



Interdisciplinary Perspectives on an Integrated Behavioral Health Model of Psychiatry in Pediatric Primary Care: A Community-Based Participatory Research Study

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Abstract

Integrated behavioral health services have positive outcomes for patients and providers, but little is known about providers' perspectives on implementing these services. This community-based participatory research collaboration with a Federally Qualified Health Center examined provider perspectives on implementing a collaborative psychiatry consultation program in pediatric primary care. We interviewed providers (N = 14) from psychiatry, social work, primary care, and psychology regarding their experiences implementing the program, and their recommendations for its sustainability. Providers described interdisciplinary integration arising from the program, with accompanying benefits (e.g., increased access to care for patients with complex diagnostic profiles, increased learning and role satisfaction among providers), and challenges (e.g., increased burden on primary care providers, potential patient discomfort with team-based care). Our results highlight the complexities of implementing collaborative psychiatry consultation in pediatric primary care, and suggest the importance of supporting primary care providers and patients within this context.

Keywords Integrated behavioral health · Collaborative care · Psychiatry · Pediatric · Community-based participatory research

Integrated care models for providing behavioral health services to children and adolescents have grown in popularity over the last several years (Foy et al. 2010). Integrated behavioral health (IBH) services involve behavioral health specialists who are coordinated with, colocated, or fully integrated into primary care settings and who work together with primary care care providers to address patients' behavioral health needs (Ader et al. 2015). IBH services are effective at improving behavioral health outcomes (Gomez et al. 2014; Kolko and Perrin 2014), particularly for populations who are less likely to receive mental health services in traditional

outpatient settings, such as low-income and ethnic minority youth (Cunningham and Freiman 1996; Kataoka et al. 2002). With the shortage of child and adolescent psychiatrists (Kim 2003; Thomas and Holzer 2006), IBH teams that include psychiatry can reduce access barriers to psychiatric treatment (Connor et al. 2006). Despite the benefits of IBH, little is known about the acceptability of these models to providers in low-resource settings. This community-based participatory research (CBPR) study examined interdisciplinary providers' perspectives on implementing a pediatric IBH model of psychiatric consultation at a Federally Qualified Health Center (FQHC) serving low-income, primarily Latino patients.

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Integrated Behavioral Health (IBH): Benefits to Child Health

A growing number of children and adolescents receive mental health services through primary care IBH (Foy et al. 2010; Lavigne 2016). There are beneficial effects of IBH on mental health (Asarnow et al. 2015; Gomez et al. 2014;

Kolko and Perrin 2014; Miranda et al. 2003) and physical health (Bird et al. 2012; Cooley et al. 2009). For example, implementing IBH services in pediatric primary care is linked to improved emotional and behavioral problems in children (Asarnow et al. 2015; Kolko and Perrin 2014), as well as high satisfaction with behavioral health services following treatment (Gomez et al. 2014). Furthermore, in children with chronic illnesses such as asthma, IBH services and an integrated, team-based approach to care appear to improve quality of life and emotional functioning (Bird et al. 2012) and reduce hospitalizations and emergency department visits (Cooley et al. 2009). Notably, many findings of the benefits of IBH have been observed in the context of racially and ethnically diverse, traditionally underserved populations (e.g., Bridges et al. 2014; Gomez et al. 2014; Miranda et al. 2003). IBH models of care may be especially beneficial for low-income children of color, who may be more likely to access mental health treatment in the context of primary care settings (Bridges et al. 2014; VanderWielen et al. 2015; Miranda et al. 2003).

Implementing Pediatric Integrated Behavioral Health Services

Several researchers have described the implementation of IBH services in pediatric primary care (Adams et al. 2016; Gomez et al. 2014; Rapp et al. 2017). Gomez et al. (2014) focused on the stages of patient treatment within primary care IBH, describing how behavioral health consultants can utilize a multi-phase model (from triage, to assessment, to intervention) for delivering parent management training within primary care. The authors found support for reduced caregiver distress and high treatment satisfaction using this delivery model (Gomez et al. 2014). In another study with adolescents and young adults, Rapp et al. (2017) described an IBH service delivery model for improving depression and rates of care. Their IBH service delivery model consisted of care managers who provided evidence-based behavioral interventions, and expert practice leaders who oversaw the implementation of behavioral intervention at the sites. This model showed higher treatment rates and better depression outcomes for adolescents and young adults who were initially reluctant to engage in treatment, compared to enhanced usual care, suggesting that IBH models within primary care are relevant to improving access to treatment for hard-to-reach populations (Rapp et al. 2017).

