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Parent Management Training-Oregon Model (PMTO™) in Mexico City: Integrating Cultural Adaptation Activities in an Implementation Model

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Abstract

This article describes the process of cultural adaptation at the start of the implementation of the Parent Management Training intervention-Oregon model (PMTO) in Mexico City. The implementation process was guided by the model, and the cultural adaptation of PMTO was theoretically guided by the cultural adaptation process (CAP) model. During the process of the adaptation, we uncovered the potential for the CAP to be embedded in the implementation process, taking into account broader training and economic challenges and opportunities. We discuss how cultural adaptation and implementation processes are inextricably linked and iterative and how maintaining a collaborative relationship with the treatment developer has guided our work and has helped expand our research efforts, and how building human capital to implement PMTO in Mexico supported the implementation efforts of PMTO in other places in the United States.

Keywords

cultural adaptation; implementation; Latinos; parenting intervention; PMTO

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SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article:
Table S1. Implementation stages and cultural adaptation phases of PMTO in Mexico.

Several parenting programs have been established as effective at preventing drug abuse and violence in youth (Matjasko et al., 2012; National Institutes on Drug Abuse [NIDA], 2011; Robertson, David, & Rao, 2003; Spoth, Redmond, Trudeau, & Shin, 2002). Unfortunately, few such programs are implemented in low-income and developing countries today (Mejia, Calam, & Sanders, 2012). Particular to Mexico, there is a scarcity of known evidence-based treatments (EBTs) used in the public system (Rojas, Real, García-Silberman, & Medina-Mora, 2011). Local experts therefore identified the need to implement an EBT to prevent child externalizing behaviors, such as drug abuse, in Mexico, and ongoing work with an evidence-based parent intervention with Latinos (i.e., people from Central and South America, Caribbean countries and territories, or Mexico) in the United States (Domenech Rodríguez, Baumann, & Schwartz, 2011; Parra-Cardona et al., 2012) opened the door for collaboration. The present article describes the beginning of the implementation of the Parent Management Training, Oregon model (PMTO™) in Mexico City, with a focus on the adaptation process of the intervention from the host country (United States) for implementation in Mexico.

IMPLEMENTATION AND CULTURAL ADAPTATION

Implementation is defined as “the use of strategies to adopt and integrate evidence-based health interventions and change practice patterns within specific settings” (National Institutes of Health, PAR-10-038). Implementing an EBT in usual care is not an easy task, as it entails negotiating the fit of the intervention with the new setting, organization, and stakeholders. Generally, implementation scientists focus on preparing and changing the context where the intervention is being delivered at multiple levels to enhance the fit between the intervention and a particular setting (e.g., hospital, school, agency), concentrating on variables such as policies, economy, and organizational aspects. Researchers study how to adapt organizations so as to facilitate the uptake of the intervention or on how changes in policies affect the implementation efforts of an intervention, for example. The literature from the cultural adaptation field, on the other hand, offers guidance on how to adapt an intervention, focusing on adapting the manual to increase the fit of the intervention to the providers and the target population (Bernal & Domenech Rodríguez, 2012). Cultural adaptation is defined as “the systematic modification of an evidence-based treatment (EBT) to consider language, culture, and context in such a way that is compatible with the client’s cultural patterns, meanings and values” (Bernal, Jiménez-Chafey, & Domenech Rodríguez, 2009, p. 362). The concept of cultural adaptation is often related to race and ethnicity, as it entails modification of a protocol to incorporate the client’s language, culture, and context (Bernal et al., 2009; Whaley & Davis, 2007). However, we advocate here for a broader conceptualization of the concept that includes multiple social, political, and economic conditions that require attention in the process of tailoring. Indeed, there is a long history of adapting treatments for contexts (see Bernal & Domenech Rodríguez, 2012, for a review), and culture itself is broadly defined as “the belief systems and value orientations that influence customs, norms, practices, and social institutions, including psychological processes (language, caretaking practices, media, educational systems) and organizations” (American Psychological Association, 2003, p. 280).

The studies on implementation science and cultural adaptation fields therefore have different research questions and goals. There are numerous implementation frameworks (Tabak, Khoong, Chambers, & Brownson, 2012), but the process of adapting an intervention to increase the fit for the target population is not explicit in most of them. Some models embed the adaptation process explicitly, usually conceptualizing adaptation as part of the implementation process, and that it should start in the early stages of the process (e.g., Aarons et al., 2012; Cabassa, Druss, Wang, & Lewis-Fernandez, 2011; Lee, Altschul, & Mowbray, 2008). However, the models do not delineate *how* cultural adaptations should occur (e.g., how should a manual be adapted, who should adapt it; Cabassa & Baumann, 2013). On the other hand, while there are also several cultural adaptation models (Bernal & Domenech Rodríguez, 2012), they do not *explicitly* incorporate variables such as training, organizational support, political, or economic aspects and how these variables can affect the outcomes of the adaptation process (Cabassa & Baumann, 2013). The literature on implementation science deals with the fit of the intervention with the setting, whereas studies on the cultural adaptation field deal with the fit of the intervention with the target population. Unfortunately, the fields of implementation science and cultural adaptation rarely interact, even though both fields are concerned with the fit of the intervention with the setting (Cabassa & Baumann, 2013).

