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Cognitive Processing Therapy for Spanish-speaking Latinos: A formative study of a model-driven cultural adaptation of the manual to enhance implementation in a usual care setting

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Abstract

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Objective—As part of a larger implementation trial for Cognitive Processing Therapy (CPT) for posttraumatic stress disorder (PTSD) in a community health center, we used formative evaluation to assess relations between iterative cultural adaption (for Spanish-speaking clients) and implementation outcomes (appropriateness & acceptability) for CPT.

Method—Qualitative data for the current study were gathered through multiple sources (providers: N=6; clients: N=22), including CPT therapy sessions, provider field notes, weekly consultation team meetings, and researcher field notes. Findings from conventional and directed content analysis of the data informed refinements to the CPT manual.

Results—Data-driven refinements included adaptations related to cultural context (i.e., language, regional variation in wording), urban context (e.g., crime/violence), and literacy level. Qualitative findings suggest improved appropriateness and acceptability of CPT for Spanish-speaking clients.

Conclusion—Our study reinforces the need for dual application of cultural adaptation and implementation science to address the PTSD treatment needs of Spanish-speaking clients.

Keywords

implementation; cultural adaptation; posttraumatic stress disorder; Latinos; cognitive processing therapy

As the largest ethnic minority in the U.S., Latinos comprise 17% of the population and are expected to make up nearly one-third of the population by 2060 (U.S. Census Bureau, 2013, 2015). Findings from a population-based study suggest that Latinos are more likely than non-Latino whites to meet criteria for a mental health diagnosis and to report problems meeting their basic needs (e.g., food, shelter, clothing, transportation) in the past year (Hernandez, Plant, Sachs-Ericsson, & Joiner, 2005). Focusing specifically on disparities in posttraumatic stress disorder (PTSD), a systematic review of articles on racial and ethnic differences in prevalence and persistence of PTSD revealed that Latinos were more likely than non-Latino whites to develop the disorder after exposure to a traumatic event. Latinos also reported higher severity of PTSD symptoms relative to non-Latino whites (Alcántara, Casement, & Lewis-Fernández, 2013). Despite documented psychosocial needs, Latinos experience significant challenges with regard to access to and quality of care for PTSD and other mental health conditions (Institute of Medicine [IOM], 2003; U.S. Department of Health and Human Services [DHHS], 2010).

Community health centers, where Latinos most often access care (Doty, 2003), are typically located in low-income communities with limited resources, where providers are overburdened and client populations face multiple psychosocial stressors and comorbid health problems (Camacho, Ng, Bejarano, Simmons, & Chavira, 2012; Sokal et al., 2004). Further, providers in community health centers are less likely to use evidence-based treatments (EBTs) with their clients compared to providers in other mental health settings (Nelson & Steele, 2007; Stein, Celedonia, Kogan, Swartz, & Frank, 2013). As a consequence of these various factors, Latino clients are less likely to receive EBTs for mental health conditions (Alegría et al., 2008; Lau, 2006).

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Spanish-speaking Latinos face additional challenges in accessing mental health treatment, given the shortage of Spanish-speaking providers (Baig et al., 2014). For clients who seek bilingual providers who deliver EBTs, the pool of available clinicians is even more limited. In addition, bilingual providers report multiple barriers to delivering therapy in Spanish, including inadequate training, struggles with technical vocabulary translation, and difficulties with different variations of Spanish language (Biever et al., 2002; Castaño, Biever, González, & Anderson, 2007; Musser-Granski & Carrillo, 1997; Verdinelli & Biever, 2009). Providers also report having to translate intervention materials in-session, resulting in communication delays as they search for correct words or phrases, particularly when using technical language (Castaño et al. 2007). Further, bilingual therapists who are motivated to implement EBTs only have a handful of culturally-adapted protocols that have undergone pilot testing with Spanish-speaking Latino populations to implement with clients (Benish, Quintana, & Wampold, 2011; Griner & Smith, 2006; Huey & Polo, 2008; Ramos & Alegría, 2014; Smith, Rodríguez, & Bernal, 2011).