Integrating Psychiatry into Pediatric Collaborative Care

One model of incorporating behavioral health services into primary care has been to utilize psychiatry consultation.

The role of the psychiatrist can include both direct and indirect consultation, providing education about mental health treatment options, leading the team, and helping to resolve potential discrepancies between medical and behavioral approaches to care (Raney 2015). In one study, primary care providers (PCPs) used a psychiatry telephone consultation model to consult about diagnosis and treatment planning, potential co-morbidity and its impact on treatment, and pediatric psychopharmacologic treatment (Connor et al. 2006). In this study, youth were referred for an initial psychiatric consult, and those with more severe mental health concerns were more likely to be retained for psychiatry follow-up after the initial evaluation (Connor et al. 2006). There is also evidence that psychiatry consultation increases PCPs' self-efficacy and skill in providing behavioral health care and can be feasibly implemented within primary care settings (Walter et al. 2017). These findings indicate the potential of psychiatry consultation models to improve patient access to IBH as well as increase PCPs' capacity to provide that care.

Provider Perspectives on Integrated Behavioral Health

Despite the growing literature on IBH models of care, less research has examined the perceptions and attitudes of the professionals involved. For IBH programs to be sustainable, implemented in the long-term, and have an impact on the most vulnerable youth, it is essential that they are designed to be acceptable to and adopted by providers who may face numerous barriers and job strains related to their work with high-need populations (Lasalvia et al. 2009).

Recent research suggests that primary care physicians are concerned by a lack of knowledge, experience, and skills in managing mental health concerns in their patients, and frustrated by an overburdened, fragmented and under-resourced system for treating mental health problems (Cole et al. 2014; Loeb et al. 2012). For providers in a low-resource, high-stress urban setting, working within collaborative teams may create opportunities to consult with specialists and be a source of satisfaction (Li et al. 1995). In one study of pediatricians, the co-location of mental health providers in primary care led to increased comfort for both providers and patients, improved communication between providers and patients, increased efficiency in managing psychosocial problems, an increase in educational opportunities, and improved quality of care (Williams et al. 2006). Similarly, the implementation of an IBH model in adult primary care has been associated with provider perceptions of improved knowledge of managing mental health problems, which could reduce the risk of provider burnout (Zallman et al. 2017). These studies suggest that IBH models of care are acceptable and desirable for providers. However, more

research is needed to understand how health care professionals experience the implementation of IBH, particularly the integration of psychiatry into collaborative care models. In addition, research is needed to examine the challenges as well as benefits of implementing IBH services, and which factors shape acceptability and long-term adoption. Further, partnerships between researchers and community providers are needed to translate research findings into practical recommendations for implementing IBH in pediatric primary care.

The Current Study: A CBPR Approach to Evaluating IBH in Primary Care

The current study examines the perspectives of pediatric and adolescent health providers who have been part of an IBH program in a FQHC serving predominantly low-income Latino patients in a large Southwestern U.S. city. This study grew out of a CBPR partnership between university researchers and clinic providers. CBPR involves developing partnerships between university researchers and community organizations, such as health clinics, to inform all stages of the research process, from the development of research questions to the interpretation and application of results (Israel et al. 1998). Thus, the CBPR approach was ideal for our goal of developing recommendations for the long-term implementation of IBH models of care. The medical director of the pediatric and adolescent IBH program at the clinic approached university researchers for help in evaluating the psychiatric component of the clinic's IBH program. From there, the program medical director and staff met with the university researchers to refine the research questions and methods of exploring the impact and outcomes of the program. Key research concerns that emerged from these meetings were how providers viewed specific aspects of the psychiatric consultation process, and what recommendations they had for improvement.

One specific component of the IBH program at this clinic involves the "psychiatry conference." The clinic's psychiatry conference model developed over many years in order to meet the mental health needs of children and adolescents enrolled in the IBH program. In this model, any of the clinic's pediatric and adolescent primary care providers (PCPs), social workers, or rotating pre-doctoral psychology students, identify and refer patients to the conference because of diagnostic complexity or medication considerations. Prior to the conference, staff obtain and score specific behavior rating scales, collect social work or psychology notes, and if possible, obtain outside medical and school records to send to the consulting psychiatrist. The psychiatrist then leads an interdisciplinary team that can include PCPs, social workers, and psychology pre-doctoral students, and medical students.