Especially when transporting an EBT from the United States to different countries, it is important to assess the fit of the intervention with the target population, and the efficacy and effectiveness of such intervention prior to full implementation and dissemination. Findings regarding the replication of EBTs across international settings, however, are mixed in that replications have been both successful and unsuccessful (Sundell, Ferrer-Wreder, & Fraser, 2013). Sundell et al. (2013) suggest that one of the big challenges to importing EBTs across borders involves balancing adaptation and fidelity, a process that requires continuous monitoring to prevent method drift while matching the preferences, culture, and context of the client. Contextual factors that contribute to implementation challenges include organizational capacity, infrastructure and organizational climate, and financial support, as well as the characteristics of the intervention. Add physical distance, differences in political context, and limited resources to the set of variables, and the challenge grows (Hoagwood, Kelleher, Murray, & Jensen, 2006). International implementation is therefore a delicate dance among several key players.

A key question when implementing an EBT developed in a country different from the original one is whether, and how much, an intervention needs to be adapted. Generally, it is assumed that the rollout of an implementation unfolds in iterative and overlapping stages (Chamberlain, Brown, & Saldana, 2011; Fixsen, Blasé, Horner, & Sugai, 2009; Rabin & Brownson, 2012). We advocate here that the need for adaptation should be planned, should start early, and should be evaluated throughout the implementation process. We believe that similar to selecting an implementation framework, researchers should select a cultural adaptation framework to guide their process. The interaction of implementation science and cultural adaptation could be beneficial in that each has different levels of focus on their frameworks. This article addresses the gap in the literature by incorporating a cultural adaptation model, the cultural adaptation process model (CAP; Domenech Rodríguez &

Wieling, 2004), within an implementation framework used by the PMTO treatment developers and their team (Forgatch, Patterson, & Gerwitz 2013), and disentangling the specific tasks, challenges, and solutions that we had when implementing PMTO in Mexico. First, we provide a brief description of PMTO and the training process of the key players (therapists, supervisors, and fidelity raters) during this process.

OVERVIEW OF PMTO

PMTO is the family of interventions based on social interaction learning theory, an ecological perspective that conceptualizes children's behavior as reflecting factors in the social environment as shaping youngsters' adjustment (Forgatch & Patterson, 2010; Patterson, Forgatch, & DeGarmo, 2010). Within PMTO, parenting practices are presumed to be affected by contextual factors; thus, parents have the potential of providing a buffer zone between harsh family contexts (e.g., divorce, substance abuse, poverty, separation between families due to military deployment) and negative child outcomes. A key underlying principle is that children and parents enter into transactional patterns that can be coercive and overlearned, particularly when families live in highly stressful circumstances (Forgatch & Patterson, 2010; Patterson et al., 2010). PMTO interventions aim to disrupt coercive patterns that often can lead to an escalation of misconduct with the goal to increase positive parent-child interactions. The intervention seeks to replace coercive processes with positive parenting approaches.

PMTO has been effective with prevention and clinical samples, and its theoretical mechanisms have been confirmed (Forgatch & Patterson, 2010; Forgatch, Patterson, DeGarmo, & Beldvas, 2009; Patterson et al., 2010). The intervention has been implemented statewide in Michigan and Kansas (Forgatch et al., 2013), and nationwide in Norway, Iceland, Denmark, and The Netherlands (e.g., Bekkema, Wiefferink, & Mikilajczak, 2008; Ogden, Forgatch, Askeland, Patterson, & Bullock, 2005; Ogden, Hagen, Askeland, & Christensen, 2009; Sigmarsdóttir & Björnsdóttir, 2012; Sigmarsdóttir & Gu mundsdóttir, 2012). In all these instances, fidelity is carefully monitored to prevent drift (Forgatch & DeGarmo, 2011; Sigmarsdóttir & Gu mundsdóttir, 2012), and notable improvements in child and parent outcomes have been found (Hagen, Ogden, & Bjørnebekk, 2011; Sigmarsdóttir et al., n.d.). The intervention has been culturally adapted for use with ethnic minorities in the United States (Domenech Rodríguez et al., 2011; Parra-Cardona et al., 2012) and Norway (Bjørknes, Kjølbi, Manger, & Jakobsen, 2012). PMTO was selected to be implemented in Mexico because of its underlying theory and research, as well as because of our history of collaboration in adapting PMTO for Latino families in the United States (Domenech Rodríguez et al., 2011; Parra-Cardona et al., 2012).

TRAINING IN PMTO

PMTO follows a model of full transfer of the program from developer to adopting community (Forgatch et al., 2013). This approach goes beyond the train-the-trainer model (Heller, 2002), in which one person (or several people) in the setting is identified to learn the intervention and then train others in the organization (see Table 1). The full transfer model enables the community that is adopting the intervention to assume full responsibility for all

