



HHS Public Access

Author manuscript

J Community Psychol. Author manuscript; available in PMC 2021 May 01.

Published in final edited form as:

J Community Psychol. 2020 May ; 48(4): 1194–1214. doi:10.1002/jcop.22296.

Using stakeholder perspectives to guide systematic adaptation of an autism mental health intervention for Latinx families: A qualitative study

Colby Chlebowski, Ph.D.,

Department of Psychiatry, University of California, San Diego, Child and Adolescent Services Research Center

Eliana Hurwich-Reiss, Ph.D.,

Department of Psychiatry, University of California, San Diego, Child and Adolescent Services Research Center

Blanche Wright, M.A.,

Department of Psychology, University of California, Los Angeles

Lauren Brookman-Frazee, Ph.D.

Department of Psychiatry, University of California, San Diego, Child and Adolescent Services Research Center, Autism Discovery Institute at Rady Children's Hospital

Abstract

Aims: Embedded within a hybrid type 1 randomized effectiveness-implementation trial in publicly funded mental health services, the current study identified stakeholder recommendations to inform cultural adaptations to AIM HI (An Individualized Mental Health Intervention for ASD) for Latinx and Spanish-speaking families.

Methods: Recommendations were collected through focus groups with therapists (n=17) and semi-structured interviews with Latinx parents (n=29). Relevant themes were identified through rapid assessment analysis process and thematic coding of interviews. Adaptations were classified according to the Framework for Reporting Adaptations and Modifications-Enhanced (FRAME) to facilitate fit, acceptability, and sustained implementation of AIM HI and classify the content, nature, and goals of the adaptations.

Results: Recommended adaptations were classified through FRAME as tailoring training and intervention materials, changing packaging or materials, extending intervention pacing, and integrating supplemental training strategies. Goals for adaptations included improving fit for stakeholders, increasing parent engagement, and enhancing intervention effectiveness.

Conclusions: The current study illustrates the process of embedding an iterative process of intervention adaptation within hybrid effectiveness-implementation trials. Next steps in this research is to integrate findings with implementation process data from the parent trial to develop

Corresponding author: Colby Chlebowski Ph.D., Department of Psychiatry, University of California, San Diego, Child and Adolescent Services Research Center, 3020 Children's Way, MC 5033, San Diego, CA 92123, cchlebowski@health.ucsd.edu, Phone: 858-966-7703, Fax: 858-966-8805.

a cultural enhancement to AIM HI and test the enhancement in a hybrid type 3 implementation-effectiveness trial.

Keywords

Hybrid Type 1 effectiveness implementation trial; Adaptation; Stakeholder Participation; Autism Spectrum Disorder; Latinx

Introduction

There are increased efforts to implement evidence-based interventions (EBIs) in routine mental health services. Within these efforts, there is a strong emphasis on delivering EBIs with fidelity in order to reproduce effective intervention outcomes; however, the need to maintain intervention integrity must be balanced with the need to adapt interventions to respond to local settings and client preferences to increase intervention sustainment (August, Gewirtz, & Realmuto, 2010; Cooper, Shrestha, Hyman, & Hill, 2016). Indeed, a number of key implementation outcomes (Proctor et al., 2011) are important to understanding and informing adaptations. The first key implementation outcome is *appropriateness* or fit between the intervention and target population/context, with the understanding that perceived fit may differ based on the stakeholder (Aarons, Miller, Green, Perrott, & Bradway, 2012; Proctor et al., 2011). Relatedly, the *acceptability* of the intervention, which indexes whether one finds an intervention agreeable or satisfactory, may inform adaptations and is commonly measured via qualitative methods (Proctor et al., 2011). Adaptations may also be utilized in the service of establishing intervention *feasibility*, an implementation outcome measuring whether an intervention can be successfully delivered in a particular setting or with a specific group (Proctor et al., 2011). Within the context of implementation science, adaptations have multiple and meaningful purposes and, when used intentionally, can facilitate successful translation of research innovations into practice.

Why Study Adaptations in Community Implementation of Evidence-based Interventions?

Examination of EBIs in mental health settings indicates that therapists utilize a high rate of adaptations when implementing interventions (Aarons et al., 2012; Cooper et al., 2016; Lau et al. 2017; Stirman, Miller, Toder, & Calloway, 2013). Stirman and colleagues (2013) argued that classifying adaptations is crucial for accurate measurement of the impact of different types of adaptations on clinical (e.g., effectiveness) and implementation (e.g., engagement, sustainment) outcomes and initially classified adaptations as fidelity-consistent (adaptations that do not change the core elements of the EBI) versus fidelity-inconsistent (adaptations that change core EBI components) (Stirman et al., 2013; Stirman et al., 2015). Stirman and colleagues recently updated the classification system into the Framework for Reporting Adaptations and Modifications-Enhanced (FRAME) and incorporated the identification of the process and reasons for adaptations (Stirman, Baumann, & Miller, 2019). According to FRAME, when classifying adaptations, specificity can be maximized by identifying *when* modifications occur, *who* modifications were initiated by, *for whom* modifications are made, *what* intervention aspect is being modified (e.g., intervention content vs training/evaluation), the nature of specific content modifications, and *why* adaptations were made.

Why Focus on Cultural Adaptations?

Adaptations in mental health are often made to meet a client's clinical or cultural needs (Aarons et al., 2012; Cooper et al., 2016; Lau et al., 2017; Stirman et al., 2013). Cultural adaptation is defined by Bernal and colleagues (2009) as "the systematic modification of an evidence-based treatment or intervention protocol to consider language, cultural, and context in such a way that it is compatible with the client's cultural patterns, meanings, and values" (Bernal, Jiménez-Chafey, & Domenech Rodríguez, 2009, p. 362). Indeed, multiple frameworks have emerged to guide researchers in the cultural adaptation process. Examples include Resnicow and colleagues' (1999) two-dimensions of surface-structure adaptations and deep-structure adaptations and the Ecological Validity Model (Bernal, Bonilla & Bellido, 1995). Undoubtedly, there can be strong rationale for adapting an EBI due to culture, but adaptations are also warranted for non-cultural reasons such as addressing clients' readiness or motivation. Newer frameworks, such as FRAME have conceptualized cultural adaptations through use specifiers indicating why the adaptation are made (e.g., language, cultural factors, recipient ethnicity or religion) (Bauman, Cabassa, & Stirman, 2017).

A review of the literature (Baumann et al., 2015) found that few studies of evidence-based parent training interventions used systematic cultural adaptation frameworks to guide adaptations, tested specific implementation strategies or focused on implementation outcomes. Baumann and colleagues (2015) highlight the importance of using systematic cultural adaptation and implementation frameworks to improve EBI quality, uptake and sustainment, and reduce research to practice gaps, which are exaggerated for racial/ethnic minority groups. Although there remains debate regarding the costs and benefits of making cultural adaptations to existing EBIs (e.g., Piña, Polo & Huey, 2019), consensus exists that utilizing systematic frameworks and documenting adaptation processes are crucial for informing stakeholders and ensuring intervention integrity.

Opportunity to Optimize the Fit and Effectiveness of EBIs by Studying Adaptations in Hybrid Trials

A systematic method for adaptation is needed as cultural adaptations to EBIs must be guided by empirical results rather than relying on developers' perception of the unique needs of the targeted cultural group (Lau, 2006). The dual focus of hybrid effectiveness-implementation research designs, which assess both clinical effectiveness and implementation outcomes (Curran, Bauer, Mittman, Pyne, & Stetler, 2012), offer a platform to systematically identify and inform adaptation targets and subsequently test the impact of adaptations on effectiveness and implementation outcomes. A hybrid type 1 primarily testing the clinical intervention effectiveness while gathering information the implementation process and quantitative and qualitative data collected during hybrid type 1 trials can be leveraged to inform adaptations, which can be later piloted and tested within follow-up implementation trials. Similarly, Lau (2006) emphasizes the need to include diverse groups within effectiveness trials to first understand the generalizability of such interventions, and then to use gathered data to examine if a compelling argument, such as indication of differential clinical or engagement outcomes, exists for treatment adaptations. Using a *selective* and *directive* approach (Lau, 2006), hybrid type 1 effectiveness-implementation designs can

produce the empirical rationale for adaptations while also minimizing disruptions to EBI fidelity.

One hybrid-effectiveness trial that is well situated for a *selective and directive* approach was conducted for the AIM HI intervention (*An Individualized Mental Health Intervention for Children with ASD*; Brookman-Frazee & Drahotka, 2010; Brookman-Frazee, Drahotka, & Chlebowski, 2016). AIM HI is a parent-mediated and child focused intervention, with a corresponding therapist training model that was developed for delivery in publicly funded mental health settings. AIM HI is a package of evidence-based strategies designed to reduce challenging behaviors in children with autism spectrum disorder (ASD) who are receiving services for their co-occurring mental health conditions. AIM HI training consists of an introductory therapist training workshop followed by 6 months of structured consultation and performance feedback on AIM HI delivery with a current client.