The psychiatrist interviews the patients and caregivers in the presence of other team members in a round table format. The psychiatrist uses the previously obtained information and interviews to determine diagnosis and treatment plan recommendations with the input of the other providers, and the family and team can discuss the psychiatrist's recommendations. In addition, in between patients at the conference, other cases can be staffed with the psychiatrist and team. The patient's own referring provider may or may not be present at the conference and receives a copy of the progress note. Psychiatrists are also available for phone consultation as needed.

In this study we explored the following research questions regarding the psychiatry conference: (1) What are the attitudes and experiences of providers related to implementing this model of care in pediatric and adolescent primary care? (2) What factors shape acceptability and adoption across providers? and (3) What challenges need to be addressed to implement this model long-term, and what do providers recommend to address these challenges?

Method

Participants

We interviewed 14 providers composed of 5 social workers, 2 psychiatrists, 6 primary care providers (4 physicians, and 2 nurse practitioners), and 1 school psychology trainee, to participate in individual in-depth interviews. All participants were recruited using purposeful sampling. The medical director of the pediatric and adolescent IBH program and the primary support staff for this program were members of the research team, and therefore were able to identify providers who had referred patients to the psychiatry conference and/or attended the psychiatry conference. Other members of the research team (i.e., those not directly employed by the clinic) recruited the participants. Fifty percent (N = 15) of providers initially identified were able to be contacted and of those, 93% (N = 14) agreed to participate and completed interviews.

Procedure

All participants provided verbal consent and interviews were audio recorded. Research assistants who conducted the interviews were trained in qualitative interviewing techniques. Interview questions were designed to elicit responses related to the range of participants' experiences with IBH and with implementing the psychiatry conference. Questions included, "What was it like to participate in the psychiatry conference?"; How do people at the meetings interact with each other?; Are there any benefits/disadvantages of the psychiatry conference?; What do you think about using

the psychiatry conference to provide behavioral health services?; and What was the impact of attending meetings with the psychiatrist?” The average length of interview was 23 min, ranging between 10 and 42 min. All interviews were transcribed and imported into Microsoft Excel for analysis.

Data Analysis

Individual qualitative interviews were coded and analyzed using an inductive thematic approach (Guest et al. 2013). Thematic analysis is a type of pattern recognition that identifies analytic codes, or themes, that emerge within the data (Daley et al. 1997). To protect against bias and encourage multiple perspectives on coding and analysis (Ryan and Bernard 2000), we utilized a team-based approach. First, the research team developed a coding template by reading together a sample of two interviews to compare similarities and differences in activities, settings, experiences, and perspectives expressed by participants in the interview (LeCompte and Schensul 1999). The team took notes of emerging themes by “constantly comparing” (Corbin and Strauss 2015) data within and across the two interviews. The team then sorted and organized the list of initial themes into broader categories, or codes, and developed a codebook that outlined the definition and application of each code. A similar process was carried out on subsequent interviews until the codebook was finalized, and no new codes or revisions to codes were made. This occurred after reading four interviews. Remaining interviews were then coded collaboratively by members of the research team to facilitate the transparency of each research member’s interpretations of the data.

Once data were coded, a thematic matrix was constructed to facilitate the recognition of patterns in the data (Guest et al. 2013). The matrix was organized by codes (columns) and participants (rows). Each cell in the matrix contained reduced or summarized data, such as short segments of text or phrases, revealing how each code manifested across participants. From this, a framework was developed to capture provider perspectives on implementing the IBH model of psychiatry, and the framework was finalized through feedback from the research team (Sobo 2009).

This study was approved by the Institutional Review Board at the University of Texas at Austin. All authors certify responsibility for this manuscript.

Results

One of the biggest effects of the IBH program, as noted by all participants, was that it led to a process of interdisciplinary integration. We define interdisciplinary integration as the process of providers from different disciplines (e.g.,

psychiatry, social work, and primary care) each contributing their specific expertise and knowledge to collaborative treat the patient. Figure 1 depicts the impact of interdisciplinary integration on team-based care and a culture of shared decision making within the clinic, revealing the ways in which interdisciplinary integration had multiple consequences that shaped both patient care and experiences as well as providers’ job structure and experiences. The figure highlights both the benefits (e.g. increased access to care, increased efficiency, and enhanced provider learning and role satisfaction; shown in white) and challenges (e.g., organizational and scheduling challenges, potential patient discomfort; shown in gray) arising from these processes, as seen through the participants’ perspectives. These benefits and challenges, as well as recommendations for increasing the effectiveness of interdisciplinary integration, are described in more detail below.

