38)
Greater than 10 years	9 (31)
Female Gender	25 (78)
Clinic Setting	
Primary Care-Teaching	22 (69)
Primary Care-Non-teaching	10 (31)
% Private Insurance Seen	
0-25%	23 (74)
26-50%	3 (10)
51-100%	5 (16)
% Public Insurance Seen	
0-25%	4 (13)
26-50%	5 (16)
51-100%	22 (71)
% Self-Pay Seen	
0-25%	30 (97)
26-100%	1 (3)

About half of the providers did not feel prepared to handle behavioral issues after training. More than three-quarters of the providers felt that they could treat behavioral concerns by counseling the parents on parenting techniques or counseling. However, slightly more than half of the providers felt they did not have adequate time to deal with these concerns. All but one provider indicated they would recommend the online version of the program to families. Bivariate analyses revealed that no provider characteristics were significantly associated with whether providers would be willing to use PWYC in practice. These included provider self-reported competency, practice setting, reimbursement concerns, cost of the PWYC program and preparedness after training. There was no significant association between the module viewed and willingness to use PWYC. The number of years after training was negatively associated with provider willingness to use the program (p=0.06). See Table 2. More than two-thirds of providers chose to view and interact with the video module about acting out in public (69% or 22/32). While 84% (26/32) found the modules to be an appropriate length for families, 16% (5/32) found the viewed module too long and questioned whether families of lower literacy may have a harder time completing the program.

Table 2. Self-reported Practice Patterns

Statement	Disagree n (%)	Neutral n (%)	Agree n (%)
I don't have enough time to provide counseling for BI or PC	13 (41)	2 (6)	17 (53)
I feel competent managing BI or PC	2 (6)	3 (9)	27 (85)
I don't manage BI or PC due to reimbursement constraints	27 (84)	2 (6)	3 (9)
Aside from medications, I can offer little to parents of children with	28 (88)	3 (9)	1 (3)
After residency, I felt prepared to handle common BI and PC	26 (52)	5 (16)	10 (32)
I would use PWYC even though a site license costs $659	11 (35)	8 (26)	12 (39)
If PWYC were a billable service, I would find a way to use it	0 (0)	8 (25)	24 (75)

Legend

BI=behavioral issues; PC=parenting concerns; PWYC = Parenting Wisely-Young Children©

Important themes emerged from the feedback regarding general impressions of PWYC and its potential use in primary care practice. These are summarized in Table 3. Half of the providers (16/32) had concerns with potential cultural and language barriers. Providers worried that the British accents would be hard to understand for families whose first language was not

English. Moreover, providers had concerns that inner-city families would not relate to the situations and language used in the modules (for example, children playing with tea sets). Most importantly, all providers raised potential problems with integrating PWYC into the busy clinic workflow.

Table 3. Summary of Themes from Qualitative Responses

Theme	Summary of Comments
Language	PWYC program uses a British English accent in the video modules. Some providers had concerns that the accent and certain wordings may be difficult for their patient population to understand. Some providers suggested sub-titles. Providers commented that it would be beneficial for a Spanish version to be available.
Cultural Barriers	Because PWYC was developed with British actors, some providers were concerns that patient's families in their setting, many practicing in inner-city populations, would not be able to relate to the specific situations in each module. Providers were interested in seeing a version set in a similar setting to which they practiced in.

PWYC = Parenting Wisely-Young Children©

DISCUSSION

The pediatric providers in this study were interested in a parenting intervention for disruptive behaviors that present in primary care practice. Although they felt competent to provide behavioral counseling, they lacked the time in practice. The majority considered PWYC to be a good strategy to provide valuable teaching to families and could complement the recommendations provided at the office visit. However, cost of the program and its integration into the busy workflow were common concerns. Providers also questioned whether the families they served would be able to relate to the scenarios presented in the case modules due to cultural and language barriers. Despite these concerns, almost all providers would recommend their families view PWYC when available in an online format. Providers found offering PWYC online as a viable option for treatment of disruptive behaviors. Families can view the case modules at home with active discussion of learned concepts at a follow up visit.