The AIM HI intervention and the training model were recently examined in a large-scale hybrid type 1 trial to test intervention effectiveness, identify barriers and facilitators of implementation to support future deployment of AIM HI, and facilitate its large-scale sustainability in community mental health settings. Results indicate that children whose therapists participated in AIM HI training and consultation showed significant greater improvements in behaviors compared to children whose therapists did not receive AIM HI training and delivered usual care. These differences were mediated by therapist fidelity (Brookman-Frazee, Roesch, Chlebowski, Baker-Ericzen & Ganger, 2019).

Recently, a mixed-method study was conducted to categorize adaptations made in therapists' active delivery of AIM HI using a previous version of FRAME (Lau et al., 2017; Stirman et al., 2013). Findings revealed that therapists primarily made "augmenting" adaptations, including integrating other treatment approaches and involving other caregivers in treatment. Additional adaptations included simplifying intervention language and slowing the pace of treatment to facilitate client and caregiver understanding (Dyson, Chlebowski & Brookman-Frazee, 2018). These reported adaptations are consistent with those made by therapists using EBIs in children's mental health more generally (Lau et al., 2017; Stirman et al., 2013) and adaptations made to AIM HI were noted to be highly consistent with the individualized intervention treatment protocol (Dyson et al., 2018).

While therapist use of adaptations to AIM HI has been examined, to date there has not been systematic study of adaptations of AIM HI for use with different cultural groups. Examining adaptations for ethnic minority families is particularly relevant, given that there are well-documented racial/ethnic disparities in access to diagnosis and treatment services for children with ASD (Magaña, Lopez, Aguinaga, & Morton, 2013; Mandell, Morales, Xie, Lawer & Stahmer, 2010). Even when ethnic minority families are able to access treatment, disparities continue in client retention (Kumpfer, Alvarado, Smith, & Bellamy, 2002). These service disparities have been documented for Latinx families in particular (Magaña, Parish, Rose, Timberlake, & Swaine, 2012; Mandell et al., 2010) and have been proposed to exist for a variety of reasons including language barriers and a lack of culturally appropriate services (Alegria et al., 2007). In order to address these disparities in care for ethnic minority families, researchers have increasingly highlighted the need for ethnic minority parents'

first-hand accounts of their experiences with interventions to inform adaptations (e.g., Parra-Cardona et al., 2016). Although a few studies have examined Latinx parents' first hand experiences with parent training interventions, such as Parent Management Training (e.g., Parra-Cardona et al., 2012; Parra-Cardona et al., 2016), and others have explored parents' perceptions of barriers to their child's ASD diagnosis (Zuckerman et al., 2014), much less is known about the perspectives or recommended adaptations from Latinx parents at the integration of these domains - parents actively participating in mental health services with their child with ASD.

Current Study

The AIM HI community effectiveness trial provided a unique avenue to address this need to obtain the perspectives of Latinx parents as 50% of parents and 58% of children in the intervention sample self-identified as Latinx (Brookman-Fraze et al., 2019).

Implementation-related study activities, including qualitative interviews with parents and therapists, were used to inform two goals: 1) identify factors that may explain differences in AIM HI treatment process targets with a specific focus on exploration of cultural factors (e.g., acculturation and cultural beliefs about ASD symptoms, mental health services, and a parent's role in treatment) and 2) explore potential adaptations to the AIM HI intervention and training program to reduce disparities.

Initial analyses exploring the first goal used qualitative data collected from a subsample of Latinx parents and therapists delivering AIM HI (Chlebowski, Magaña, Wright, & Brookman-Fraze, 2018).

Three primary themes emerged from stakeholders including, 1) the recognition by both parents and providers of the need to address gaps in Latinx parental knowledge about ASD; 2) the emergence of differing perceptions regarding parents' desire to participate in their child's mental health treatment, with therapists often perceiving a lack of parental interest in participation, while parents reported a strong motivation to participate and 3) the identification of cultural influences that impact parent-therapist interactions during a child's therapy, including the cultural value of *respeto*/deference (emphasized by therapists), and importance of *personalismo*/personal connection (emphasized by parents) (Chlebowski et al., 2018). These previous findings provide a starting place for identifying avenues to enhance the AIM HI intervention as well as more broadly facilitate the community implementation of parent-mediated EBIs for Latinx families with a child with ASD.

Study Aims

To achieve the second goal of identifying potential adaptations to the AIM HI intervention and training program, the current investigation was conducted. The use of a qualitative approach was implemented in recognition of the need to broaden the implementation focus in clinical research to include perspectives from community-based care (Hohmann, 1999). Qualitative approaches have been noted to be a way of giving voice to participants and effectively involving the service users in the development and refinement of mental health interventions (Concannon et al., 2012; Peters, 2010). Gathering perspectives of stakeholders involved in implementation of an intervention helps ensure that the approach is appropriate,

feasible, and acceptable (Glasgow et al., 2012). As parents of Latinx children with ASD are important stakeholders in the AIM HI intervention, using their perspectives to refine the AIM HI intervention can help facilitate successful implementation in community mental health care and maximize the effectiveness of care.

The study's primary aim was to use stakeholder recommendations to inform adaptations to the AIM HI intervention content, delivery, and training to reduce disparities for Latinx and Spanish-speaking families with limited English proficiency. We adopted a *selective and directive* approach to identify and develop adaptations based on qualitative data collected from therapists' and Latinx parents' that described their first-hand accounts of delivering or receiving a structured, parent-focused intervention for ASD. We used an established adaptation framework (FRAME) to categorize recommended adaptations by intervention content, therapist training and intervention delivery to facilitate fit, acceptability and sustained implementation of the AIM HI intervention with diverse families in the community.

Method

Data were collected from a supplemental disparities study (Chlebowski et al., 2018) embedded within a Hybrid Type 1 effectiveness-implementation trial of AIM HI (Brookman-Frazer et al., 2019). Qualitative methods were used to gather targeted recommendations for AIM HI adaptations from a subgroup of therapists and Latinx parents who participated in the trial.

The specific qualitative approach used in the current study reflects qualitative methods in implementation science, which have been recognized to differ from traditional qualitative approaches (US Department of Health and Human Services, 2018). The approach was designed to be practical and targeted, with the goal of addressing the specific implementation-related topic of improving the fit and acceptability of the AIM HI intervention for Latinx families via perspectives from multiple stakeholders (parents and providers) served across multiple mental health programs. Consistent with the implementation science approach to qualitative methods, the qualitative data collection in the current study was designed to be time limited, occurring at a single time point post-implementation, with data collection and analyses occurring in a rapid fashion to inform future AIM HI implementation.

Participants

Therapist participants.—Therapists were eligible if they participated in the training condition of the AIM HI effectiveness trial and enrolled in the AIM HI study with a client or parent who identified as Latinx. See Table 1 for participant characteristics. A sample of 80 potentially eligible therapists was identified and sent a mailing with an invitation to participate in the additional research activity; 7 were unable to be contacted and 17 therapists responded to the invitation to participate and participated in the focus groups, providing data for the current analyses. Therapists in the current study did not differ significantly from therapists from the AIM HI effectiveness trial who did not participate in the supplemental activities on age, gender, race/ethnicity, mental health discipline, years of

clinical experience, or licensure status. Written informed consent was obtained prior to participation in the focus groups. Participating therapists were compensated with a \$35 gift card.

Parent participants.—Eligibility criteria for parents included participation with their child in the AIM HI effectiveness trial (i.e., received psychotherapy services from a therapist receiving AIM HI training) and parent self-identification as Latinx (indicated on a demographic questionnaire collected upon enrollment in the effectiveness trial). A sample of 63 parents were identified as eligible and contacted about participation in the interviews and 38 parents expressed interest in participating. Of the 38 interested parents, 5 were unable to be contacted by phone for the interview and 4 were a “no show” for the scheduled interview and did not respond to follow up phone calls. Twenty-nine parents consented to participation and completed the interview. All self-identified as Latinx; 86% were fluent in Spanish and 66% identified Spanish as their preferred language and completed their interview in Spanish. All families were insured by MediCal. See Table 1 for participant characteristics. Compared to eligible parents who did not participate, parents in the current study did not differ significantly on age, gender, or socioeconomic status. Parents participating in the interview had lower levels of maternal education than non-participating parents from the AIM HI effectiveness trial ($X^2(2, N=202) = 11.25, p < .01$) with fewer participating parents completing high school or obtaining a college degree. Verbal informed consent was obtained prior to participation in the semi-structured interviews. Parents who completed the interviews were compensated with a \$35 gift card.