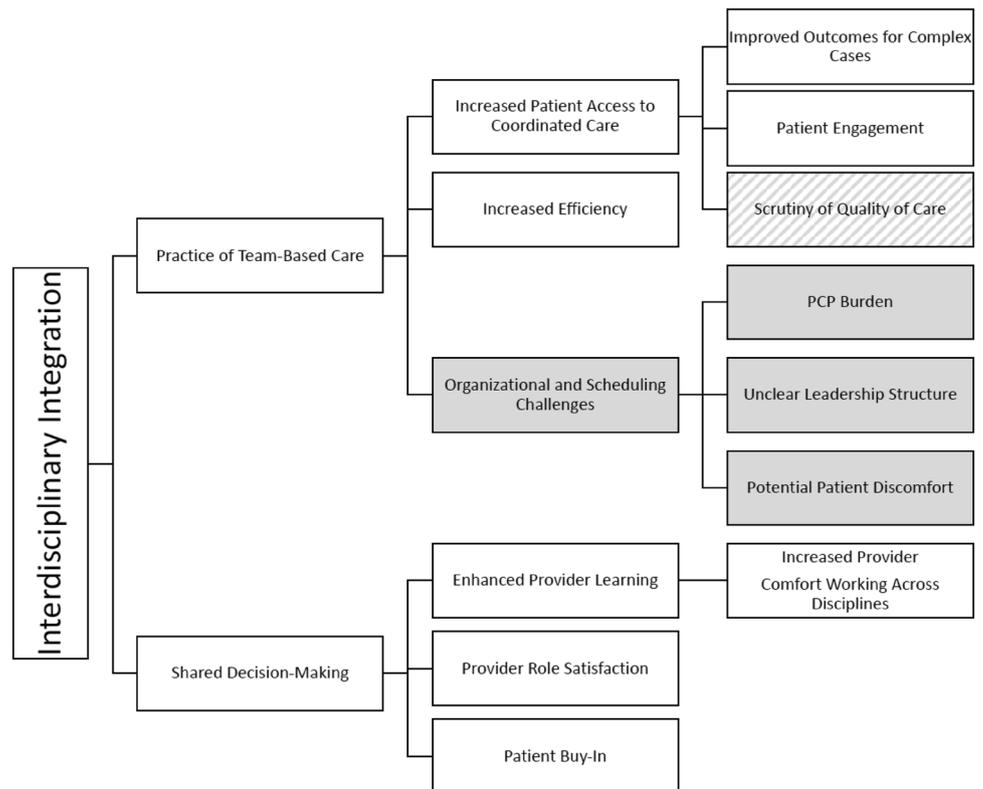
Providers’ Perspectives of Effects on Patients

Benefits

Participants saw increased access to coordinated behavioral health care as the primary benefit of interdisciplinary integration for patients. This increased access to coordinated care was particularly important for patients with complex psychiatric histories and diagnostic profiles (e.g., multiple co-morbidities). As one participant noted, providers “use the conference for teasing out behavior, ADHD, teasing out learning disorders.” Another described, “[the psychiatrist] gives us almost a little class after patient leaves if [it’s a] complex case.” This also pertained to co-morbidities between mental and physical health problems: “providers can bring up medical issues that are affecting mental health and [everyone] is able to see the whole picture.”

Several participants said that the care was more patient-centered, convenient and engaging for patients: “the fact that the services were available to them at a place where they already go and already have rapport with the physicians... it helps engage them better.” The interdisciplinary psychiatry conference also improved the clarity of and follow through with the treatment plan. Because multiple providers were present during the psychiatry conference, they could be aware of the treatment plan, buy into it, and support it: “afterwards we touch base with the [referring but not present] provider—this is what we talked about and this is the plan. We had EMRs [Electronic Medical Records] so everything was included from the appointment to labs to therapy notes... anyone could access it who’s working with the patient.” Another noted, “we always had a plan... regarding the medication I got good feedback on what I could move towards and I thought that the outcomes were good.”

