

Integrating a parenting intervention into pediatric primary care: A qualitative pilot study of stakeholders' perspectives

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Short report

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Abstract

Background In the U.S., children as early as two years old are being diagnosed with depression and other mental health problems. Children with chronic diseases also struggle with mental health problems. Evidence-based parent interventions can support these families by improving parenting practices. Pediatric primary care practices are ideal settings to provide parent interventions, as they can have broader reach, decrease stigma and improve health and mental health outcomes. There is currently no clear guidance as to how to integrate these interventions.

Methods With the scientific premise that primary care settings can be a powerful place to reach families, this study examined barriers and facilitators of implementing an evidence-based parenting intervention within a primary care practice-based network.

Results Semi-structured interviews were conducted with 16 community pediatricians in a Midwestern Practice-Based Research Network. The interview guide was developed based on the Consolidated Framework for Implementation Research (CFIR), with a particular emphasis on intervention characteristics and the organization's inner setting. A codebook was developed using CFIR. Interview transcripts were coded by two independent raters ($\kappa = 0.93$). Data were analyzed using directed content analysis.

Conclusions Themes at the outer and inner setting were identified as determinants. Using theory and stakeholder input will help adapt the intervention as well as its strategies to implement parent interventions in primary care settings.

Contributions To The Literature:

This study identifies specific barriers and facilitators to implement evidence-based parent interventions in pediatric primary care settings, as described by the providers (i.e., pediatricians)

We used the Consolidated Framework for Implementation Research to guide our semi-structured interview to capture determinants at the outer and inner settings.

Using a theoretical approach to examine the context will help guide the adaptation of the intervention and its implementation strategies, allowing for scientific reproduction and evaluation of our work

Background

In the United States (U.S), 17% of children aged 2–8 years old experience behavioral problems (1, 2), estimating a total annual cost of \$247 billion (3). Children's behavioral problems can have long-term consequences on their developmental process (4). Similarly, about 15–19% of children in the U.S. have a chronic illness (5), a physical or mental condition that requires frequent medical care as there is no cure (6). Mental and behavioral health problems are strongly associated with children with chronic illness, such as asthma (7, 8), and sickle cell disease (9).

Data show that parenting practices can mediate child behavior (10). Evidence-based parent interventions (EBPIs) decrease child behavior problems, with 60–70% improvement in behaviors sustained for one year (11). EBPIs also decrease maternal depression and promote parent financial growth (12). The question now is not whether EBPIs are effective, but rather *how* and *where* to implement these interventions (11, 13, 14) to reach children who are suffering.

There has been a strong movement to integrate EBPIs into primary care (15, 16). More than 90% of children in the United States see a primary care physician each year, making primary care ideal for early intervention (17, 18) and a powerful strategy to address disparities in care (18). Moreover, because pediatric primary care is the usual source of care for children, these settings are the best place to provide mental health support for families (19). EBPIs could become part of preventive services, with universal access for children (19) thus increasing patient access and decreasing stigma (20, 21). However, there are few specific recommendations on how to implement EBPIs in pediatric offices (20, 22). With the scientific premise that primary care settings can be an impactful place to reach families, we examined the determinants of implementing EBPIs in a Practice-Based Research Network (PBRN) of community pediatricians.

Conceptual Framework

Our work was informed by the Consolidated Framework for Implementation Research (CFIR) (23), an overarching framework comprised of five domains: intervention characteristics, outer setting, inner setting, characteristics of individuals involved, and the process of implementation. The CFIR has been widely used to evaluate pre, post, and ongoing implementation processes (24). We aimed to (a) examine how EBPIs would fit in pediatric primary care settings; (b) assess providers' perceived importance of EBPIs and interest in implementing such interventions; (c) gather insights into barriers to implementation, and; (d) explore modifications needed for the intervention to be successful.

Methods

This study employed semi-structured, in-person interviews with pediatricians and pediatric nurses from a PBRN affiliated with a Midwestern University. The institutional review board at the university approved the study.

Setting and Providers

Participants were recruited from a PBRN of community pediatricians affiliated with a Midwestern University. The network was created to improve the health of children and adolescents in the community by identifying and addressing gaps in knowledge about prevention, diagnosis and management of pediatric diseases in primary care. Currently, the network comprises 80 pediatricians and six pediatric nurse practitioners from 36 practices in the metropolitan urban, suburban, and rural areas of a Midwestern region. It is estimated that this group of pediatricians provides care to about 150,000

children, 59% of whom are white, and 32% African American, indicating that providers have experience with diverse populations.

Sample

We used a convenience sample of 16 pediatricians. The majority of practitioners identified as female ($n = 12$, 75%), and had an average of 18 years ($SD = 9.7$; range = 1 to 34 years) of experience in practice. Eleven providers (68%) reported being part of a pediatric group practice, three were in a multi-specialty group practice, one was self-employed, and one was at a single-physician practice. On average, providers reported that 21% of their patients were covered by Medicaid/Medicare insurance ($SD = 20\%$; range = 5–75%).