Procedure

Focus groups.—A total of 6 therapist focus groups, ranging in size from 2 to 5 therapists, were completed. Focus groups were used to allow for participant interaction, promoting the sharing and collection of a diverse range of responses (Morgan, 1996). Each focus group was 1.5 hours in length. The focus groups were moderated by the first and senior authors. The moderators were non-Latinx White females who are AIM HI experts, licensed clinical psychologists, with qualitative interviewing and coding experience and experience leading provider focus groups. The focus groups moderators were not directly involved in training participant therapists. The 3rd author attended the focus groups to conduct the rapid assessment process. She is a Latina with Spanish as her native language who had been previously training in qualitative data collection and coding. At the time of the focus groups, she had a bachelor’s degree and was involved in coding video recorded therapy sessions for AIM HI fidelity. The focus groups were conducted in English, audio recorded, and transcribed by English-speaking transcribers.

Parent interviews.—Due to the majority of parents’ preferences to participate by phone, interviews rather than focus groups were conducted to collect parent perspectives, which allowed for the greatest number of participants. Interviews with self-identified Latinx parents were completed by phone and were

conducted in parents’ preferred language (English or Spanish), with 62% of parent interviews completed in Spanish. Interviews were conducted by two female bilingual,

bicultural staff members who self-identified as multi-racial and Latina and are native Spanish speakers. In training and debriefings interviewers discussed the importance of building rapport with the Latinx parents through prolonged engagement (Williams & Morrow, 2009) by engaging in *platica* with parents throughout the interview. Interviewers had bachelor's degrees and were trained in qualitative data collection by the first or senior author. Interviewers had experience conducting research outcome interviews with parent participants as well as collecting qualitative data via interviews. A subset of recordings were reviewed by the first author for quality assurance. Parent interviews were an average 44 minutes in length (range 28–76 minutes). Interviews were recorded and transcribed by a professional transcription service (TranscribeMe). Recordings of interviews conducted in Spanish were translated by transcribers fluent in Spanish.

Measures

Demographic questionnaires— Demographic information was available from surveys completed by all participants as part of their participation in the AIM HI effectiveness trial. Caregivers completed a baseline questionnaire providing demographic information including age, gender, and race/ethnicity for themselves and their child. Caregivers self-identified their preferred language (English or Spanish). Caregiver characteristics including marital status, years of education, employment status, and household income were also collected. Therapists completed a web based demographic survey which included questions about personal and professional characteristics including age, gender, race/ethnicity, mental health discipline, licensure status, and years of professional experience.

Focus group guide.—The therapist focus group guide was developed by study investigators in collaboration with a study consultant who specializes in the study of racial and ethnic disparities among children with autism and developmental disabilities. In the therapist focus groups, a semi-structured guide of open ended questions along with prompts and follow up responses was utilized.

The focus group guide included sections asking for recommendations to improve training, intervention materials and intervention delivery; see Table 2 for sample prompts from these content areas. A funnel approach was used such that open-ended questions were initially presented to the group followed by specific follow up prompts. This approach was used to encourage therapists to initially share their perspectives and experiences with the AIM HI intervention process more broadly and then use the follow up prompts to understand whether therapists made specific modifications for Latinx families and elicit recommendations to determine whether revisions to the AIM HI training and clinical interventions protocol were indicated when delivering AIM HI with Latinx families.

Parent interview guide.—The parent interview guide followed a semi-structured interview approach with a pre-determined set of open-ended questions to allow the interviewers to follow the parents lead during the interview and explore relevant responses in more depth. Parents were asked to share their experience with mental health services more broadly, discuss their experiences participating in their child's treatment sessions with their AIM HI therapist and share their perspectives on factors that influenced their participation in

their child's sessions. Parents were specifically asked to share perspectives on the AIM HI intervention materials and provide feedback about ways they could be improved and made to be more relevant and applicable for their child and family (see Table 2 for sample prompts).

Data Analytic Plan

Data were analyzed using thematic analysis to compare findings and identify themes. Qualitative data were collected using strategies to ensure the credibility, confirmability, transferability, and trustworthiness of the data (Wu, Thompson, Aroian, McQuaid, & Deatrck, 2016). In conducting the study, data were triangulated across 1) sources through data collection from therapists and parent participants, 2) methods through the use of both focus groups and semi-structured interviews, and 3) investigators through the use of multiple interviewers to complete the parent interviews, having transcripts coded by multiple coders, and guiding data analysis by interpretations from authors who did not participate in the initial study or data collection (Creswell & Miller, 2000; Duffy, 1987). Data objectivity was maintained through investigator consultation with an expert in the field of disparities research, who was not directly involved in data collection and analysis.

The therapist focus groups were initially analyzed using a rapid assessment process (Beebe, 2001; Hamilton, 2013) with findings categorized using real time notes aligned with domains pulled from the focus group guide. The rapid assessment process is a qualitative inquiry approach that collects data through direct contact with participants and utilizes triangulation and iterative data analysis and collection to quickly develop an understanding of qualitative data. For the current project, transcripts of the focus groups were reviewed to confirm identification of initial themes from the parent interviews and identify additional recommendations from focus group participants, allowing for data source triangulation (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014). Peer debriefing between the first and senior author allowed for detailed discussions of the data and interpretation of the emerging themes.

The parent interviews were analyzed via a consensus coding process in which coder reliability was assessed by independent coding followed by review and group discussion to reach coding consensus, which has been identified as a common strategy in qualitative methods in implementation science (US Department of Health and Human Services, 2018). A stepwise development of the coding system was employed starting with utilization of a codebook developed by investigators based on a priori themes informed by the existing literature. The codebook contained definitions of the codes, guidelines for use, and examples of representative quotes appropriate for inclusion in the coding category. Five transcripts were coded by the first author and served as "gold standard" comparisons for the coding team. The remaining 24 transcripts were independently coded by four research assistants with training in qualitative methods, with Spanish interviews coded by two bilingual, bicultural coders who are native Spanish speakers and identify as multi-racial and Latina. Of the remaining transcripts, 9 were randomly selected and double coded by the first author, the remaining 15 transcripts were double coded by the coding team to allow for comparison of the codes and resolution of coding disagreements. Quotations provided in Spanish are noted in the manuscript with the abbreviation SP.

For the analyses for the current study, transcripts were analyzed via a consensus coding process using a codebook developed by investigators based on themes informed by the adaptations literature and topics outlined in the parent interview guide; data consisted of content from the transcripts identified and coded as recommendations, prompted by questions from facilitators. The NVivo (QSR International, 2012) qualitative analysis software program was used to complete the coding to allow for aggregation of codes to identify emergent themes and to ensure systematic analysis of coded data (Seale & Silverman, 1997).

Adaptations were classified according to Stirman and colleagues' Framework for Reporting Adaptations and Modifications-Enhanced (FRAME; Stirman et al., 2019) to classify *what* was being modified, the *nature* of the specific modifications, and the *goals* for each adaptation. For the nature of specific modifications, the recommendations were classified using FRAME's specific content categories with specifiers indicating why the adaptation was made. Adaptations made for cultural reasons were identified in this manner. In addition to FRAME classifications, the current study collected stakeholder identified reasons for each adaptation, which were used to identify the goal of the proposed adaptation.

Results

The following adaptations were recommended to AIM HI training and intervention delivery, themes were classified according to adaptation types described in FRAME (Stirman et al., 2013; Stirman et al., 2019). Recommendations were provided in two domains informed by categories in the FRAME model: 1) therapist training and 2) intervention content and contextual modifications. Table 3 summarizes application of the FRAME model to categorize specific therapist and parent recommendations as well as noting the reason for adaptation, goal of adaptation and each adaptation type. Quotations provided in Spanish are noted in the manuscript with the abbreviation SP.

Domain 1: Adapting Training for Therapists

Recommendations regarding adapting training were gathered from therapists and parents. Recommendations from therapists were primarily collected from responses to targeted questions directed to therapists requesting training adaptations for AIM HI delivery with Latinx and Spanish-speaking families with limited English proficiency. Parents were not asked directly about recommendations to AIM HI training, rather their adaptations emerged from recommendations about therapist in-session behaviors that then informed therapist training.

Improving fit for client language.—The first identified reason for adapting training, provided in response to a specific line of inquiry, was *improving fit of the intervention in consideration of clients' language*. In service of this goal, therapists recommended *tailoring training language* and conducting the introductory AIM HI training workshop in Spanish for therapists who are intending to deliver the intervention in Spanish to their clients, as it would better support therapist learning and AIM HI delivery in Spanish. Therapists identified the challenges of learning an intervention in one language while delivering it in another. One therapist stated:

You can kind of imagine it's like driving manual versus an automatic. It's like flipping your brain to think a certain way. Having some of it- the whole workshop or part of it- in Spanish could be helpful with that effort it takes.