Fig. 1 Providers' perceived benefits and challenges arising from interdisciplinary integration. Boxes in white represent perceived benefits. Boxes in gray represent perceived challenges. The partially shaded box (Scrutiny of Quality of Care) represents a mixed benefit and challenge arising from interdisciplinary integration



Challenges

Providers described perceived patient discomfort with the team approach as a primary disadvantage of interdisciplinary integration, particularly how it was organized within the psychiatry conference. Specifically, they noted that patients seemed to feel reticent, defensive, or intimidated by meeting with multiple professionals at once, particularly if being asked about psychiatric difficulties, suggesting that patients may not disclose all information that would be relevant to their case or diagnosis: “[they] feel like they’re in the hot seat or in the spotlight”; “all the people sitting in the room...[the patient is] already nervous, and [they] walk in and there’s 4 or 5 people sitting in the room. That can be intimidating.” Related to this discomfort was differences in how medical providers interacted with patients compared to mental health providers: “if you think about grand rounds when the residents are going around with the attending, they present all the facts of the case, and it’s all done in front of the patient. When you get into intellectual and emotional stuff, I think it’s way more sensitive. But I think the medical field is used to doing things that way, and there are differences between behavioral health and physical health.”

Several providers felt that patients would benefit from more one-on-one interactions with the psychiatrist because of this. One provider also commented that the low-income patient population might not feel empowered to question the

team approach, while higher-SES families might be more likely to vocalize their preference for more of an “individualized” approach: “patients don’t complain, and that’s bad in a way... If an upper-middle-class child came in they might complain...maybe ours don’t because they’re happy for help.” Finally, some providers noted that although the psychiatry conference increased access to psychiatric care, the psychiatric care may not always be ideal or evidence-based, e.g., “the psychiatry conference was mostly about medicine...but [behavioral treatment] was almost like the last line. We tried these interventions, but maybe we could have used evidence based treatment... it was often unsettling”, and “There is not a systematic metric to judge psychiatry patients who go through this program—only anecdotal”, suggesting that with increased access, also comes increased scrutiny by providers from different fields concerning quality of care. While this increased scrutiny may reflect an immediate organizational challenge, it may also be a benefit of interdisciplinary integration in the long run (i.e., leading to closer adherence to evidence-based practices).

Providers' Perspectives of Effects on Providers

Benefits

Participants noted several benefits for themselves arising from interdisciplinary integration. Most providers indicated

that the psychiatry conference was a learning opportunity which resulted in their having increased confidence with conceptualizing and treating patients with psychiatric diagnoses: “providers also gain experience and learn about medications and what to prescribe when, so their comfort levels have definitely built up over time...having psychiatry in the medical center really helps educate everybody, including physicians, nurses, medical staff, social workers.” Along with this process, participants described a growing comfort in interacting with psychiatrists as part of an interdisciplinary team. For example, they described “healthy communication” among team members, and stated “it was very collaborative.” They also expressed satisfaction in their roles on the team: “the doctors take the social workers’ advice.... Everyone respects everyone’s position, expertise, knowledge, and education, and that’s really, really nice.... We’re not just giving input; we’re participating in the plan... It’s like we’re equal here.” Likewise, one provider stated, “I feel like I get respect with what I have to say and I respect other people and their opinions and everyone contributes.” As another benefit, participants noted that they appreciated the clinic’s efforts to improve the treatment for the patients, and that this was related to increased job satisfaction: “I’m happy to be here....I think we do a pretty good job” and “I’m grateful we have this service...for many patients, it’s complicated going through other systems.”

Increased efficiency of care was another perceived benefit of the psychiatry consultation model. Multiple participants indicated that they viewed the psychiatry conference as efficient, well-organized and well-coordinated by the psychiatrist. One provider noted, “it’s everybody there at the same time, not having to get records from this person and that person. So the benefit was everybody in the same place at the same time, helping the patient feel connected and cared for.” Efficiency also arose from psychiatrists being present and offering expertise that complimented and furthered the care already given by clinic providers: “I think having the psychiatrist in the consultant role it really extends the expertise of that psychiatrist where he doesn’t have to extend himself to see every patient we see, but he’s doing a lot of training with our staff who see those patients when they come here for a regular appointment.” Again, the efficiency was viewed particularly in the context of improved care for complex cases. As one provider noted, “it really starts building up the capacity of the primary care staff to be able to deal with more mental health issues... It’s been real gratifying to see the internal capacity around mental health growing among the whole staff. To me, that’s one of the primary benefits.”