The basic premise for adapting EBTs to a client's cultural background is that explicitly integrating cultural factors (e.g., language & values) into care will improve the relevance, acceptability, effectiveness, and sustainability of that treatment in usual care, thereby reducing inequities in care (Bernal, Jiménez-Chafey, & Domenech Rodríguez, 2009; Castro, Barrera, & Martinez, 2004). Leaders in the field of minority mental health research suggest that cultural adaptations may help to improve treatment outcomes associated with EBTs, because previous studies have demonstrated lower client satisfaction among racial and ethnic minority clients receiving non-culturally adapted services (Meyer & Zane, 2013), and poorer treatment response to EBTs among racial and ethnic minority clients, as compared to non-Latino white clients (Castro, Barrera, & Steiker, 2010; Castro et al., 2004).

Despite these challenges, EBTs may be especially fitting for the needs of community health centers where Latinos receive their care, as previous studies have indicated that, in addition to offering improved mental health outcomes, EBTs are cost effective, produce rapid and sustained effects (Issakidis, Sanderson, Corry, Andrews, & Lapsley, 2004; Ma & Teasdale, 2004; Watzke et al., 2014), and help reduce provider emotional exhaustion and burnout (Aarons, Fettes, Flores, & Sommerfield, 2009). Further, a meta-analysis of culturally adapted interventions found that adapted interventions for low-acculturated Latinos (versus other minority groups) had the largest effect sizes, indicating the promise of adapting EBTs to Latinos (Griner & Smith, 2006). Given that rigorously tested culturally adapted EBTs are often unavailable in usual care settings, there is a pressing need for the use of cultural adaptation and implementation research methods to fully address the mental health needs of Latinos presenting at community health centers. Moreover, the need to integrate cultural adaptation and implementation science research has already been identified in previous publications (Baumann et al., 2015; Cabassa & Baumann, 2013).

The present study uses Barrera and colleagues' (Barrera, Castro, Strycker, & Toobert, 2013) five-stage model to describe the process of cultural adaptation of Cognitive Processing Therapy (CPT) for PTSD for Spanish-speaking Latino clients (Resick, Monson, & Chard, 2010) within the context of a larger implementation trial at a community health center. In addition, the study utilizes formative evaluation (Stetler et al., 2006) to assess potential and

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actual influences on the success of our process of implementation of culturally-adapted CPT. No studies to date have examined the process of cultural adaptation of a standardized EBT for PTSD for Spanish-speaking Latino clients. Therefore, our study focuses on how cultural adaptation can respond to the needs of both clients receiving the EBT and the providers attempting to implement the EBT. For example, we discuss how cultural adaptation affects implementation outcomes (Proctor et al., 2011) such as *acceptability* (agreeability, palatability, or perceived adequacy) and *appropriateness* (relevance to the needs of providers and clients) (Cabassa & Baumann, 2013). The specific aims of this study are to: 1) detail and evaluate the steps of the cultural adaptation process based on Barrera and colleagues' (Barrera et al., 2013) five-stage theoretical model of cultural adaptation, and 2) discuss emergent themes related to the acceptability and appropriateness of the adapted CPT manual.

Methods

Participants

This study is part of a larger implementation trial that evaluated the feasibility and acceptability of CPT for PTSD in a diverse community health center. More specifically, the parent study examined provider and client perspectives on barriers and facilitators to implementing CPT. Participants in the parent study included: 1) mental health providers treating clients with PTSD (hereafter: "providers"; N = 28) and 2) clients receiving treatment for PTSD (hereafter: "clients"; N = 78). To meet inclusion criteria for the larger implementation trial, providers needed to have at least one patient on their case load with a primary diagnosis of PTSD, licensure in a mental health specialty field (e.g., social work, psychiatry) or student intern status with the supervision of a licensed clinician, and report the ability to provide therapy in English and/or Spanish. Providers who did not agree to the procedures of the research protocol (e.g., self-report measures, audio recording of sessions, consultation) were excluded from the trial. All providers who participated in the study provided informed consent.