Data Collection

One study team member (MP) conducted semi-structured interviews with each participant, which averaged 25 minutes in duration. The interview guide was developed based on the CFIR (23), with a particular emphasis on intervention characteristics (i.e. characteristics of the EBPI) and the organization's inner setting. Participants were asked about the prevalence of behavioral disorders in their practice, the availability of resources for parents, and their preferences for implementing an EBPI in the pediatric primary care office.

Data Analysis

Each interview was audio-taped and transcribed verbatim. Two team members (MP, CWB) created codes using the CFIR constructs, developed the codebook and reviewed each transcript multiple times to increase familiarity with the data. Once the research team reached agreement regarding the codebook, two team members (MP, CWB) conducted dual independent review and coding of each transcript using NVivo, Version 12 (QSR International, Cambridge, MA). Because CFIR was used to shape the interview guide and the codebook, data were analyzed using directed content analysis (24) to guide the identification of variables and the development of initial codes (26). The reviewers reached a high overall agreement ($kappa = .93$), thus a consensus approach was not needed to resolve discrepancies (27).

Results

Researchers identified themes, which were organized according to the outer setting, inner setting, and intervention characteristics CFIR domains. Table 1 shows the frequency of codes within each domain.

Table 1
Frequency of code by CFIR domain

CFIR domain	Total # mentions	# providers mentioned
Outer setting	71	16
Inner setting	115	16
Intervention characteristics	89	16

Outer Setting

The outer setting domain has constructs that refer to factors outside of the organization. The *patients' needs and resources* (i.e., the extent to which patient's needs are known by the organization) was a salient theme. Providers reported the challenges with working families who would struggle to have time to attend EBPIs

"Basically, the barriers are... cultural and socioeconomic and just again a lot of people

have jobs, and it's hard... working full time and taking care of your family, carving out time to go to a class about something can be difficult" (Participant 6).

"I think unfortunately, parents don't always put enough weight into how they can help their kids through these tough things and um for a number of reasons because they're busy with other kids, because they have to work two jobs, because they're caring for another parent or a parent of theirs. A resource of time is such a limitation for so many families." (Participant 11)

Providers also described barriers surrounding the availability of and distance to providers:

"There's a lack of services... There's just not enough providers for the load of patients that need help... I mean, you can't get in. It takes 5–6 months to see someone sometimes... By that time, parents lose interest sometimes or they problem solve it themselves. You have to be exceptionally motivated and organized from a parent's standpoint to navigate all of the resources that parents have to access. And sometimes if you are in a lower socioeconomic status or if you're in a state where you're just trying to get food on the table for your family, the time it might take to access resources can be overwhelming." (Participant 10)

Inner Setting

Providers repeatedly expressed interest in offering a program to support parents, including offering office space during working hours or making it available on evenings/weekends

"We all see it as a huge issue with our families who cope with that. We'd be willing to kind of make moves or bends to accommodate them." (Participant 11)

"I've been hoping to do something like this at some point in time from this office because we have a space that is easy to get to, could be open in the afternoon or evening hours, when families would be available. I really think it's a need that pediatricians can fill, but we're very busy people and can't really do it during the daylight hours. But if there are other folks like yourself or other social workers or folks who've had training in some of these techniques to teach parents, what I envision is... more after hours or evening kind of sessions... But our office could be available for that. We have that big room that you were sitting in. But we also have sort of our lunchroom that's in the back that could be set up for a group discussion."(Participant 15)

Physicians also explained that the pediatric primary care setting is a convenient location and a "safe space," where physicians are trusted sources of information.

"Our parents have developed a big trust in us as physicians... And, I think with that trust if we have someone in our practice, they would feel that it was a unified, it's not somebody else, dealing somewhere else, that there might be communication, there might be a safe place to, they might have more confidence in seeing someone in the practice" (Participant 2).

Despite the enthusiasm, EBPIs seemed to be of low *relative priority*, providers emphasized the limited resources available for parents both within the pediatric primary care setting as well as in the community as a whole. Though some primary care offices offered resources for parents, such as recommended reading materials or additional consultations, many providers described them as insufficient for addressing parents' concerns:

"There's not enough. I think they [existing resources] are very helpful, but there's just not enough. They are sometimes hard to plug the parents into...Sometimes the counselors or the psychologists, they're full, the waiting time is long, so it's not that easy... They're not as available as we need them to be" (Participant 7).

Intervention characteristics

Cost of the intervention was a major theme; however cost, along with other themes on social determinants of health are reported elsewhere (28). The other main theme identified was related to the *intervention's adaptability*. Although providers felt that an EBPIs are needed and would be welcomed by parents, they acknowledged the relative complexity of many EBPIs. Some suggested having fewer sessions, while others recommended decreasing the length of each session.