implementation activities: training, coaching, certification and continuous monitoring of fidelity, and outcomes (Forgatch & DeGarmo, 2011; Forgatch et al., 2013). Certification at the level of PMTO specialist involves an 18-month training process, with five workshops (totaling 18 days) and clinical work with a minimum of five families for individual intervention or four sets of groups for the group approach. The final step in certification requires achieving passing fidelity of implementation (FIMP) scores on sessions with families or parent groups. Certified therapists can be trained to coach and lead workshops. Certified coaches provide support to therapists training to become specialists; they achieve certification status with passing FIMP scores based on two coaching sessions. Workshop leaders can independently lead training workshops, although the model specifies that at least two workshop leaders are required. Certification is achieved by invitation following direct observations of workshops taught with fidelity. FIMP raters are certified therapists trained to inter-rater reliability in the use of the Fidelity of Implementation Rating System (Knutson, Forgatch, & Rains, 2009). The FIMP training course involves a set of activities requiring up to 40 hours to attain reliability (mean 20–25 hours; Sigmarsdóttir, Rains, Knutson, & Forgatch, 2010). Finally, a PMTO mentor has accomplished all the training efforts and assists in the implementation of large projects in collaboration with Implementation Sciences International Incorporated (ISII; www.isii.net). All training is provided by ISII, a research-based, nonprofit organization affiliated with the Oregon Social Learning Center (OSLC). For more information on training levels and tasks, please see Knutson et al. (2009) and Sigmarsdóttir et al. (2010). As shown in Table S1, all authors started and continued our trainings in PMTO in parallel with the adaptation of the manual.

PMTO IN MEXICO

An initial question in the planning stages of implementation in Mexico was how much adaptation would be needed for an intervention that was already tailored for Latino families in the United States. PMTO had been translated for use of Latino families in the United States, and preliminary data were showing that the intervention was effective in recruiting and maintaining Latinos in the intervention. The adaptation of PMTO for Latino families in the United States began in 2003, shortly before our work in Mexico in 2008 (see Table S1). Data from the randomized controlled trial (RCT) were still being collected when we started our project in Mexico, so it was not clear how effective the simple translation was of the original manual to Spanish. Moreover, while many contextual factors (e.g., cultural values) could be similar for the families living in the United States and families living in Mexico, our study in the United States had particular challenges in the U.S. context (e.g., deportation; Baumann, Domenech Rodríguez, & Parra-Cardona, 2012). We believed that the original manual showed promise based on good fit for Latinos in the United States (Domenech Rodríguez et al., 2011; Parra-Cardona et al., 2012), more so because the initial implementation efforts in the United States involved collaboration on translations from the Mexico implementers. However, we also needed to make important changes in the manual, such as adding sessions on monitoring and supervision (see section on the adaptation of the manual below), so we addressed the empirical question via careful documentation of the adaptation steps following existing models for cultural adaptation to evaluate the degree to which the manual needed to be adapted for a better fit to the Mexican context.

IMPLEMENTATION AND CULTURAL ADAPTATION MODELS

We followed the implementation process guided by Dr. Forgatch and her team. As described in Forgatch et al. (2013), the PMTO team follows a model based on the work of Fixsen and colleagues (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005) and Rogers (1995) that has four phases: preparation, early adoption, implementation, and sustainability (Forgatch et al., 2013). In addition to these phases, we incorporated an exploration phase to our work, as described below. Within each phase, we also describe the adaptation process that took place, using the CAP model (Domenech Rodríguez & Wieling, 2004). The CAP model (Domenech Rodríguez & Wieling, 2004) is based on Rogers's (1995, 2002) diffusion of innovation theory and has three phases: setting the stage, initial adaptations, and adaptation iterations.

SETTING THE STAGE FOR PMTO IN MEXICO

Part of the work that preceded the implementation process of PMTO in Mexico was the implementation of PMTO in Logan, Utah, in 2003 led by Dr. Domenech Rodríguez during her NIH K award (MH066297) and during Dr. Parra-Cardona's R34 grant (NIMH R34 MH087678). These two sites were finishing the RCTs that involved the adaptation of the PMTO manuals from English for use for Latino families in the United States. We will next briefly describe the establishment of the collaborations in the United States that led to our work in Mexico.

As shown in Table 1, the first stage of the implementation process is the exploration, where—among other tasks—the team assesses who may be the key stakeholders of the process. Similarly, the first phase of the CAP model consists of the formation of collaborative relationships. Two important collaborations were being formed: between Dr. Domenech Rodríguez with the treatment developer and between Dr. Domenech Rodríguez and the Mexican leaders. Domenech Rodríguez had a long history of collaboration with Marion Forgatch (see Domenech Rodríguez et al., 2011). At the same time, she collaborated with researchers at the National Institute of Psychiatry Ramón de la Fuente Muñiz (INPRFM) dating back to 1995. It was in this stage when we established collaborative relationships between future stakeholders, including the program developer and the cultural adaptation specialists, as well as the champions, agency leaders, and likely participants who would lead to our work in Mexico.

Facing the challenges to prevent and decrease violence and substance abuse among youngsters in Mexico, investigators from the INPRFM, Jorge Villatoro-Velázquez and María Elena Medina-Mora, invited Domenech Rodríguez to collaborate with them. Three workshops on parenting intervention based on PMTO were delivered at INPRFM between 2002 and 2005. The research collaboration led to scale testing in parenting practices (Donovick & Domenech Rodríguez, 2008; Domenech Rodríguez & Villatoro, 2004) and problem-solving process (Domenech Rodríguez, Villatoro Velázquez & Guitierrez López, 2007). Some of these scales are now routinely included in the national surveys in Mexico.