Inclusion criteria for clients were: (a) at least 18 years of age, (b) current primary diagnosis of PTSD (per medical record and/or Posttraumatic Symptom Checklist-Specific Version [PCL-S] score >36 [Weathers, Litz, Herman, Huska, & Keane, 1993]), and (c) willingness to have sessions audio-taped. Clients were excluded from the study if they (a) were unstable on their psychiatric regimen (defined by drastic changes in medication in the past 30 days & clinical opinion of client's psychiatrist), (b) evidenced current psychosis or manic episode of Bipolar Disorder, (c) met criteria for current diagnosis of substance dependence, (d) were prescribed benzodiazepines PRN, or (e) reported concurrent cognitive-behavioral therapy (CBT) or previous CPT treatment. Eligible clients were referred to the study by their providers, and met with a member of the study staff to complete a written informed consent. Only the subset of clients who received CPT in Spanish (n = 19) and their providers (n = 6 social workers), were included in the present study. Provider and client demographic information is presented in Table 1.

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Treatment

CPT is a front-line EBT for PTSD that is available in English (Resick et al., 2010) and Spanish (an unpublished one-way direct translation to Castilian by A. B. Adell & E. A. Avendaño at the Instituto Valenciano de Psicología, València, Valencia, Spain; hereafter: Spanish CPT Manual—Version 1). Informed by the principles and strategies of CBT, CPT asserts that extreme, rigid, inflexible, and inaccurate beliefs maintain PTSD symptoms (Resick et al., 2010). CPT utilizes techniques such as Socratic questioning to guide clients through cognitive restructuring, including the identification and challenging of inaccurate or unhelpful beliefs and thinking patterns that were caused or reinforced by exposure to a traumatic event.

Procedures

Modifications to the CPT Manual are presented according to the five-stage theoretical model for cultural adaptations (Barrera et al., 2013). This model consists of: (Stage 1) *information gathering,* (Stage 2) *preliminary adaptation design,* (Stage 3) a *preliminary adaptation test,* (Stage 4) *adaptation refinement,* and (Stage 5) a *cultural adaptation trial*. Our process of culturally adapting the CPT Manual was further informed by Stetler and colleagues' (2006) overview of formative evaluation, wherein data are collected before, during, and after implementation to better understand the nature of the initiative, need for refinements, and the worth of extending the project to other settings. Although there are no formal guidelines for formative evaluation, our use of multiple repeated sources of qualitative data throughout the different stages of adaptation allowed for the iterative evaluation of the implementation process. The hospital Institutional Review Board reviewed and approved all study procedures.

Stage 1: Information Gathering

Information gathering in Stage 1 involves literature review, pre-adaptation interviews, and other means of determining whether or not an adaptation is needed and which components of the intervention should be altered during the adaptation. Our primary goal for this stage was to determine if CPT was acceptable to stakeholders, and if a cultural adaptation of the Spanish CPT Manual—Version 1 was required to meet the needs of the client population. First, we reviewed clinic data to estimate the prevalence of PTSD in the client population and the proportion of clients who reported Spanish as their primary (preferred) language. Next, we conducted semi-structured interviews with providers (n = 17) at the community health center to determine whether or not CPT was perceived by providers as *appropriate* (i.e., relevant to the needs of clients served in this clinic) and *acceptable* (i.e., agreeable, palatable, or satisfactory) to implement in their clinic (Proctor et al., 2011). We also performed a literature search to identify factors to consider when adapting interventions for Latinos, with an expanded focus on Latinos with low-income and low-educational attainment. In addition, we searched for factors to consider when adapting treatments for Spanish-speaking clients and bilingual providers.

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Stage 2: Preliminary Adaptation Design

Information gathered in Stage 1 was used to inform preliminary adaptation design, including changes to the original intervention. Our objective for this stage was to design a pilot test of the pre-existing direct translation of the English CPT Manual into Spanish (hereafter: Spanish CPT Manual—Version 1) and to train providers to deliver CPT using this manual. Given the high client need for PTSD treatment in Spanish, we proceeded by using the Spanish CPT Manual—Version 1, translated by Adell & Avendaño into Castilian in Barcelona (unpublished, 2008). No studies have been published on the use of this manual in clinical trials. However, the Spanish CPT Manual—Version 1 is a direct translation of the English CPT Manual, which has been tested in several RCTs (Steenkamp, Litz, Hoge, Marmar, 2015; Surís et al., 2013). The Spanish CPT Manual-Version 1 is publically available, and therefore, this version closely approximates what may be currently available for use in clinical practice.