Therapists noted that if delivery of the entire workshop in Spanish was not feasible then providing additional translated resources, such as additional Spanish versions of the intervention demonstration videos that are shown at the initial training workshop, would be beneficial. A portion of the training videos are already Spanish. As one therapist noted:

[Having] videos in Spanish I think are so helpful because we use such clinical language and Spanish doesn't often have a direct clinical transition. For me, I'm very visual, so if I can see some of the verbiage being used, that would be cool.

Increasing fit for client culture.—Other recommendations were provided with the goal of *increasing fit of the intervention in consideration of cultural factors*. Therapists indicated a need for additional training in a culturally-informed approach to intervention delivery at the initial training workshop, particularly in the context of delivering a manualized intervention and recommended *integrating supplemental training strategies*. One therapist asked, “[In the training workshop], can we also include cultural humility? Just a little bit... and [discuss] what the approach is to working with families of different racial and ethnic backgrounds.” This theme was echoed by therapists who identified concerns about how to respond to situations in which parents are “saving face” and agreeing with therapists in session, even when they do not understand the concepts being discussed; this was identified as a behavior that might be more likely to be displayed by Latinx families. A recommendation to focus on cultural humility and acknowledge the diversity within Latinx families was identified and highlighted by a therapist's comments about the need for providers to “just recognize Latino background. There's such variability that it is not homogeneous right? There's a lot that's very different – and so I think you can't just know everything you can about one.”

As previously mentioned, authors sought parent perspectives about therapist in-session behaviors to inform specific recommendations for therapist training. The concept of *familismo*, or the importance of family loyalty, closeness, and connection, (Kapke & Gerdes, 2016) emerged from the parent interviews as a relevant cultural theme that was reflected in parents' identified need for involvement of other family members into AIM HI delivery. Parents expressed the desire to directly involve family members, beyond including both caregivers, in the child's treatment. One parent stated (SP), “It would be good if [therapists] involved all of the family of the child with autism.” Another commented:

I think that also, once in a while, a therapy session at home with some relatives, the closest ones. For example, his brother was in some therapy sessions. Call upon other family to be more involved, not just the parents, the siblings.

Parents also highlighted a need for therapists to take time to truly learn about the family's cultural context and the family situation prior to beginning treatment in order to establish a dynamic that allows for the therapist to most successfully help the family. As one parent emphasized (SP):

So then the therapist, my personal point of view is, has to know how to understand, number one, the beliefs, the culture, the parent's religion, to be able to intervene without there being neither a negative interaction [in session] nor offensive behavior towards the parents.

These recommendations did not reflect adaptations to the intervention materials or content but rather reflected how therapists could learn to improve the cultural responsiveness in interactions with clients and as such were classified as relevant to the therapist training domain.

When asked to consider the cultural factors that might influence AIM HI treatment for Latinx families, therapists overwhelmingly endorsed the concept of *respeto*, noting that that Latinx parents often did not speak up or ask questions in therapy session due to the cultural practice of deference to professionals. As one therapist stated:

I believe this is a cultural thing and that's a lot of the families that I work with - they feel they want to be very cooperative with treatment and they don't want to feel like they're wasting my time. So a lot of families will be more apt to say, "Yes, I understand," when they don't understand... It's just my impression that culturally it's harder for them to speak up and say, "You're going too fast." or "I don't understand that. Let's explore that more." Or whatever. If we're talking about how we can improve services for Spanish speakers, the therapists should be more aware of that difference.

While parents did not reference the concept of *respeto* directly, they did provide specific suggestions when asked for recommendations that could help parents feel comfortable participating in session. The primary recommendation was that therapists directly encourage parents to participate and ask questions. One parent stated that therapists should be "letting [parents] know that they're welcome to ask any question. No question is a dumb question, I guess you could say. All questions are important, and they all have to do with benefiting their child." Another recommended that (SP) "therapists should always be asking [a parent] if you have any questions, or if after talking a while, [say] "do you understand what I said?" One parent summarized that the important element is "just making sure there's that line of communication. That [parents] know that they are not alone and if they have questions there's somewhere to call."

These recommendations from both therapist and parents highlighting the need to consider the cultural values of *familismo* and *respeto* was conceptualized as a training need, with AIM HI training benefiting from tailoring that help therapists learn to recognize, consider, and respond to the cultural factors that may be influencing their treatment.

Domain 2: Content and Contextual Modifications

Recommendations regarding adapting the intervention materials and delivery came from both therapists and parents. Although therapists and parents commented on similar themes, specific recommendations varied by stakeholder; therapists tended to identify materials to be added to the intervention while parents' recommendations tended to focus on therapists

providing additional information and context to the intervention materials that were currently in use.

Improving fit for client language.—The first identified reason for adaptation was to increase the accessibility of the intervention to Spanish-speaking families; this was classified as *improving the fit of the intervention in consideration of clients' language*. Not surprisingly, when therapists and parents were asked about implementing AIM HI with primarily Spanish-speaking families, recommendations for *tailoring language* emerged. Therapists recommended that additional translated AIM HI materials be added to the protocol to provide additional information and context. As one therapist described, the additional translated materials could be “an example you could share with the family of [the intervention form] completed in Spanish.”

Parents highlighted the importance of having therapy sessions in parent's preferred language, even when their child's primary language was English, making comments such as, “It is important to know what is the more preferable language [for the family], so you can make the sessions in the language.” One parent clearly identified the challenge when working with providers that they feel are helping their child in English, but not effectively communicating with them in Spanish. She stated (SP):

It would be ideal to be able to find... more [providers] who speak Spanish. When I began there was a very good therapist ... which very much helped my child. She did not speak any, any Spanish at all. For me it was traumatic to have to come and not know how to explain to her or ask her to help. I think that [the issue of language] it is very important for parents that just begin and do not speak the English language.

One parent noted (SP) that the language the therapy session is conducted in “is important, because the child speaks English, but one [parent] sometimes does not understand the things that [therapists] tell the children, then the Spanish is also important.” Attention to the parents' knowledge and comfort with the language was recommended, even for parents who were able to converse in English, but felt more comfortable speaking in Spanish, as parents noted that these were situations in which the language barrier may have a subtle, though significant, impact on session interactions. When asked to identify how therapists might address language barriers one parent stated,

Well, the language barrier, because some people know how to speak English, but they don't know how to understand the words, the vocabulary. So if they are stuck with a certain word and it's beyond their knowledge, I don't know, maybe [the therapist] could break down the word, or maybe ... say what the word means.

Increasing client engagement.—The next provided reason for adaptation was to promote parents' participation and engagement in AIM HI and the goal was identified as *increasing reach or engagement*. Therapists discussed the potential benefit of making *changes in packaging or materials* such as providing content to parents via videos. As one therapist described, “It'd be cool if there was a website for the parents to access, but maybe if it had some video models.” Another clarified that videos could help parent engage in treatment by reducing pre-treatment anxiety and help parents know what to expect from

treatment, “maybe they can see ahead of time, if they can go to a website and see, ‘This is what your sessions with your therapist is going to look like with your child.’ That’s the bait, because a lot of them are fearful [about starting treatment].” Therapists also recommended using video testimonials from parents who had previously completed the intervention so that new parents beginning AIM HI with their child could hear about the process from the perspective of other parents.

Parents’ recommendations to *increase reach or engagement* involved *tailoring* delivery of the intervention. Parents highlighted the need for increased information from therapists about what parents should expect in their child’s treatment and asked for information to be shared about their child’s overall treatment plan and what they could expect in forthcoming sessions through clear conversations in session. Parents also provided recommendations for therapists assigning home based practice, with the goal of keeping the assignment simple and short to allow for success. One parent recommended (SP) therapists work on “helping [parents] to find a time [for home-based practice] that is not very long” and another (SP) encouraged simplicity saying, “One [recommendation] may be giving strategies that are not so hard to follow.”

Improving intervention effectiveness.—The final reason identified by stakeholders for adaptations to intervention materials and delivery was provided by both therapists and parents and was related to facilitating parent understanding and learning of the intervention. As AIM HI is a parent training intervention, recommendations designed to enhance learning were classified with the goal of *improving the effectiveness of the intervention*.

A recommendation for *tailoring* the intervention was provided by therapists and parents. Therapists recommended simplifying behavioral terminology and reducing behavioral terms used in session; for example, replacing the term “antecedent” with the phrase “what happens before.” This recommendation was echoed by parents who advocated for therapists’ use of clear language and avoidance of technical jargon, with one parent recommending that therapists “always answer us the [way] most clearly possible, many times [therapists] talk in jargon but [they should be] clear as possible so we can understand them.” Another parent stated (SP):

There are times when we as parents need [therapists] to explain to us with simple words this information. And I think it would be very beneficial if we understand what they are explaining. Not with scientific concepts or words that times we do not understand, but that if they explain it with [simple] words it’s very beneficial.

Parents also encouraged therapists to provide parents with verbal examples to explain concepts during discussions in session with one parent recommending (SP), “instead of the questions [therapists] ask, they should give an example, right? [Therapists] should always give examples.”