An implementation process of PMTO in Utah and Detroit continued where, during the preparation and implementation stages, we had several rounds of adaptations of the manual. Specifically, the second phase of CAP (which takes place during the preparation stage of the

implementation process) consists of making the first round of adaptations on the measures and on the manual in close contact with the treatment developer. As an example of how the CAP phases are interactive and not linear, the second phase of CAP in Logan started in parallel process to Phase I of the CAP model. That is, the pilot testing of the behavioral observation tasks for Latino families in the United States started in 2003, right after Domenech Rodríguez was awarded her grant, a process that continued in 2005 (Domenech Rodríguez, Davis, Rodríguez, & Bates, 2006; Domenech Rodríguez, Rodríguez, & Davis, 2006). During this phase, Domenech Rodríguez also included workshops at INPRFM as part of the collaboration with the institute, where Amador, a researcher at INPRFM, provided valuable contributions to the translation of the PMTO manual to Spanish. At that same time, Baumann started to collaborate with Domenech Rodríguez as a research assistant during her graduate studies. The result of such efforts was the development of CAPAS-Logan, *Criando con Amor, Promoviendo Armonía y Superación* (Domenech Rodríguez, 2008).

Phase 3 of the CAP model, which takes place during the early adoption and the implementation stages, focuses on capturing the adaptations in the new version of the manual, finalizing changes to the measures, and planning for future replications and implementation of the intervention. The RCT in Logan took place from 2006 to 2008, with a total of 87 participating families. We had several contextual and methodological challenges, some inherent to the adaptation process (Domenech Rodríguez et al., 2011), others to the political and social context during those years related to immigrant families (Baumann et al., 2011). We learned valuable lessons, such as how to facilitate recruitment of the families, how to be flexible with methodology while maintaining scientific rigor, and that our families liked the intervention, and our team was ready to evaluate whether CAPAS could be replicated in Mexico. We also learned that we worked really well as a team, a key ingredient for our current success.

BUILDING THE BRIDGE TO MEXICO

Stage 1: Exploration

One of the key components of the exploration and preparation stages is the assessment or gathering of resources. In 2008, the Mexico research team secured a grant from the Consejo Nacional de Ciencia y Tecnología (CONACYT), funding the adaptation of CAPAS to Mexico City and testing its effectiveness by an RCT. Funding is never enough to do all the work scholars would like to do, especially in a low-resource country. As many researchers experience, we had significant budget cuts after the initial allocations. To sustain a PMTO program for Latino families, we also required increasing human resources in at least three different levels of PMTO expertise: specialists, coaches, FIMP raters, and, ultimately, mentors who were fluent in Spanish. As part of the exploration stage, therefore, we had defined that Baumann and Amador needed to be certified as PMTO specialists and that Domenech Rodríguez would continue her PMTO training to become a mentor. Collaboration and support from those who believed in our work was crucial. It was with our institutions' support (e.g., paying for travel and lodging) and ISII (integrating us in ongoing trainings without charges) that allowed Baumann and Amador to start their formal training as PMTO therapists in 2009.

During the exploration phase, we had also decided to adapt the graphic components of the CAPAS-Logan manual to increase the fit of the manual for the Mexican culture. As explained below in the Cultural Adaptation of Manuals section, the art in CAPAS-Logan was mainly based on figures and clip art found in Microsoft packages and on the web. We wanted to make the manual a more professional document. Creativity also helped establish the base for the implementation process. To assist our team, Amador invited Sabino Gaínza Kawano, a professor in the National School of Plastic Arts at the Universidad Nacional Autónoma de México (UNAM) to collaborate with us. This allowed manual changes to be informed on psychological theory and also on communication theory. Gaínza attended all PMTO therapist training workshops to better understand the content of the intervention and be able to maximize the utility of his feedback and recommendations on the adaptation of evaluation instruments and treatment manuals. He then assembled a team of graduate students at the UNAM to support his activities around development of needed materials. The graphic adaptation of materials was a collaboration between the designers and the psychologists that involved making decisions ranging from the colors used to the structure and presentation of the contents of the manual (Amador et al., 2011). The goal of this transdisciplinary collaboration was to facilitate straightforward communication of the intervention content to a broader Latino audience beyond Mexico.

During this phase, we also established that Laura Rains, ISII mentor, would provide us with guidance and supervision, and the criteria to train our therapists in Mexico were defined: Baumann and Amador were going to start their training as certified therapists; Domenech Rodríguez was going to finish her other trainings to become an ISII mentor; and we would train therapists in the PMTO model: five workshops spread across 18 months. All videos were to be uploaded in a portal developed and sustained by us, and supervisions were given by the ISII team of coaches. We decided then to train 13 therapists, all graduate students from INP, who would then be the supporting team during the implementation process. All students had interest in parent interventions and expressed interest in writing their dissertations on components of the PMTO evaluations.

Stage 2: Preparation

By 2010, the team of collaborators was selected, and we started the adaptation of the manual (see section on Cultural Adaptation of Manuals below). Both the intervention and the training manual were translated and adapted for the Mexican context. This stage was also filled with workshops, trainings, and presentations so as to share with our collaborators our work in Mexico. During this stage, which included Phase II of the CAP model, we also selected and adapted the measures to be used in Mexico. Measures were added, and the language was edited to better fit the context of Latino families in Mexico. The adapted and added measures were reviewed by a pool of 17 experts from the fields of parenting intervention and scale development, and the resulting measures were calibrated in focus groups with parents. Details about the measures used in this project are beyond the scope of this article and will be reported elsewhere.