A national CPT trainer and the principal investigator of the study co-led a 3-day CPT training workshop in English. CPT content was delivered via lecture, didactics, demonstration, and role-play. During this training, providers were given an opportunity to discuss anticipated barriers and facilitators to implementation. Providers were interviewed before training about their experiences with treating PTSD and attitudes towards EBTs for PTSD (AUTHOR CITATION OMITTED, in press). More specifically, providers were asked to discuss their previous training in PTSD treatment, their experiences using these treatments, their training in EBTs, their willingness to use new and structured forms of treatments, and their initial thoughts about CPT. Although no data were collected regarding the Spanish CPT Manual—Version 1 at this stage, providers' pre-treatment beliefs about the acceptability and appropriateness of CPT were assessed (AUTHOR CITATION OMITTED, in press).

Stage 3: Preliminary Adaptation Test

During this stage, we conducted a preliminary adaptation test using the Spanish CPT Manual—Version 1 and then gathered feedback from stakeholders. Our goal during this stage was to gather provider feedback on the Spanish CPT Manual—Version 1. Feedback on the Spanish CPT Manual—Version 1 came from multiple qualitative data sources, including CPT sessions, provider field notes following each CPT session, weekly consultation meetings, and researcher field notes on CPT sessions written by trained bilingual-bicultural undergraduate-level research assistants. In some cases, feedback on the Spanish CPT Manual—Version 1 manual emerged naturally, and in other cases, providers were directly asked about their experiences using the Spanish CPT Manual—Version 1.

Data Collection—After each CPT session, providers were asked to record a brief field note addressing the following questions: "What went well during this session? What did not go well during this session? What are some of the barriers to the CPT protocol that you experienced during this session? What would make it easier to administer CPT the next time you see this client? Do you have any other impressions of the session or important things to note?" Providers also took part in hour-long weekly group consultation meetings with the senior author over a 6-month time period. At the end of the consultation period, providers

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participated in 1-hour follow-up interviews with a member of the study staff to discuss their experiences with training in CPT, receiving CPT consultation, and implementing CPT in their practice. All provider field notes (N = 74), consultation meetings (N = 61), and CPT sessions (N = 73) were transcribed verbatim. Two bilingual-bicultural research assistants recorded daily researcher field notes on qualitative data from CPT session audio to document needed changes to the CPT manual based on the following criteria: A) direct feedback from providers as part of provider field notes and consultation qualitative data, B) observation of common challenges documented through audio review of CPT sessions, and C) own recommendations of linguistic modifications needed to better fit the Latino population at the urban community health center.

Qualitative Data Analysis—The coding team consisted of four undergraduate research assistants, supervised by the principal investigator of the study. Two coders were assigned to code qualitative data gathered through CPT sessions and provider field notes, and two coders were assigned to code data gathered through consultation team meetings. Each coding pair followed the procedures of conventional content analysis, whereby coding categories were developed as data were reviewed. This method is appropriate when existing theory and research on a phenomenon are limited, as was the case at this stage in our study (Hsieh & Shannon, 2005). In order to generate coding categories, all four coders independently coded 10 transcripts. The coders then met and discussed these themes as a team in order to generate an initial codebook. Each member of the coding team then used this initial codebook to code an additional 10 transcripts from their respective data sources. When the coders met, they discussed any emerging themes or disagreements. Each coder had to agree on how a transcript should be coded. This process proceeded until theoretical saturation was reached and no new themes emerged. The codebook was then finalized and tested for inter-coder reliability by having all coders double-code 20% of the data for their respective data source, followed by a calculation of percent agreement. Percent agreement for sessions and field notes reached >95%. Percent agreement for consultation data was >80%. Researcher field notes were integrated with clinical observations of the principal investigator. Data were triangulated to form firm recommendations for revisions.