Therapists also provided recommendations for *changes to intervention packaging/materials*. Therapists suggested adding a glossary of intervention terms for parents with one therapist stating, “using and having glossaries, or just information about all the jargon and terminology that we use in more parent-friendly ways [would be helpful], especially in

Spanish too.” Another material that was recommended was the addition of a parent workbook. Therapists noted that using a workbook could help increase treatment continuity by helping parents keep track of materials and allowing them to easily reference previous lessons. One therapist recommended providing parents,

Something that they could carry with them. Something easier for them to keep track of. I think a binder would be good. If they had that binder and if they come into sessions, if they’re having questions about initial sessions we can always go back and say, “Oh, remember this?” and [then] we are talking about it.

Therapists also recommended utilizing technology to facilitate parent learning by reminders for parent’s use of skills outside of session. For example, one therapist shared:

My pie in the sky idea is texting them what intervention we’re working that day like three or four times a week. You know, a little bit of a pat. Like great job. Remember to continue to prime them. Or keep up the good work and remember to use that social skill.

Another therapist noted that text messages could help providers keep in touch with parents between sessions and serve as reinforcement for parents such as, “Keep it up, you’re doing a good job” or could be a reminder what had been worked on in the previous session.

The final recommendation designed to improve intervention effectiveness was from parents and involved *extending the pacing* of intervention delivery. Parents recommended that the treatment be targeted and focused on small specific goals. One parent stated, “I would prefer that, to work with one thing at a time, than to work with multiple stuff at a time,” while another parent commented, “Don’t try to fix everything at the same time, like if I have a problem with seven things, do one at a time.”

Discussion

This study used a targeted qualitative approach to identify therapist and parent recommendations to inform cultural enhancements to community implementation of AIM HI. Data were collected as part of a supplemental disparities study (Chlebowski, et al., 2018) embedded within a hybrid type 1 randomized effectiveness-implementation trial and was implemented in direct response to calls for a selective and directed approach to inform and guide cultural adaptations to improve EBI quality and implementation outcomes (Bauman et al., 2015; Lau et al., 2006). The current study collected recommendations about proposed adaptations to intervention training, content, and delivery from therapists and Latinx parents who had previously delivered or received the AIM HI intervention. Using the FRAME adaptation framework, recommended adaptations were classified by both content and goals to inform refinements to the AIM HI intervention (Stirman et al., 2019). Consistent with the goals of a hybrid type 1 study (Curran et al., 2012), this study systematically collected implementation process data within an effectiveness trial to inform future efforts to maximize implementation. This study adds to the emerging body of literature examining adaptations within similar trials of mental health EBIs (e.g., Santesteban-Echarri et al., 2018; Smith, Stormshak & Kavanagh, 2015) and is an example of how a community

implementation trial can facilitate understanding and help address service disparities (Stahmer & Brookman-Frazee, 2019).

Since adaptations are often used to tailor an intervention to increase fit and meet the needs of clients, the inclusion of stakeholder perspectives is critical. Although limited studies have started to explore the perspectives of Latinx parents participating in parent training interventions (e.g., Parra-Cardona et al., 2012; Parra-Cardona et al., 2016), the perspectives collected in this study, of Latinx parents actively participating in community mental health services with their child with ASD, offers a unique contribution to the literature.

Using the FRAME framework, the current study recommendations were classified primarily as tailoring training and intervention materials, changing packaging or materials, extending intervention pacing, and integrating supplemental training strategies. Goals for adaptations included improving fit for stakeholders, increasing parent engagement, and improving intervention effectiveness. Themes revealed primarily intervention-level adaptations centering on adapting the AIM HI intervention content and therapist training. Both therapists and parents identified a need for additional training and guidelines to help therapists systematically tailor the language and AIM HI delivery based on the cultural values and language of their clients and the Latinx values of *familismo* and *respeto* were particularly emphasized. A large body of literature has documented the importance of incorporating Latinx cultural values within youth treatment (e.g., Calzada, 2010; La Roche, 2002). While there have been calls to integrate these values for adaptations to intervention content (e.g., Domenech Rodríguez, Baumann, & Schwartz, 2011), the current study results underscore the importance of including these values explicitly in the EBI training process with providers, an approach that has been emerging to increase the fit of mental health interventions across diverse treatment settings (e.g., implementation in urban schools; Eiraldi et al., 2015). A benefit of integrating values into the initial training (versus solely in the intervention content) is that it reduces the risk of providers making erroneous assumptions about their client values simply because clients identify with being Latinx; this is aligned with existing guidelines to not overgeneralize and thus, stereotype racial/ethnic groups (Betancourt & Green, 2010). Providing therapists with training allows them to be selective and deliberate about applying their values knowledge when it is appropriately *indicated* with a client and family.

Although broader themes were identified by both parents and therapists, investigation into specific recommendations revealed important differences in therapist and parent perspectives. While therapists often recommended the addition of new intervention materials (e.g., glossaries, workbooks, videos), parents recommended changes in delivery including the therapist providing verbal examples of intervention content, removing jargon or technical language from in session discussions and simplifying treatment to focus on one intervention target at a time. Indeed, a similar finding about the need to simplify language and avoid use of jargon was found in another type 1 hybrid design where a youth anxiety EBI was adapted for application in a Spanish-speaking sample (Santesteban-Echarri et al., 2018). When considering ease of implementation, it is relevant to note that the majority of parent's recommendations could be incorporated into an existing intervention with minimal changes to treatment materials as their recommendations focused more on adaptations to therapist

presentation of intervention content, rather than changes to the content itself. This finding has practical utility for all interventions being implemented in community settings, and exemplifies the importance of collecting perspectives from multiple types of stakeholders.

Although parent and therapist recommendations often centered on intervention-level adaptations, a number of the recommendations appeared to reflect the influence of larger, system level factors that impact intervention delivery highlighting higher level adaptations that are also important to consider. For example, recommendations from parents for modifying language to allow the intervention to be delivered in their preferred language requires a Spanish-speaking mental health workforce who can flexibly shift between English and Spanish in session to meet the needs of their English-speaking child clients and Spanish-speaking parents. In addition to Spanish-speaking therapists, there is a need for bilingual and bicultural supervisors and formalized training in the delivery of mental health services in multiple languages (Castaño, Biever, González & Anderson, 2007; Schwartz, Rodríguez, Santiago-Rivera, Arredondo, & Field, 2010), all of which require focused efforts to prioritize bilingual and bicultural hires across multiple levels of an organization. Furthermore, as many bilingual providers cite concerns about their linguistic competence (Kapasi & Melliush, 2015), assessment of providers' Spanish language proficiency would help guide targeted language-based supports needed in supervision or at the broader agency level. In particular, as our study results replicate findings from other studies in which Spanish-English bilingual providers noted difficulties in using technical terms of therapy (e.g., Verdinelli & Biever, 2009); it is highly likely that that both consumers and bilingual providers across settings and interventions would benefit from the current study's recommendation for simplification of language used in intervention delivery.

Additionally, adaptations also highlighted methods to strengthen parents' overall engagement in their child's ASD therapy and thus, positively benefit clinical outcomes. Adaptations include simplifying behavioral terminology and using videos to help parents develop appropriate treatment experiences. Proposed adaptations related to the goals of improving fit and increasing parent engagement will undoubtedly benefit community mental health treatment more broadly, where parent involvement is traditionally challenging; for example, a recent study within a predominantly Latinx sample found parent attendance rates as low as 50% (Wright, Lau & Brookman-Frazee, 2019). Given the high unmet service needs of Latinx families with a child with ASD (Magaña, Lopez, Aguinaga, & Morton 2013), when they do access services, it is critical to ensure that their unique needs are met by both EBIs and community providers alike. Indeed, these efforts are underway as disparities in diagnosis are closing and ASD prevalence in Latinx children is increasing (Magaña, Lopez, Aguinaga, & Morton 2013) and the argument for ASD-specific interventions that consider Latinx cultural background is now gaining momentum in the field (e.g., DuBay, Watson, & Zhang, 2018; Lopez, Magaña, Morales, & Iland, 2019).

Consistent with this emerging approach, stakeholder recommendations, along with themes identified in our prior qualitative study (Chlebowski et al., 2018), are currently being used to inform the development of an intervention toolkit and training plan designed to enhance the AIM HI intervention for delivery with Latinx families. The toolkit, *AIM HI EQUIPO*, is designed to address two key targets to improve AIM HI delivery: (1) increase parent

understanding of ASD diagnosis and the role of parents in their child's mental health care; and (2) develop a collaborative and trusting relationship between parent and therapist to facilitate active parent engagement in their child's mental health treatment.