Stage 3: Implementation

We had many challenges during this stage. Our funding support from CONACYT ended at the beginning of 2012, leaving us with few resources for therapist training and retention. Of the 13 therapists who began training in 2010, three remain. The main reason for attrition was funding, as we could not secure therapists with the low salary available through the grant. Thirteen therapists were trained at the beginning with the hopes of establishing the human capital necessary to implement PMTO in Mexico; however, human resources cannot be secured without a stable funding source and infrastructure. While the high attrition rate is worrisome, our experience shows that full implementation of the PMTO can be achieved with small numbers of trained therapists. For example, Iceland started with three therapists in the first generation in 2000, and currently, there are 16 therapists in the fourth generation being trained with high fidelity rates (Sigmarsdóttir & Guðmundsdóttir, 2011). Moreover, we are still in contact with the trained therapists in Mexico, who have verbalized interest in participating in our project once we are able to secure more funding.

Starting to implement with a small—but persistent—number of trained therapists therefore can be done. We have recently finished our RCT, with 61 families having participated in the project. Participants were mothers, fathers, and other extended family with a child between 6 and 12 years of age with borderline or clinical-level externalizing symptoms. Preliminary analyses show improved child outcome for children whose parents participated in the intervention group as compared to the control group (Amador, Villatoro, Guillén, & Santamaria, 2013).

Fidelity Checking—Both implementation science and cultural adaptation fields attend carefully to fidelity when implementing and adapting an intervention to a new setting or population. Gearing and colleagues (2011) identify four components of fidelity: (a) intervention design and protocols; (b) intervention training; (c) monitoring of intervention delivery; and (d) monitoring of intervention receipt. Fidelity of protocol entails the framework, standards, and essential components guiding the assessment and measurement of the intervention. In our case, the selection and adaptation of the measures were constantly communicated with the treatment developer. We also maintained the PMTO theoretical framework during the entire process, keeping the core components of the intervention intact. The intervention training refers to the manual review as well as training of role-playing and modeling. PMTO has a strong emphasis on active learning (Forgatch et al., 2013), and we maintained such emphasis during our training in Mexico.

The intervention delivery in our case was constantly monitored in two ways: First, our training sessions in Mexico were supervised by the ISII mentors, who guided and provided us with supportive feedback. Second, each therapy session from the therapists in training was supervised by at least two of the three Mexico implementation leaders (Amador, Baumann, or Domenech Rodríguez), and written notes were recorded for future reference. PMTO has a strong philosophy of teaching to teach, so by closely monitoring our work as trainers, the ISII mentors believed that we would be doing the same with the therapists whom we were supervising.

Finally, fidelity monitoring of the intervention involves two components: therapist adherence and competence (Waltz, Addis, Koerner, & Jacobson, 1993). As we mentioned above, all sessions are videotaped and uploaded, along with a session narrative, to a secure portal. Fidelity is rated using the FIMP Rating System (Knutson et al., 2009), a valid observation-based measure that assesses the therapist's behavior during the interventions on five dimensions: knowledge, structure, teaching, process skills, and overall development. The observation system, albeit expensive, is an efficient method both for supervisors to monitor the therapist behavior as well as for the therapist to conduct self-assessment of his or her practice. Another advantage of observational assessment is that, with a secure portal, ISII mentors and supervisors could provide support to our team from different places of the world.

GOING BEYOND MEXICO CITY

PMTO in Michigan

The work in Mexico has been supported by another research team, led by José Rubén Parra-Cardona, in Michigan. We have a long history of collaboration with Parra-Cardona, starting in 2004 with his qualitative studies to evaluate the feasibility of implementing PMTO for Latino families in Lansing and Detroit (Holtrop, Parra-Cardona, & Forgatch, 2013). CAPAS-Logan has served as a blueprint for Parra-Cardona's R34 (MH087678), which compares the original CAPAS-Logan with a CAPAS-enhanced intervention, where components to address immigration and biculturalism were added to the curriculum (Parra-Cardona et al., 2012). The manual used in Detroit for this study was developed in a collaborative effort among our teams (Parra-Cardona, Domenech Rodríguez, Amador, & Baumann, 2009). Some of the adaptations made in Mexico were included in the Michigan project. For example, there was an increase in emphasis on emotional regulation in CAPAS enhanced. Several foreign-born parents in this setting have reported being raised in Mexico according to harsh parenting practices and have expressed a clear concern for repeating such practices with their own children. Moreover, the self-report and observational measures used in Mexico were adapted with input from Parra-Cardona's team, who are also using the same measures in their study.

Puerto Rico

Pilot work is also underway in Puerto Rico. Work there has focused on examining parent practices to best understand potential needed adaptations to treatment manuals. The project was funded by an internal pilot grant, and parent-child observations and self-reported parenting practices were collected for 55 two-parent families in Puerto Rico (Domenech Rodríguez et al., in press). Having the same measures at three sites (Mexico City, Detroit, and Puerto Rico) will allow us to examine the degree to which parents from Mexico, parents from Puerto Rico, and Latino immigrant parents in Detroit have similar parenting styles and also will help us refine measures for future efforts.

Trainings

All of our work in Mexico, Michigan, and Puerto Rico has been conducted in close collaboration with ISII mentors Forgatch and Rains. The close collaboration with the

developers, and our persistence and constant training, has enabled us to support therapists and families in other places in the United States. As mentioned above, our roles were not static but rather have evolved with the project. For example, Domenech Rodríguez started as a PMTO workshop leader and is currently a mentor. Baumann is now a PMTO specialist and coach, and Amador is a PMTO specialist and FIMP rater. As we continue our training, we are now involved in training therapists from New York City and Kansas, where PMTO is being implemented. Our reach goes beyond therapists who see only Latino families, as we coach different therapists involved in these projects. Strengthening the PMTO human capital for Mexico therefore is also helping the implementation of PMTO in other contexts.