Stages 4: Adaptation Refinement

Qualitative findings from Stage 3 were used to revise the Spanish CPT Manual—Version 1, and to develop a new manual (hereafter: Spanish CPT Manual—Version 2). The development of the Spanish CPT Manual—Version 2 was spearheaded by our bilingual-bicultural research assistants, under the close supervision of two doctoral-level research staff with extensive clinical experience with CPT.

Stage 5: Cultural Adaptation Trial

Next, we piloted the Spanish CPT Manual—Version 2 with two new providers. Our objective for this stage was to determine providers' perceptions of appropriateness and acceptability of the Spanish CPT Manual—Version 2. To verify improvement, one provider who participated in Stage 3 continued to enroll clients at Stage 5. This provider is the only provider to deliver both versions of the Spanish CPT Manual as part of the implementation trial.

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Data collection—Study procedures were the same as Stage 3.

Qualitative Data Analysis—The coding team consisted of two undergraduate research assistants and one bachelor's level research assistant, supervised by a doctoral-level researcher. The first coder was assigned to CPT session and provider field-note data; the second coder was assigned to consultation data; and the third coder was assigned to code all data sources (sessions, provider field notes, & consultation), thereby, allowing for 20% of all data to be double-coded. Each coding pair followed the procedures of directed content analysis, whereby an existing codebook (developed during Stage 3) was used to code the data. Percent agreement for sessions and field notes reached >95%. Consultation meetings were coded in a similar fashion, with percent agreement reaching >90%.

Results

Stage 1: Information Gathering

From our interviews with providers (n = 17), we learned that none of the providers were using EBTs for trauma in usual care. When asked about specific conditions for which they would like to receive EBT training, these same providers overwhelmingly favored PTSD. In addition, these providers favored CPT over other EBTs. Providers and administrators perceived that a high percentage of their clients experienced trauma and likely met criteria for PTSD (per self-report). In addition, 41% of the client population at the health center spoke Spanish as their primary language (per clinic data provided by senior administrative director). These findings indicated the need for a culturally adapted EBT for PTSD for Spanish-speaking clients.

Our review of the literature revealed several factors to consider when adapting interventions for Latinos seen in community health settings, including ways of adapting inventions to fit education and literacy levels of clients. More specifically, our review of the literature highlighted that poor English skills, minimal education, lack of familiarity with Western psychological concepts and culturally specific idioms of distress (e.g., *ataques de nervios*) should all be considered during the adaptation process (Hinton, Hofmann, Rivera, Otto, & Pollack, 2011). Moreover, research indicates that differences in cultural values (e.g., familism, spirituality, trust), beliefs (e.g., more mistrustful attitudes towards mental health providers), and customs (e.g., men not discussing topics such as aggression or sex with women providers) may create communication barriers and misunderstandings between Latino clients and non-Latino providers during the course of mental health treatment (Fierros, Smith, & Gillig, 2006; Santiago-Rivera, 1995). In addition, the frequent somatization of psychological distress among Latino clients, and particularly among Latinos with lower levels of education, was identified as another potential barrier to communication between Latino clients and non-Latino providers (Alamilla, Kim, & Lam, 2010; Gureje, Simon, Ustun, & Goldberg, 1997).

Stage 2: Preliminary Adaptation Design

Because it was publicly available, we used the existing Spanish CPT Manual—Version 1 as our preliminary adaptation design. This manual includes all core components of the original

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English CPT Manual (translated to Castilian by A. B. Adell & E. A. Avendano; per P. Resick, personal communication, September 28, 2015).

Stages 3 & 4: Preliminary Adaptation Test & Adaptation Refinement

During Stage 3 of the study, four providers used the Spanish CPT Manual—Version 1 with a total of 10 clients (each provider enrolled 2 or 3 clients). Challenges with the Spanish CPT Manual—Version 1 presented in 10 of 61 (16.4%) consultation meetings, 19 of 73 (26.0%) CPT sessions, and 9 of 74 (12.2%) field notes. Clients who received treatment with the Spanish CPT Manual—Version 1 evidenced difficulties understanding directions on homework assignments, key terminology, and the relevance of the trauma vignettes provided in the manual. Triangulated data from this stage (also see Table 2) suggests that the Spanish CPT Manual—Version 1 was a poor fit for clients and providers alike. Providers reported on how the manual did not match well with clients' dialect, lived experiences, educational backgrounds, literacy levels or cultural beliefs.