Challenges

A considerable challenge to the process of interdisciplinary integration included a disconnection between the psychiatry

conference and the PCPs. Providers noted that “it’s very difficult to have time away from patients to attend a psychiatry conference,” and because of the time commitment and scheduling difficulties, “not all PCPs can participate directly in psych conferences.” In addition, several providers mentioned that they experienced a burden to convey information from the psychiatry conference to patients. As one primary care provider put it, “I don’t think [the patients] come out pretty clear about [what the plan is] and they come to me to ask about that”; and as another described, “It’s a burden to be one of the only PCPs relaying all the info from [the] psychiatrist,” which led to the PCP feeling “out on a ledge.” This was linked to a perception that there wasn’t a system or method to the conference, and that the psychiatry conference didn’t represent truly integrated care: “Once the conference starts, we generally don’t [interact with each other].... If we’re going to have everybody in a room and the psychiatrist is talking the entire time, that’s not integrated care...it’s us watching the psychiatrist.” At the same time, providers noted an unclear leadership structure, which led to unclear treatment plans: “[we] have had some problems with who is ordering the meds and who is really responsible for this.”

Recommendations from Providers for Implementing IBH

Recommendations related to both increasing the perceived benefits of the psychiatry conference model within IBH, as well as resolving some of the existing limitations of the model. One popular recommendation was to increase the psychiatrist’s time with the clinic: “We could have psychiatrists here and available more often.” Along with this, they recommended hiring other behavioral health providers to support the long-term implementation of integrated behavioral health services: “If [the clinic] is going to go big time... we really need to maintain a larger core of therapists on staff and full-time prescribers like NPs [nurse practitioners].”

Several participants had recommendations to make the psychiatry conference more efficient, from scheduling to follow-up. One suggested, “having a more streamlined process on who to task for what” and another suggested “a clear exit form [that shows] this is what was discussed and this is who is going to do what next, so that the same things are not discussed the next time.” Additional recommendations included “spacing patients further apart... [to have] more time to do treatment planning after” and “doing a flow-sheet ...[for] coming up with resources that we can provide to families in a timely manner.” In addition, several participants noted that increasing the opportunities for case presentations had the potential to improve efficiency, quality of care received, and treatment recommendations: “I think prior to every patient [coming in] we should make a 5 min case presentation over

the patient - the goals, what the past history is, and what we're trying to do.”

Another key recommendation was to improve the integration of the patients' PCPs in the psychiatry conference and in team decision-making: “we've got to find a better way to integrate the patient's primary care provider. I think to me that's the most important thing.” They had suggestions for improving integration between psychiatrist and PCPs, such as “[I] would like to figure out [the] logistics of having psychiatrists at PCPs' clinic appointments...maybe a more formal phone conference arrangement for PCPs to each have telephone office hours each month with the psychiatrist.”

Finally, to ease perceived patient discomfort with the interdisciplinary team process, many participants recommended better preparing patients for the set-up of the psychiatry conference: “occasionally you can see somebody get offput by it [the group format], so it's about us doing a better job of preparing them.” Another suggested, “give the parents a list about what to expect... the person doing the confirmation call [could] greet the parent and remind them who is in the room.”

Discussion

This study examined providers' perceptions of their clinic's psychiatric consultation model within an IBH primary care program. The participants described a process of interdisciplinary integration arising from the psychiatry conference, which resulted in team-based care and a culture of shared decision-making. Our results revealed both the benefits and challenges of this process. Benefits of the psychiatry consultation model included increased clinic efficiency and patient access to more specialized services. Increased psychiatric support was perceived as helping to engage providers and patients, and improving treatment for patients with more complex diagnostic profiles. Interdisciplinary integration promoted a culture of shared decision-making across professions and with patients, which furthered learning, IBH role satisfaction, and staff and patient buy-in. It also fostered an environment in which the quality of behavioral health services could be scrutinized by the various disciplines involved. In addition to these benefits, organizational and scheduling challenges arose from this practice of team-based care. These perceived challenges were linked to an unclear leadership structure and increased burden on PCPs, as well as potential patient discomfort with team-based care. Related to these perceived benefits and challenges of interdisciplinary integration, providers offered several recommendations to improve the implementation of this model of psychiatry consultation.