Roles

Our roles in this journey have been flexible not only in terms of intervention training but also in expertise within the adaptation and implementation processes. The process in CAP is led by the cultural adaptation specialist (CAS), who is the expert with the knowledge of the target population who assists on the integration of the core elements of the target culture on the adapted version of the intervention in collaboration with the treatment developer (Domenech Rodríguez & Wieling, 2004). The implementation process is usually led by a team of researchers, with the help of the facilitator, who is the person who knows the organization and the setting where the intervention is being implemented, and works to facilitate the process of incorporating the EBT in the new setting (Kauth et al., 2010).

In implementation science, there is the concept of team science (Stolkos, Hall, Taylor, & Moser, 2008), where a group of people with different roles collaborate to facilitate the process of implementation. Such was our case, where we not only collaborated as a group but the emphasis on which roles we played also shifted depending on the context in which PMTO was being implemented. For example, in Logan, Domenech Rodríguez was considered the CAS. In Mexico, Amador was considered the CAS. Domenech Rodríguez and Baumann were supporting the implementation. As we continue our work in Mexico, Amador also incorporates the role of the facilitator in Mexico. As we move beyond Mexico and support PMTO therapists in the United States, the three of us currently serve as CAS, coaches, fidelity of implementation raters, and mentors for PMTO therapists, with Forgatch and Rains as our mentors.

In summary, the adaptation process of PMTO from the United States to Mexico has been long, hard, and full of challenges but fruitful. The constant collaboration with the developers and the support provided by our institutions have allowed us to continue the process. We have tested the adapted manual in an RCT in Mexico, tested an adapted version with enhanced components in Detroit, and are currently sharing components of the manuals with therapists who work with Latino families in Kansas and in New York City. Below, we report on the adaptations to the CAPAS-Logan manual to create the CAPAS-Mexico.

CULTURAL ADAPTATION OF MANUALS

The process of the adaptation of PMTO to Mexico is unique in that it was based on the manual *Criando con Amor: Promoviendo Armonía y Superación* (CAPAS; Domenech

Rodríguez, 2008), as well as on other PMTO manuals. A summary of the adaptations made to CAPAS-Logan is presented in Table S1.

The name CAPAS was created based on focus groups in Logan, Utah, with the Latino parents who identified two goals for their children: *superación* (educational attainment and achievement beyond the parents' levels) and *educación* (competent and respectful human beings; Domenech Rodríguez et al., 2011). Focus groups were held in Mexico; three separate groups for parents of children 1 to 12 years of age were conducted. A total of 33 individuals belonging to 17 families participated. The focus groups indicated that similar values were important for parents, who liked the name and the idea that parents are their children's best teachers and superheroes, which is embedded in the manual's title (Amador, Guillén-Ochoa, Sánchez-Moreno, Domenech Rodríguez, & Baumann, 2012). The manual in Mexico therefore is called CAPAS-Mexico.

Table 2 shows the details of the adaptations made to the manual, following the Ecological Validity Model proposed by Bernal, Benilla, and Bellido (1995). There were five main changes to the manual. First, CAPAS-Logan did not have sessions on monitoring and problem solving; these sessions were added based on the rationale that, specifically, parents monitoring kids is related to prevention of risk behaviors such as drug abuse. Second, the concept of family was expanded throughout the manual, incorporating other family members such as grandmother and uncles in the materials. Third, language was revised to better fit the context of Latino families in Mexico (e.g., families spoke of "estímulo"—encouragement—in Mexico rather than "aliento," which was the original word in the manual, more reminiscent of "breath"). CAPAS-Logan was adapted by two Puerto Rican native Spanish speakers, a Peruvian near-native speaker, and a Brazilian nearnative speaker (Domenech Rodríguez et al., 2011). CAPAS-Mexico was adapted by locals, who incorporated metaphors and specific sayings related to the Mexican culture.

Fourth, the graphic design was completely changed. CAPAS-Logan's drawings were made with Microsoft Office "clip art" by research team members. Gaínza Kawano brought to the adaptation an astonishing level of professionalism. We had discussions, for example, about the type of facial figures we would like to have when portraying our families in the manual, including race and color of skin. While we could have included families wearing typical Mexican outfits, we decided to use neutral-style figures with no particular emphasis on race or color of skin, with the long-term goal of using these designs on manuals for other settings that are implementing PMTO.

Finally, we adjusted our methods based on the context. In Logan, if a parent missed a session, she or he would receive the makeup session prior to the following session, on the same day. Because there were more groups in Mexico running at the same time, makeup sessions were more flexible: Parents could attend other group sessions if they missed their own.

DISCUSSION

Implementation and cultural adaptation models are ideal companions in providing structure and guidance to collaborative teams that seek to transport evidence-based interventions across cultural and/or national boundaries. As is evident in this article, such undertakings are not to be assumed lightly. The work we describe here has evolved over a decade, two decades if we consider the time it took to build professional relationships before PMTO seeds were even planted. A careful selection of team members, a strong commitment to see the work through, a strong evidence-based program that was applicable and flexible (thus transportable), and unwavering support from treatment developers were all essential components to our success. In fact, as Chambers and Azrin mention, “partnerships [between treatment developers, researchers, and consumers] have been instrumental components of systematic approaches to implementation and in the conduct of the studies themselves” (Chambers & Azrin, 2013, p. 509, our insert).