"I think that for some problems, just a one-time visit might be enough... Other times, the parents may welcome a more intensive repetitive program, if that makes sense. It depends on the problem, right? So it would be nice to have either one of those... But we know, let's say with anxiety, cognitive behavioral therapy takes many visits to teach them what to do, because they didn't get there overnight. It'll take a while to fix it." (Participant 16)

Providers focused on the strategies to deliver the interventions. To increase convenience, they suggested in-home visits or offering the program in a community-based setting.

“Well, proximity is important. Location, location, location. The closer it is to people, the more likely they are to go... Whether that be a church, whether it be a community center, it would be allowing you to do this” (Participant 16).

Providers also emphasized the importance of thinking about who would deliver the EBPI. Psychologists, social workers, and peers (i.e., another parent) were suggested as viable options, but greater emphasis was placed on the interventionist’s personality and approachability.

“I think if it's convenient and the person's helpful, I don't think you need a PhD to counsel a family through some behavioral problems” (Participant 14).

There were mixed ideas regarding the intervention’s delivery format. Some providers suggested a group format to encourage feelings of support and camaraderie. Others recommended a one-on-one format to allay concerns about stigma and judgment.

“And people might have fears about strangers, if it’s in a group setting for example, a parenting class with ten strangers. They may feel uncomfortable or they don’t want to feel stupid. They don’t want to look like they don’t know how to take care of... their own child and they don’t want to show up because it implies that ya know that they’re not a good parent... So they might not want to come if it’s in a group setting.” (Participant 6)

“Well, I think one-on-one helps a lot, but I think also, a small group, I think also helps some parents to realize, ‘okay, they’re going through the same thing. It’s not just me.’” (Participant 7)

Providers recognized the need for this type of program as a treatment and as a preventative approach.

“I think that it's one of the most important things to do in life is to be a parent and the frustrating, challenging aspect of it is that no one gets training in it, right? I mean, we take time to teach people how to drive cars, we take time to teach people education at school. And you learn lots of facts and how to think and how to speak in front of a group and things like that. But you don't really learn how to be a parent and yet the impacts of it are huge... So I think it would be a great thing to try to find a way to support families and parents with all the complexity that they have to deal with... It would be really helpful to have better answers or better training for those families, ideally, ahead of time... So it's not just about intervening when there's a problem, although that can happen. It would be great to train people to know how to take care of their child, how to parent their child, I guess. You know how to take care of them, you know how to put their diaper on and stuff like that. It's more than that.” (Participant 15)

Discussion

In this pilot study, we examined the determinants to implement an EBPI in pediatric primary care setting. Providers highly endorsed the need for this type of intervention and its importance for their patients. However, they also mentioned challenges. Themes at the outer setting level, such as *external policies* regarding food availability and housing, highlighted the importance of addressing patients’ needs and

resources. Regarding the inner setting, providers indicated low *tension for change* when adopting EBPIs because they highlighted the need for such service for their clients. However, they also mentioned the (lack of) *availability of resources*, and low *readiness for change* due to competing demands, particularly space. These factors are related to how we will adapt the intervention and its delivery. Their *high motivation for the intervention* (characteristics of individuals) show, however, that these providers could be key champions in informing the implementation process.

Designing and adapting EBPIs to enhance the fit to new contexts (29) will be key to our success, especially if we aim to reach the most vulnerable families (30). Taking time to adapt the intervention for the context, using theory and stakeholder input (31) will be important. There is little guidance in the literature on how to adapt interventions for different settings (32), particularly as it relates to addressing outer setting contexts (33). Using the CFIR to guide our assessment highlighted the determinants that need to be addressed to enhance the fit of the intervention with the practices' culture and compatibility.

Conclusions

This pilot study contributes to the literature of EBPIs by providing empirical, theoretical guidance on the determinants that need to be addressed to adapt these interventions to pediatric primary care settings. Using a well-established framework for evaluation allow us to use consistent terminology and ensure that we are grounded in theory during our implementation process (34).

Declarations

- **Abbreviations:**
 - EBPI: evidence-based parent intervention
 - CFIR: Consolidated Framework for Implementation Research
 - FRAME: framework for reporting adaptations and modifications to evidence-based interventions
- **Ethics approval and consent to participate:** This study was approved by the Washington University Institutional Review Board #201711138
- **Consent for publication:** Consent for publication was obtained from all individuals who participated in interviews.
- **Availability of data and materials:** The qualitative data generated and/or analyzed during the current study are not publicly available because of participant's expectation that their identity would be kept confidential. De-identified transcripts may be available from the corresponding author on reasonable request.
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- **Authors' contributions:** AB conceived the research question. MP and AB developed the interviewed guide. MP interviewed providers. MP and CWB analyzed data. AB, MP and CWB drafted and reviewed the manuscript. All authors read and approved the final manuscript.
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