Previous research has indicated that IBH models of care are related to better patient outcomes and higher satisfaction

(Gomez et al. 2014; Rapp et al. 2017), and that models of psychiatry consultation are feasible and improve providers' behavioral healthcare skills (Walter et al. 2017). Our findings begin to explain why IBH models are related to more positive outcomes for patients and providers. In particular, our results highlight the importance of access to collaborative psychiatric care for patients with complex diagnostic profiles, who otherwise might not get needed services within a primary care system. Our results emphasize not only the potential for increased provider skill in providing behavioral health services as a result of interaction with psychiatrists, but also the increased role satisfaction that emerges from the process of team-based decision making. This finding is consistent with previous research suggesting that collaborative team-based care in low-resource settings promotes provider satisfaction (Li et al. 1995) as well as increased educational opportunities, improved behavioral health knowledge, and improved quality of care (Williams et al. 2006; Zallman et al. 2017).

This study also explored the challenges of integrating team-based psychiatric services into pediatric and adolescent primary care. Some of the participants in our study noted the difficulties of integrating the patient's PCP into the psychiatry conference, as well as the burden on PCPs to convey information to patients. Previous literature has focused primarily on the educational and skill-building benefits to PCPs, which theoretically should decrease burden and burnout (Zallman et al. 2017). However, our findings highlight the complexities of implementing IBH in primary care, and show how organizational and scheduling difficulties might actually place additional job stressors on PCPs. Similarly, our findings suggest a potentially more nuanced picture of patient satisfaction with IBH related to the specific format of the psychiatry conference. Previous studies have shown evidence of high caregiver satisfaction when receiving services such as parent management training within primary care (Gomez et al. 2014); however, our study examined the integration of psychiatry services for more complex patients with significant comorbidities. Providers expressed concerns that the team approach may be intimidating to these patients and their families, which could prevent patients from disclosing sensitive, yet diagnostically important information. The recommendation to prepare patients for the format of the appointment and explain the purpose of the team approach in a standardized way may have significant benefits for patient and family comfort. In turn, increased patient comfort may lead to more open patient-provider communication, and ultimately impact the effectiveness of the treatment plan.

Study Strengths, Limitations, and Directions for Future Research

The current study has numerous strengths. Our CBPR approach allowed us to collaboratively design and conduct the study, analyze the data, and evaluate the research findings for the greatest relevance to clinical and organizational practice. The participating FQHC serves low-income, primarily Latino families, increasing the relevance of the findings to an underserved population that stands to benefit the most from well-implemented IBH programs. Another strength is the occupational diversity of the sample, which included all fields represented at the psychiatry conference. Thus, we were able to explore benefits and challenges of IBH that may not have been apparent if only focusing on one profession.

Despite these strengths, study limitations include the lack of data from patients and families regarding their experiences with the psychiatry conference, as well as limited information about provider and patient characteristics (e.g., demographic, diagnostic) that may have influenced perceptions. Another limitation may be related to our CBPR approach. This approach meant that the research team included staff from the psychiatry conference team, which could have biased interpretation of the interviews to be more aligned with the researchers' own experiences as providers. Future research should examine patient and family experiences with IBH services that involve a team conference approach, particularly to explore concerns of patient discomfort with this model. In addition, research should seek to further examine the benefits and challenges of the IBH model of care through mixed methods and testing hypothesized relations among the processes associated with interdisciplinary integration.

Conclusion

IBH models increasingly are a part of the landscape of pediatric and adolescent primary care (Foy et al. 2010), and have significant benefits for both patients and providers (Gomez et al. 2014; Williams et al. 2006). This CBPR study, representing a collaborative approach between university researchers and clinic stakeholders, is one of the first to explore interdisciplinary provider perceptions of consultant psychiatry services within an FQHC. Our findings highlight the underlying processes by which IBH models with psychiatry consultation may increase provider capacity and improve patient outcomes, as well as the challenges of implementing these models. Our results suggest the importance of creating organizational structures

that support the role of the PCPs and other disciplines, as well as taking steps to ensure patient acceptance of the team-based approach. The findings also emphasize the importance of fostering enhanced learning opportunities and role satisfaction for providers, which may be potent factors that motivate the acceptability and long-term adoption of IBH models of psychiatry in pediatric primary care.

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Compliance with Ethical Standards

Conflict of interest The authors declare no conflicts of interest.

Ethical Approval This study was approved by the Institutional Review Board at the University of Texas at Austin. All participants provided informed consent per the approved IRB protocol for the study.

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