This study is the first to examine whether pediatric providers would be willing to use PWYC in primary care outpatient practice. Primary care providers play a pivotal role in the identification and management of behavioral concerns given the prevalence of disruptive behaviors among young children [14, 15]. Moreover, approximately a quarter of all primary care visits are comprised of a behavioral, developmental or emotional concern [16]. However, providing parenting education and counseling in the workflow of outpatient practice is an ongoing challenge. Parents desire help from providers for managing problems with behavior and frequently wish there was more time during well child visits to discuss these issues [17-19]. Moreover, providers recognize the importance of addressing behavioral concerns and their role in the early identification and treatment of these issues [15, 20]. However, psychosocial issues often complicate behavioral issues and take time to discuss [21]. In addition, the provider must garner parent buy-in towards alternate parenting strategies to effectively change parent-child interactions. It is for these reasons that time remains the main barrier to addressing these issues in the clinic [22]. Having a tool for providers to teach parents discipline strategies is especially critical for parents of young children, as the first-line treatment for disruptive behaviors is parent training [23]. Therefore, brief parenting interventions must either be developed and/or existing evidence-based interventions be adapted for primary care practice, along with systematic changes to the delivery of well child care [1, 24]. In addition, it is important to possess an understanding of potential barriers that pediatric providers face when they are expected to integrate behavioral and mental health care into primary care practice [13, 25, 26]. This study confirms that providers are interested in tools such as PWYC; however its current form may make it difficult to use in practice. The use of multimedia to teach parents alternate parenting strategies is not new. In fact, many

of the evidence-based parenting programs incorporate videotape modeling to promote rapid skill acquisition [27-30]. However, there are few studies that have examined the use or adaptation of these programs specifically for pediatric primary care practice [31, 32]. When the PWYC series was originally developed, the intent was to offer convenience and privacy to the family who could complete the program at their own pace. To realize the teaching contained in PWYC fully and learn to apply parenting techniques across various scenarios, parents should ideally complete all seven case modules. The program's seven case modules each take a minimum of 30 minutes to complete.

Logistical questions arose from participants concerning the physical space for families to complete PWYC, if the program should be offered at one or multiple visits, and if it should be offered to all families or only to select families with identified behavioral issues. One practical solution offered by participants was to offer PWYC as a waiting room kiosk or played on a continuous loop on televisions in the waiting area. Interestingly, some providers felt providing the program in one of these two ways alleviated the burden of initiating discussions on parenting. Parents who actively sought advice or had specific questions could then be "empowered" to raise a concern after viewing a segment of the video. The physicians felt the program would complement behavioral counseling already offered; whereas, the licensed social worker surveyed was interested in having PWYC as a component of individual treatment for families who were referred by providers at the clinic. Therefore, while most providers felt the teaching contained in PWYC was valuable for families they served, they felt in order to provide the teaching contained in all seven modules, it would have to be offered in segments or allow parents to view the entire program online at home and discuss key concepts at a follow up visit to the clinic. The one downside to offering PWYC to parents online is that not all parents may follow through on this recommendation or not have access to a home computer, which are known barriers for parents asked to complete web-based developmental screening tools before the clinic visit [33]. Providers in this study felt that certain modifications to the PWYC were required for the intervention to meet the needs of the families they served. These included changing the videos so that the actors and scenarios portrayed were more diverse and improving the narration to be clear and simpler. Even though the parent-child interactions are universal, the context in which the interactions are portrayed and the perceived inabilities of the families to relate to the actors were reported barriers. Providers want brief parenting interventions that can be meaningful to all families regardless of race/ethnicity, culture, and socioeconomic status.

Several features of this study may limit the generalizability of these findings. The study was conducted as a convenience survey. Thus, the providers who were willing to participate in this survey may have had a special interest in pediatric disruptive behaviors over those who did not respond to the initial invitation to participate. That, along with the sample size, may hinder how these findings might apply to other populations or locations. However, the individual pediatric providers represented 13 community- and academic-based clinics in the central Indianapolis area serving families with varied socio-demographics. Another limitation is that providers only interacted with one of seven possible case modules. This prevents complete evaluation of the program as a whole, which may have led to skewed perceptions from providers. However, most providers were positive in their assessment of the PWYC program and felt comfortable in their quick understanding of the interactive teaching format of the program. Also, social desirability and expectancy bias may have been present in the providers' responses; however the verbal feedback that followed upon completion of the surveys contained a wide range of comments, including positive comments and ways to improve upon the program.

This study illustrates the view pediatric providers would like brief, cost-effective treatment options for behavioral problems. The pediatric providers surveyed in this study believe that parenting programs, such as PWYC, are needed. Having families view the online version of the program would complement recommendations made to families during routine office visits. Further work is needed to determine if parents would access the program and if they felt it was helpful in teaching them techniques to deal with common parenting and behavioral concerns.

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Potential conflicts of interest: Dr. Bauer is the primary author and has disclosed a potential conflict of interest in that Don Gordon PhD, the developer of Parenting Wisely-Young Children, donated the multimedia program to her for this study. This is the full extent of the relationship between Dr. Bauer and Dr. Gordon. The other three co-authors do not have any conflicts of interest to disclose. Dr. Bauer and the other three co-authors do not have any financial conflicts to disclose.

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