One of the questions our team had was whether we needed to further adapt a manual that was already effective for Latino families living in the United States when implementing it in Mexico. As we describe here, the manual was adapted for the new context and objectives. We added session content (monitoring and problem-solving sessions) to reflect the five core components of PMTO (Forgatch & Patterson, 2010) to the manual in Mexico. Because we did not test CAPAS-Logan, it is not clear whether the adaptations to the manual were necessary. It is worth observing that when we were adapting CAPAS-Logan, the original PMTO manual was also adapted for implementations in Kansas and in New York, so we worked closely with the treatment developer to reflect the new changes to the manual in CAPAS-Mexico. An example is that emotional regulation was added in CAPAS-Mexico with more intensity than we had in CAPAS-Logan.

The ongoing adaptation process of the manual in three places at the same time reflects the fact that a manual is not a static document; rather, it is a living and flexible document that should reflect the context where it is being implemented. If the core components are still the same, if—as in our case—close collaboration with the treatment developer is maintained, and if the adaptation is carefully documented and follows a framework, we would suspect that there would be a replication of the effectiveness of the intervention. In fact, preliminary data of RCT show promising results, with significant reductions in child externalizing behaviors postintervention. A follow-up research question is whether CAPAS-Mexico would be effective for families in the United States.

Our goal in this article was to expand an implementation model to incorporate explicit steps of the adaptation process. It is our hope that by describing our process of collaboration and training, we can provide a roadmap for future researchers who aim to launch their implementation process and evaluate the adaptation of the intervention to new settings and populations. Moreover, we wanted to highlight, by showing the years, the steps, and the challenges, that the process of adapting an intervention is long. This preparation process is oftentimes not funded or recognized in institutional promotions but is necessary for a sustainable program of research.

We had several successes: We are currently finishing the RCT in Mexico, and our team is providing coaching to therapists in Kansas, New York City, and Detroit. Support from our organizations and from ISH was crucial for the success of this project. Creativity, such as bringing Gaínza to work with us, and close collaboration among our team members with the developers are also key components for the success of this work. However, we also had several challenges. As shown in the online supporting information, lack of financial support yielded high attrition rates for therapists. Not shown in the table is a large contextual factor that our team faced regarding changes in political context. Our collaboration for this project spans one presidential election in Mexico, meaning changes in power and consequently changes in funding. At one point, our team was contacted by a government authority asking us to implement PMTO in Mexico and train over 900 therapists from mental health services. While we were extremely excited with the idea, we knew that our human capital was too small to be able to fulfill the task with high quality. As we negotiated what was feasible for the team, time passed and the election term was up, when we were then informed that implementing PMTO in Mexico was not a priority for the government anymore as funding needed to be reallocated to campaigning.

Some lessons can be learned from the above situation. One lesson refers to timing: Sometimes resource allocation in the real world does not wait for the results of a controlled trial to test the effectiveness of an intervention. It can be challenging to balance scientific rigor with urgent needs, especially in low- and middle-income countries where resources for mental health treatments are scarce (WPA, WHO, & IACAPAP, 2005). While rigorous calibrations of the intervention should be conducted prior to its dissemination to new settings, one also must balance the potential lack of resources in the context where the study is taking place. Potentially, if negotiations had taken place earlier in the political timeline, we could have started a hybrid design (Curran, Bauer, Mittman, Pyne, & Stetler, 2012) of PMTO in Mexico, allowing us to speed the implementation process by testing the effectiveness of the adapted trial while evaluating implementation outcomes. A positive outcome of such negotiations, however, is that our team has now a clearer implementation and dissemination plan for PMTO in Mexico with lessons learned from our challenges in Mexico as well as outcomes from other countries that have implemented PMTO.

NEXT STEPS

Based on the lessons learned, we anticipate exciting possibilities in the future dissemination of PMTO as an efficacious and culturally relevant intervention across the United States and developing countries. First, we anticipate that we will continue to learn relevant lessons from our cross-cultural research. For example, Parra-Cardona et al. (2012) have found that the level of satisfaction of Latino immigrant parents with two culturally adapted versions of PMTO is very high (CAPAS-Original versus CAPAS enhanced), even if parents are only exposed to the core PMTO components without addressing in depth culturally focused topics such as living in the United States as an immigrant. These findings are encouraging, as they provide evidence for the high cross-cultural impact of the core components of the PMTO intervention. Particularly when considering how challenging the dissemination of PMTO can be in international contexts, these findings indicate that elaborate adaptations for multiple Latin American contexts (e.g., adding a session about biculturalism) are not

necessary as long as the core PMTO components are presented within relevant cultural frameworks to the target populations. Thus, cross-cultural lessons to be learned are multiple in nature and directionality.