In response to the current study's recommendations regarding tailoring therapist training, the training plan will incorporate the concepts of cultural humility relevant to AIM HI delivery which will be addressed at the initial AIM HI training workshop. Additional videos demonstrating therapists using AIM HI and toolkit content in Spanish with actor "clients" will be added to the training workshop to serve as exemplars to therapists in training. Suggestions focused on adaptations to AIM HI content led to the development of additional parent handouts designed to orient parents to the process of the AIM HI intervention and clearly highlight their role in their child's treatment. New parent materials with information about autism symptoms will be utilized at the beginning of treatment to provide psychoeducation for parents and prompt open discussions about a child's specific behaviors between the parent and therapist. All new forms will be created in Spanish and English to allow therapists to provide both verbal and visual examples of intervention concepts in the parent's preferred language.

Lastly, in response to suggestions regarding adaptations that emerged from a goal of improving fit with consideration of Latinx cultural values, adaptations are being made to the AIM HI protocol to add a parent-focused activity to the beginning of the treatment process that utilizes vignettes about children with autism along with therapist prompts presented in a conversational framework to explore the broader family's experience with autism. Therapists will receive training and practice in how to facilitate this discussion, highlight parent's strengths and expertise, assess parent's treatment priorities, and invite parent questions to promote the development of a strong and trusting therapist-parent relationship prior to the traditional intervention implementation.

Limitations

Limitations of the current study relate to the generalizability of the results. Although recommendations in the current study may reflect adaptations that may be beneficial for a wider range of groups, since themes were developed from a select sample of Latinx parents and their therapists, it is important to recognize that their perspectives may not be reflective of the experience of all parents and therapists that received or utilized AIM HI. Additionally, due to the heterogeneity within the Latinx population, that parent perspectives in the current study should not be thought to be reflective of the overall Latinx experience in receiving AIM HI or other ASD mental health interventions. Future studies will benefit from additional collection of first-hand accounts from stakeholders from a wide range of language and cultural groups, to increase our understanding of parent and therapist experiences. Finally, any work considering EBI adaptations must acknowledge the tension that exists between tailoring interventions to improve fit and sustainment and maintaining fidelity to original EBI content (Cabassa & Baumann, 2013). This balance is particularly relevant for AIM HI, as therapist fidelity to the intervention moderated child outcomes (Brookman-Frazee et al., 2019). Future work implementing the recommended adaptations will need to

utilize systematic frameworks to ensure that adaptations are fidelity-consistent and reflect the core elements of the intervention.

Implications and Future Directions

In line with current best practices for the adaptation of EBIs (Bauman et al., 2015; Lau, 2006; Stirman et al., 2013; Stirman et al., 2019), the current study used a data-driven process guided by existing adaptation frameworks to collect parent and therapist recommended adaptations for a parent-focused intervention for ASD. This study provides a model for how a systematic framework to document adaptation recommendations can lead to the implementation of stakeholder recommendations in routine practice. Next steps for the current study will include strategically implementing these adaptations with mental health programs who are participating in AIM HI training in a quasi-experimental design, within a follow up hybrid type 3 implementation-effectiveness trial, to allow for comparison of proximal outcomes, collected from therapists and parents in the adapted AIM HI condition to those providing standard AIM HI delivery (Brookman-Frazer & Stahmer, 2018). This approach is an example of appropriate use of hybrid type 1 findings to inform future implementation trials, which raises likelihood of success with wider-spread dissemination and provides a promising foundation for EBI sustainability.

The current study has important implications for future researchers adapting EBIs to meet the needs of diverse cultural groups. Based on existing classification frameworks (FRAME; Stirman et al., 2013; Stirman et al., 2019) the study's approach categorized stakeholder qualitative data into specific adaptation types within two larger domains (adaptations to therapist training and content and contextual modifications), which allowed for increased clarity regarding the goal of each adaptation for improving outcomes including fit, engagement, and effectiveness. This process provided a model for future researchers for how hybrid effectiveness-implementation designs can be used to systematically characterize modifications and identify adaptation targets. Further, it exemplified how well-developed adaptation classification frameworks can be used to classify stakeholder recommendations by adaptation type and identify adaptation goals while integrating relevant cultural adaptations. Future studies may consider using FRAME or other adaptation frameworks to inform their data-driven adaptation approach, while obtaining the perspectives of multiple stakeholders to inform adaptations. Current study results confirmed the importance of adaptations for cultural reasons while also capturing recommendations for adaptations to meet other stakeholder needs and highlighted the role of inclusive adaptation frameworks to fortify translation of research into practice. Additionally, the importance of adapting both intervention *and* provider training was clearly demonstrated. Future studies may benefit from using a similar process to guide their stakeholder recommendation process and maximize their adaptation measurement and implementation outcomes.

Acknowledgments

This work was supported by Research Project Grants R01MH094317 and R01MH094317S from the National Institute of Mental Health.

References

- Aarons GA, Miller EA, Green AE, Perrott JA, & Bradway R (2012). Adaptation happens: a qualitative case study of implementation of the incredible years evidence-based parent training programme in a residential substance abuse treatment programme. *Journal of Children's Services*, 7(4), 233–245. doi:10.1108/17466661211286463
- Alegría M, Mulvaney-Day N, Woo M, Torres M, Gao S, & Oddo V (2007). Correlates of past-year mental health service use among Latinos: Results from the National Latino and Asian American Study. *American Journal of Public Health*, 97(1), 76–83. doi:10.2105/AJPH.2006.087197 [PubMed: 17138911]
- August GJ, Gewirtz A, & Realmuto GM (2010). Moving the field of prevention from science to service: Integrating evidence-based preventive interventions into community practice through adapted and adaptive models. *Applied and Preventive Psychology*, 14(1–4), 72–85. doi: 10.1016/j.appsy.2008.11.001
- Baumann A, Cabassa LJ, & Wiltsey Stirman SW (2017). Adaptation in dissemination and implementation science. *Dissemination and implementation research in health: translating science to practice*, 2, 286–300. doi:10.1093/oso/9780190683214.003.0017
- Baumann AA, Powell BJ, Kohl PL, Tabak RG, Penalba V, Proctor EE, & Cabassa LJ (2015). Cultural adaptation and implementation of evidence-based parent-training: A systematic review and critique of guiding evidence. *Children and Youth Services Review*, 53, 113–120. doi: 10.1016/j.childyouth.2015.03.025 [PubMed: 25960585]
- Beebe J (2001). *Rapid assessment process: An introduction*. Walnut Creek, CA: AltaMira Press.
- Bernal G, Bonilla J, & Bellido C (1995). Ecological validity and cultural sensitivity for outcome research: Issues for the cultural adaptation and development of psychosocial treatments with Hispanics. *Journal of abnormal child psychology*, 23(1), 67–82. doi: 10.1007/BF01447045 [PubMed: 7759675]
- Bernal G, Jiménez-Chafey MI, & Domenech Rodríguez MM (2009). Cultural adaptation of treatments: A resource for considering culture in evidence-based practice. *Professional Psychology: Research and Practice*, 40(4), 361. doi:10.1037/a0016401
- Betancourt JR, & Green AR (2010). Commentary: linking cultural competence training to improved health outcomes: perspectives from the field. *Academic Medicine*, 85(4), 583–585. [PubMed: 20354370]
- Brookman-Frazee L, & Drahota A (2010). *An Individualized Mental Health Intervention for Children with Autism Spectrum Disorders (AIM HI): A model to address challenging behaviors in children with ASD—A therapist manual*. San Diego, CA: University of California, San Diego.
- Brookman-Frazee L, Drahota A, & Chlebowski C (2016). *An Individualized Mental Health Intervention for Children with Autism Spectrum Disorders (AIM HI): A model to address challenging behaviors in children with ASD: Therapist manual- Version 2*. San Diego, CA: University of California, San Diego.
- Brookman-Frazee L, & Stahmer AC (2018). Effectiveness of a multi-level implementation strategy for ASD interventions: study protocol for two linked cluster randomized trials. *Implementation Science*, 13(1), 66. doi:10.1186/s13012-018-0757-2 [PubMed: 29743090]
- Brookman-Frazee L, Roesch S, Chlebowski C, Baker-Ericzen M, & Ganger W (2019). Effectiveness of training therapists to deliver An Individualized Mental Health Intervention for Children with Autism Spectrum Disorder in publicly-funded mental health services: A cluster randomized trial. *JAMA Psychiatry*. doi:10.1001/jamapsychiatry.2019.0011
- Burrell TL, & Borrego J Jr (2012). Parents' involvement in ASD treatment: what is their role? *Cognitive and Behavioral Practice*, 19(3), 423–432.
- Cabassa LJ, & Baumann AA (2013). A two-way street: bridging implementation science and cultural adaptations of mental health treatments. *Implementation Science*, 8(1), 90. doi:10.1186/1748-5908-8-90 [PubMed: 23958445]
- Calzada EJ (2010). Bringing culture into parent training with Latinos. *Cognitive and Behavioral Practice*, 17(2), 167–175. [PubMed: 25960630]