Difficult to use—In consultations, providers reported that they struggled to use the manual, stating that they felt "confused" and "taken by surprise" by the procedural differences between this version of the manual and the original, English language version. For example, one provider stated, "The English [CPT manual] asks us to leave 25 minutes at the end to do the Challenging Questions Worksheet. That's not even mentioned in the Spanish one."

Bilingual providers noted specific challenges they faced as they tried to compensate for the shortcomings of the Spanish CPT Manual—Version 1. For example, providers noted how they attempted to translate (from English to Spanish as well as from language in Spanish Manual— Version 1 to the client's dialect) while in session. One provider highlighted concerns regarding the equivalence of the CPT that was delivered to Spanish- versus English-speaking clients. She stated, "... the treatment manual in Spanish that I have, is very different from the one in English, so I didn't do the session as I would have done it, had I done it in English. It's like a different procedure." This report also raised concerns regarding the adequacy of the manual overall.

Provider fluency: Providers repeatedly discussed concerns regarding their own Spanish-language fluency, when attempting to implement the Spanish CPT Manual—Version 1. Due to provider-level difficulties with the language, one provider described how she shifted between both the English and Spanish version during session,

> I kind of liked doing it [with the English and Spanish Manuals] side by side, because I found more [self-] efficacy ... [when I know I can refer to] something in English, ...then... do it in Spanish and vise-versa. ... I feel like my fluency ... was not adequate enough ... because so much of the conversation relies on using the subjunctive and ... really complicated grammatical sentences.

Another provider (a non-native Spanish speaker) noted vocabulary difficulties when attempting to explain concepts in Spanish, as she had been able to do in English. She stated, "One of the challenges is being able to explain something in like 20 different ways and when

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doing it [in] another language that can be really difficult." Provider also noted difficulty translating CPT skills learned in English (during training) to their subsequent delivery of CPT in Spanish. She described how training in English made it challenging for her to gain fluidity with the CPT terminology that she would later be used in sessions with Spanish-speaking clients,

> Personally...it's been a little bit difficult because the Spanish worksheets are different than what we've learned [in the training] and ... I feel like I'm not doing a good job teaching them because they're not the ones [terms] I've learned [in training]...for example, of the 5 [Socratic] questions that we've learned, only 3 of them are the same in the Spanish handouts.

Client education and literacy level—Providers described various experiences where they perceived that clients had a difficult time understanding the concepts taught through CPT. Providers expressed their belief that client education and literacy level likely contributed (beyond language) to some challenges observed in session. As one provider described,

> I wonder though too, because it's a [literacy] level thing. Like even if you got the grammar completely right, I think sometimes I felt like there was a disconnect with... my [way of] Spanish speaking, [and] teaching [clients] stuff to do that [pertains to a certain] type of thinking. ...I felt... [that] since a lot of our clients don't have a high level of formal education, [they may not understand the concepts]...even if you got the grammar 100% correct.

Another provider noted,

> The other part is [that]- I, myself as a [native] Spanish fluent speaker, some of the wording on the worksheet is definitely not basic wording. ... Some of the language is complicated. It's not ... basic Spanish, it's ... high functioning. [My client]... said quite a lot today on the tape, you know, about how the language didn't – it just didn't make sense to him.

Another provider noted how one of her clients was able to comprehend therapy content, despite challenges with the level of the language,

> And I mean, I think it [CPT] can be done, honestly, in Spanish, because [my client] only has a third grade level and she's been able to move along very nicely in this.

Providers were strong proponents of adapting the language in the manual to the literacy level as well as the dialect of the clients seen in the clinic. One provider suggested,

> But I do know from reading the worksheets and seeing them struggle that definitely the language is complicated for them, and, um (pause) and I wonder if we can, um adapt the language to make it simpler for when they go home, [so then] they can remember what we're discussing and working on.