Finally, the project described in this article constitutes a case study to inform the unique opportunities and limitations associated with maintaining a program of services research by solely relying on funding from local and federal governments. Whereas resources generated from government funding constitute an extraordinary opportunity to set in motion relevant programs of services research, public funding is also subject to changing political agendas and priorities. Thus, a promising alternative for future dissemination and sustainability efforts in Latin America refers to enhancing collaborations with universities, NGOs, and private training institutes committed to the promotion of mental health. Because these institutions were created with clear mission goals of generating and disseminating knowledge, as well as serving populations in need, we consider that partnering with strong social advocates of the Mexican (and Latin American) society will be essential for the promotion of sustainable programs of services research focused on parenting interventions. Successful and innovative stories are already occurring in the field of couple and family therapy as best practices are being promoted in Mexico through private sector organizations. We look forward to contributing to such stories of success by disseminating efficacious and culturally relevant versions of PMTO in an effort to address the multiple challenges that Latin American populations continue to face. Thanks to the Mexico City experience, we have confirmed that joint efforts, creativity, and a strong commitment to scientific knowledge and social justice can support in highly meaningful ways the lives of Latin American families facing extraordinary challenges.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1**PMTO Implementation Framework^a**

Adopting Community/Provider	Collaboration	Program Developer/Purveyor
Stage 1: exploration		
Evaluate training resources	System-level assessment	Gather training team
Establish team-level leadership	Funding/resources	Establish human resources to train and supervise
Assess human capital	Politics	Establish criteria for therapist training (e.g., readiness, certification)
Evaluate fit of EBT with population	Policies	
	Assess EBT fit with setting	
	CAPAS: set the stage	
	Define stakeholders: program developer/purveyor, trainers, cultural adaptation specialist, champions, agency leaders, practitioners, supervisors, consumers	
	Form collaborative relationships	
Stage 2: preparation		
Gather resources	Establish an implementation team	Develop program and materials
Select a program	Treatment developer/purveyor	Develop technology (e.g., website, tracking/monitoring systems)
Recruit staff	Researchers	
	Cultural adaptation specialist	
	Trainers/coaches	
	Administrators	
	Clinicians	
	Consumers	
	Establish an implementation plan	
	Select implementation framework to use/test/adapt	
	Establish EBT efficacy/effectiveness for population/context	
	CAPAS: set the stage for adaptation	
	Define adaptation model	
	Adapt manual and evaluation manuals	
	Conduct focus groups with adapted materials	
	Pilot test adapted materials	
Stage 3: early adoption		
Engage agencies/trainees	Based on pilot work, continue adapting materials	Conduct practitioner training
Ensure referrals	Manage logistics	Provide materials/technology
Provide training resources	Establish communication system among team members	Evaluate fidelity
Complete training	CAPAS: initial adaptation	Provide technical assistance
	Adapt manual based on community and provider feedback	
Stage 4: implementation		
Training and coaching with context-driven adaptation support	Problem-solving challenges	Train trainers, coaches, fidelity raters
	Evaluate and adjust for feasibility	Guide infrastructure development
Provide community services	Evaluate client outcomes	Provide technical assistance

Adopting Community/Provider	Collaboration	Program Developer/Purveyor
Build infrastructure	Post hoc program adaptation	Evaluate fidelity
Sustain commitment and support	Assess sustainability	
	Assess provider knowledge, acceptability, and adoption	
	<i>CAPAS: adaptation iterations</i>	
	Ongoing manual adaptation based on feedback from providers and community	
Stage 5: sustainability/feedback phase		
Integrate program into system	Assess fidelity	Complete transfer to community
Extend reach	Consumer satisfaction and retention	Provide technical assistance
Sustain practice with fidelity	Provider satisfaction and retention	
Train/coach/certify practitioners	Client outcomes	
Maintain infrastructure	Funding and sustainment plan	
Sustain buy-in/commitment	Establish feedback system between adopting community and purveyor	
	Evaluate need for further adaptation for fit to community	
	<i>CAPAS: adaptation iterations</i>	
	Ongoing adaptation of manual based on feedback from providers and community	

Note.

^a Adapted from Forgatch et al. (2013).

Table 2

CAPAS-Logan and CAPAS-Mexico adaptation process based on the Ecological Validity Model (Bernal et al., 1995)

EVM Domains	CAPAS-Logan	CAPAS-Mexico
Language	Manual translated from English to Spanish; language adapted to each group; not country specific.	Focus on native language.
Persons	Therapists of mixed background (first-generation Latinas from Puerto Rico, Perú, Brazil).	All therapists were Mexican.
Metaphors	Expressions incorporated from different cultural backgrounds, depending on therapists and group.	Attention given to Mexican expressions. Attention to nonverbal (i.e., graphic design) communication of cultural and contextual values.
Content	Used cultural values to frame goals (e.g., <i>respeto</i>).	Cultural values maintained and adapted. Addition of problem-solving and monitoring sessions to manual.
Concept	Goal was to promote family harmony, and parents' and children's success.	Concept of family expanded beyond mother–father–child to include, for example, single-father families, families with grandparents, and families with different ethnicities.
Goals	Treatment goals framed in culturally relevant manner. Values of <i>respeto</i> and <i>buena educación</i> incorporated in manual.	Treatment goals essentially the same as CAPAS but more focused on Mexican culture.
Methods	Makeup sessions delivered individually prior to next session.	Parents who could not attend their specific group were welcomed to makeup sessions in another group. High attrition rates after the incentive session (4th session) and high resistance from those parents who stayed in the intervention. Adaptation of materials to incorporate these concepts at the beginning of the intervention and inclusion of incentives to increase retention rates.
Context	Topics included contextual issues, such as deportation.	Focus on Mexican context (i.e., no mention of deportation).