- Carter N, Bryant-Lukosius D, DiCenso A, Blythe J, & Neville AJ (2014). The use of triangulation in qualitative research. *Oncology Nursing Forum*, 41(5), 545–547. doi:10.1188/14.ONF.545-547 [PubMed: 25158659]
- Castañó MT, Biever JL, González CG, & Anderson KB (2007). Challenges of providing mental health services in Spanish. *Professional Psychology: Research and Practice*, 38(6), 667. doi:10.1037/0735-7028.38.6.667
- Chlebowski C, Magaña S, Wright B & Brookman-Frazee L (2018). Implementing a Behavioral Intervention for ASD in Publicly-funded Mental Health Services: Therapist and Parent Perceptions of Delivery with Latinx Families. *Cultural Diversity and Ethnic Minority Psychology*, 24(4), 552–563. doi: 10.1037/cdp0000215 [PubMed: 30024185]
- Concannon TW, Meissner P, Grunbaum JA, McElwee N, Guise JM, Santa J, Conway PH, Daudelin D, Morrato EH, Leslie LK (2012). A new taxonomy for stakeholder engagement in patient-centered outcomes research. *Journal of General Internal Medicine*, 27(8), 985–991. doi: 10.1007/s11606-012-2037-1. [PubMed: 22528615]
- Cooper BR, Shrestha G, Hyman L, & Hill L (2016). Adaptations in a community-based family intervention: replication of two coding schemes. *The journal of primary prevention*, 37(1), 33–52. doi: 10.1007/s11606-012-2037-1 [PubMed: 26661413]
- Creswell JW, & Miller DL (2000). Determining validity in qualitative inquiry. *Theory into practice*, 39(3), 124–130. doi:10.1207/s15430421tip3903_2
- Curran GM, Bauer M, Mittman B, Pyne JM, & Stetler C (2012). Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact. *Medical care*, 50(3), 217. doi:10.1097/MLR.0b013e3182408812. [PubMed: 22310560]
- Domenech Rodríguez MM, Baumann AA, & Schwartz AL (2011). Cultural adaptation of an evidence based intervention: From theory to practice in a Latino/a community context. *American journal of community psychology*, 47(1–2), 170–186. [PubMed: 21116707]
- DuBay M, Watson LR, & Zhang W (2018). In search of culturally appropriate autism interventions: Perspectives of Latino caregivers. *Journal of autism and developmental disorders*, 48(5), 1623–1639. [PubMed: 29188586]
- Duffy ME (1987). Methodological triangulation: a vehicle for merging quantitative and qualitative research methods. *Journal of Nursing Scholarship*, 19(3), 130–133. doi:10.1111/j.1547-5069.1987.tb00609.x
- Dyson MW, Chlebowski C, & Brookman-Frazee L (2019). Therapists' adaptations to an intervention to reduce challenging behaviors in children with autism spectrum disorder in publicly funded mental health services. *Journal of autism and developmental disorders*, 49(3), 924–934. doi:10.1007/s10803-018-3795-3. [PubMed: 30368628]
- Eiraldi R, Khanna MS, Jawad AF, Fishman J, Glick HA, Schwartz BS,... & Beidas R (2015). A hybrid effectiveness-implementation cluster randomized trial of group CBT for anxiety in urban schools: rationale, design, and methods. *Implementation Science*, 11(1), 92.
- Foronda C, Baptiste DL, Reinholdt MM, & Ousman K (2016). Cultural humility: A concept analysis. *Journal of Transcultural Nursing*, 27(3), 210–217. doi:10.1177/1043659615592677 [PubMed: 26122618]
- Glasgow RE, Vinson C, Chambers D, Khoury MJ, Kaplan RM, & Hunter C (2012). National Institutes of Health Approaches to Dissemination and Implementation Science: Current and Future Directions. *American Journal of Public Health*, 102(7), 1274–1281. doi:10.2105/ajph.2012.300755 [PubMed: 22594758]
- Hamilton AB (2013). Qualitative methods in rapid turn-around health services research. Retrieved from https://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/780-notes.pdf
- Hohmann AA (1999). A contextual model for clinical mental health effectiveness research. *Mental Health Services Research*, 1(2), 83–91. doi:10.1023/a:1022382219660
- Hook JN, Davis DE, Owen J, Worthington EL Jr, & Utsey SO (2013). Cultural humility: Measuring openness to culturally diverse clients. *Journal of Counseling Psychology*, 60(3), 353. doi:10.1037/a0032595 [PubMed: 23647387]

- Kapasi Z, & Melliush S (2015). Language switching by bilingual therapists and its impact on the therapeutic alliance within psychological therapy with bilingual clients: A systematic review. *International Journal of Culture and Mental Health*, 8(4), 458–477. doi:10.1080/17542863.2015.1041994
- Kapke TL, & Gerdes AC (2016). Latino family participation in youth mental health services: Treatment retention, engagement, and response. *Clinical child and family psychology review*, 19(4), 329–351. doi:10.1007/s10567-016-0213-2 [PubMed: 27585812]
- Kumpfer KL, Alvarado R, Smith P, & Bellamy N (2002). Cultural sensitivity and adaptation in family-based prevention interventions. *Prevention science*, 3(3), 241–246. doi:10.1023/A:1019902902119 [PubMed: 12387558]
- La Roche MJ (2002). Psychotherapeutic considerations in treating Latinos. *Harvard Review of Psychiatry*, 10(2), 115–122. [PubMed: 11897752]
- Lau AS (2006). Making the case for selective and directed cultural adaptations of evidence-based treatments: examples from parent training. *Clinical psychology: Science and practice*, 13(4), 295–310. doi:10.1111/j.1468-2850.2006.00042.x
- Lau A, Barnett M, Stadnick N, Saifan D, Regan J, Wiltsey Stirman S,... & Brookman-Frazee L (2017). Therapist report of adaptations to delivery of evidence-based practices within a system-driven reform of publicly funded children's mental health services. *Journal of consulting and clinical psychology*, 85(7), 664. doi:10.1037/ccp0000215 [PubMed: 28471210]
- Lopez K, Magaña S, Morales M, & Iland E (2019). Parents Taking Action: Reducing disparities through a culturally informed intervention for Latinx parents of children with autism. *Journal of Ethnic & Cultural Diversity in Social Work*, 28(1), 31–49.
- Magaña S, Lopez K, Aguinaga A, & Morton H (2013). Access to diagnosis and treatment services among Latino children with autism spectrum disorders. *Intellectual and Developmental Disabilities*, 51(3), 141–153. doi:10.1352/1934-9556-51.3.141 [PubMed: 23834211]
- Magaña S, Parish SL, Rose RA, Timberlake M, & Swaine JG (2012). Racial and ethnic disparities in quality of health care among children with autism and other developmental disabilities. *Intellectual and Developmental Disabilities*, 50(4), 287–299. doi:10.1352/1934-9556-50.4.287 [PubMed: 22861130]
- Mandell D, Morales K, Xie M, Lawer L, Stahmer A, & Marcus S (2010). Age of diagnosis among Medicaid-enrolled children with autism, 2001–2004. *Psychiatric Services*, 61(8), 822–829. doi:10.1176/appi.ps.61.8.822 [PubMed: 20675842]
- Matson ML, Mahan S, & Matson JL (2009). Parent training: A review of methods for children with autism spectrum disorders. *Research in Autism Spectrum Disorders*, 3(4), 868–875.
- McConachie H, & Diggle T (2007). Parent implemented early intervention for young children with autism spectrum disorder: A systematic review. *Journal of evaluation in clinical practice*, 13(1), 120–129. [PubMed: 17286734]
- Morgan DL (1996). Focus groups. *Annual review of sociology*, 22(1), 129–152. doi:10.1146/annurev.soc.22.1.129
- NVivo qualitative data analysis software (Version 10) [Computer software]. (2012). Retrieved from <http://www.qsrinternational.com/>
- Parra-Cardona JR, Domenech-Rodríguez M, Forgatch M, Sullivan C, Bybee D, Holtrop K, ... & Bernal G (2012). Culturally Adapting an Evidence-Based Parenting Intervention for Latino Immigrants: The Need to Integrate Fidelity and Cultural Relevance. *Family Process*, 51(1), 56–72. doi:10.1111/j.1545-5300.2012.01386.x [PubMed: 22428711]
- Parra-Cardona JR, López-Zerón G, Domenech Rodríguez MM, Escobar-Chew AR, Whitehead MR, Sullivan CM, & Bernal G (2016). A balancing act: Integrating evidence-based knowledge and cultural relevance in a program of prevention parenting research with Latino/a immigrants. *Family process*, 55(2), 321–337. doi:10.1111/famp.12190 [PubMed: 26503301]
- Peters S (2010). Qualitative research methods in mental health. *Evidence-Based Mental Health*, 13, 35–40. [PubMed: 21856603]
- Piña AA, Polo AJ, & Huey SJ (2019). Evidence-based psychosocial interventions for ethnic minority youth: the 10-year update. *Journal of Clinical Child & Adolescent Psychology*, 48(2), 179–202. doi:10.1080/15374416.2019.1567350 [PubMed: 30746965]

- Proctor E, Silmere H, Raghavan R, Hovmand P, Aarons G, Bunger A, ... & Hensley M (2011). Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Administration and Policy in Mental Health and Mental Health Services Research*, 38(2), 65–76. doi: 10.1007/s10488-010-0319-7 [PubMed: 20957426]
- Resnicow K, Baranowski T, Ahluwalia JS, & Braithwaite RL (1999). Cultural sensitivity in public health: defined and demystified. *Ethnicity & Disease*, 9(1), 10–21. [PubMed: 10355471]
- Santesteban-Echarri O, Hernández-Arroyo L, Rice SM, Güerre-Lobera MJ, Serrano Villar M, Espín-Jaime JC, & Jiménez-Arriero MÁ (2018). Adapting the brief coping cat for children with anxiety to a group setting in the spanish public mental health system: A hybrid effectiveness-implementation pilot study. *Journal of Child and Family Studies*, 27(10), 3300–3315.
- Schwartz A, Rodríguez MMD, Santiago-Rivera AL, Arredondo P, & Field LD (2010). Cultural and linguistic competence: Welcome challenges from successful diversification. *Professional Psychology: Research and Practice*, 41(3), 210a. doi:10.1037/a0019447
- Seale C, & Silverman D (1997). Ensuring rigour in qualitative research. *The European Journal of Public Health*, 7(4), 379–384. doi:10.1093/eurpub/7.4.379
- Smith JD, Stormshak EA, & Kavanagh K (2015). Results of a pragmatic effectiveness implementation hybrid trial of the Family Check-Up in community mental health agencies. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(3), 265–278. [PubMed: 24927926]
- Stahmer A, & Brookman-Frazee L (2019). Utilizing Community-Based Implementation Trials to Advance Understanding of Service Disparities in Autism Spectrum Disorder. *Global Pediatric Health*. 10.1177/2333794X19854939
- Stirman SW, Baumann AA, & Miller CJ (2019). The FRAME: An expanded framework for reporting adaptations and modifications to evidence-based interventions. Manuscript submitted for publication. *Implementation Science*, 14(1), 58. doi:10.1186/s13012-019-0898-y [PubMed: 31171014]
- Stirman SW, Gutner CA, Crits-Christoph P, Edmunds J, Evans AC, & Beidas RS (2015). Relationships between clinician-level attributes and fidelity-consistent and fidelity-inconsistent modifications to an evidence-based psychotherapy. *Implementation Science*, 10(1), 115. doi:10.1186/s13012-015-0308-z [PubMed: 26268633]
- Stirman SW, Miller CJ, Toder K, & Calloway A (2013). Development of a framework and coding system for modifications and adaptations of evidence-based interventions. *Implementation Science*, 8(1), 65. doi.org/10.1186/1748-5908-8-65.. [PubMed: 23758995]
- US Department of Health and Human Services (2018). Qualitative methods in implementation science. National Cancer Institute, National Institutes of Health Bethesda, MD, USA <https://cancer-control.cancer.gov/IS/docs/NCI-DCCPS-ImplementationScience-WhitePaper.pdf>. Accessed August 1, 2019.
- Verdinelli S, & Biever JL (2009). Spanish–English bilingual psychotherapists: Personal and professional language development and use. *Cultural Diversity and Ethnic Minority Psychology*, 15(3), 230. doi: 10.1037/a0015111 [PubMed: 19594252]
- Williams EN, & Morrow SL (2009). Achieving trustworthiness in qualitative research: A pan-paradigmatic perspective. *Psychotherapy research*, 19(4–5), 576–582. [PubMed: 19579089]
- Wright B, Lau AS, & Brookman-Frazee L (2019). Factors Associated With Caregiver Attendance in Implementation of Multiple Evidence-Based Practices in Youth Mental Health Services. *Psychiatric Services*, appi-ps.
- Wu YP, Thompson D, Aroian KJ, McQuaid EL, & Deatrick JA (2016). Commentary: Writing and evaluating qualitative research reports. *Journal of Pediatric Psychology*, 41(5), 493–505. doi:10.1093/jpepsy/jsw032 [PubMed: 27118271]
- Zuckerman KE, Sinche B, Mejia A, Cobian M, Becker T, & Nicolaidis C (2014). Latino parents' perspectives on barriers to autism diagnosis. *Academic Pediatrics*, 14(3), 301–308. doi: 10.1016/j.acap.2013.12.004 [PubMed: 24767783]

Table 1.

Participant characteristics.

	Therapists (N=17) Frequency by % Mean (Standard Deviation)	Parents (N=29) Frequency by % or Mean (Standard Deviation)
Female	94%	93.1%
Age	$M = 33.5$ years (SD=9.2)	$M = 40$ years (SD=7.4)
Latinx	35%	100%
Fluent in Spanish	47%	86%
Educational Level		
Doctoral Degree	5.90%	-
Master's Degree	70.60%	3.4%
Bachelor's Degree	17.60%	10.3%
Associate's Degree	-	10.3%
High School/GED	-	31%
Less than High School	-	41.4%
Other	-	3.4%
Mental Health Discipline		
Marriage and Family Therapist	29.40%	-
Social Work	29.40%	-
Clinical Psychology	23.50%	-
School Psychology	17.60%	-
Licensed in Clinical Discipline	17.60%	-
Years Practicing in Clinical Discipline	$M = 6.9$ (SD=5.8; Range: 1–23)	-
Employment Status		
Full or part time	-	28%
Unemployed	-	10%
Not employed outside the home	-	62%

Table 2.

Representative prompts for focus groups and interviews.

Participant	Content Area	Representative Prompts
Therapists	General recommendations on ways to improve the AIM HI intervention	<i>What are potential modifications that would make AIM HI easier to deliver for families who need more support?</i>
Therapists	Recommendations to improve the AIM HI intervention for Spanish-speaking families	<i>Can you share thoughts about potential modifications to tailor the intervention to your client and family's preferred language - what would modifications of this type look like?</i>
Therapists	Recommendations to improve training for therapists delivering AIM HI to Spanish-speaking families	<i>Do you have suggestions for how to improve the training process for bilingual therapists or therapists who will be working with translators to deliver AIM HI to Spanish speaking families?</i>
Parents	Recommendations about intervention materials and delivery	<i>Do you have general recommendations for therapists about information that would be helpful for them to provide to parents at the beginning of treatment when they are first bringing their children to counseling/therapy sessions?</i>
Parents	Recommendations to facilitate session participation	<i>What can therapists do to help families feel more comfortable and empowered to ask questions? Do you have any suggestions about what therapists can do to make parents feel more comfortable participating in therapy sessions?</i>
Parents	Recommendations to facilitate home practice	<i>What are some things therapists can do to make home practice easier for families? Was there anything your child's therapist did to make home practice easier for you?</i>

Table 3.

Recommended adaptations.

Adaptation Domains	Adaptation Reason	Adaptation Goal	Adaptation Type - specifier	Therapist Recommendations	Parent Recommendations
Modifications to AIM HI Therapist Training	Facilitate therapist delivery of AIM HI with Latinx/Spanish speaking families	Improve fit with recipients (to address recipient language)	Tailoring training - language	Conduct initial training workshop in Spanish; Provide additional video training examples in Spanish	--
	Increase therapist confidence and competence in working with culturally diverse clients	Improve fit with recipients (to address recipient cultural factors)	Integrating supplemental training strategies	Provide training in incorporating cultural values in AIM HI delivery	--
	Increase accessibility for Spanish speaking families	Improve fit with recipients (to address recipient language)	Tailoring training - cultural	--	Involve family members in AIM HI delivery; Therapist should get to know the family (considering <i>familismo</i>); Therapists should invite parents' questions in session (considering <i>respezo</i>)
Intervention Content and Contextual Modifications	Increase accessibility for Spanish speaking families	Improve fit with recipients (to address recipient language)	Tailoring - language	Provide additional translated AIM HI materials	Provide AIM HI intervention in parent preferred language
	Facilitate parents' participation and engagement	Increase reach or engagement	Changes in packaging or materials	Provide video testimonials outlining what parents can expect from intervention	--
			Tailoring	--	Provide parents with the overall treatment plan; Simplify assignments to ensure parents' success
			Tailoring	Simplify behavioral terminology	Use clear language, avoid technical jargon; Provide examples to explain concepts;
	Facilitate parent understanding and learning	Improve effectiveness/ outcomes	Changes in packaging or materials	Provide glossary of intervention terms; Provide parent workbook; Send text messages to parents to encourage and remind to use skills	--
			Extending pacing	--	Address one treatment goal at a time.