Another provider noted,

> I know she [my supervisee] talked about, you know, the complicated nature of doing that [adapting the Spanish manual] and I was thinking it would almost be like

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somebody who works in this community and works with our population would... have to write the, write the Spanish or figure out ways of.

Terminology—Beyond challenges with client literacy and provider fluency, providers also noted that some of the terminology was not relevant to dialects of clients seen at the clinic. One provider highlighted how she "...had a really hard time explaining the two types of emotions. So I could use some coaching around that." Another provider noted similar challenges with another term,

I remember just trying to describe the concept of a pattern. The word that is used, *patron*, they didn't understand and so then I was trying to think of other words. How do you explain the concept of a pattern? And it was really hard, I took awhile.

Manual Burden and Low Adoption—Over the course of the trial, providers discussed how challenges with the manual, especially the Spanish CPT Manual—Version 1, decreased their desire to continue using the treatment. Thus, these issues were identified as barriers to implementation. One provider stated, "Well I have to tell you my hesitation with enrolling other people...the manual is just the labor intense... I'm a hard worker, but this was labor intense." Given the prominence of low literacy and low levels of education among clients in the study, we opted to integrate another adapted version of the CPT manual that was tested for use among clients with low educational attainment and low literacy. For this refined adaptation (hereafter: Spanish CPT Manual—Version 2) we integrated the CPT manual for female survivors of sexual violence in the Democratic Republic of Congo (CPT-DRC; Bass et al., 2013). The CPT-DRC manual preserved core elements of the original intervention, but simplified language to increase comprehension and retention for low-literacy and illiterate participants. Further details provided in supplementary appendix to Bass et al. (2013). For the Spanish CPT Manual—Version 2, we translated the CPT-DRC manual into Spanish and formatted the content to individual therapy (instead of group therapy). Consistent with Resnicow and colleagues' model of deep structure adaptation (Resnicow, Soler, Braithwaite, Ahluwalia, & Butler, 2000), we also made significant data-driven changes to the manual in order to improve cultural fit (e.g., incorporating cultural values & psychosocial factors that influence the trauma responses) for the Spanish-speaking clients at the urban community health center where the study took place (e.g., the inclusion of more relevant clinical examples). For example, we added more relevant trauma vignettes, based on client's negative reactions to CPT content that seemed to "Focus more on people who go to war...like it's [CPT is] specifically for soldiers."

Prior to the cultural adaptation trial, we also consulted with CPT experts to ensure fidelity of the revised manual to the basic principles of CPT. Feedback and revisions to the manual are presented in Table 2. In addition, we integrated new terms that were found to be a better fit for the variations of Spanish used by clients at the community mental health center (see Table 3). We then met with native Spanish-speaking providers and researchers to discuss the initial acceptability of key terminology and the revised manual.

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Stage 5: Cultural Adaptation Trial

During Stage 5, three providers used the Spanish CPT Manual—Version 2 with a total of nine clients (providers enrolled 7, 1, & 1clients). Directed content analyses (Hsieh & Shannon, 2005) of all currently available data indicated that the Spanish CPT Manual—Version 2 was more comprehensible and culturally appropriate for participants as compared to the Spanish CPT Manual—Version 1. Generally speaking, qualitative data from Stage 5 included markedly fewer mentions of the Spanish CPT Manual—Version 2, as well as more positive feedback.. Challenges with the Spanish CPT Manual—Version 2 presented in 4 of 35 (11.4%) consultation meetings versus 16.4% in Stage 3; 11 of 60 (18.3%) CPT sessions versus 26.0% in Stage 3, and 2 of 42 (4.7%) field notes versus 12.2% in Stage 3.

Providers who received training in the Spanish CPT Manual—Version 2, had generally positive things to say about CPT. As one provider noted,

> And I really liked the new first homework assignment where trying to get the person to imagine what their life could be like if their symptoms were lower. It was really hard for my patient to imagine anything being different, but... just asking the question [was helpful].

Providers also reported some ongoing challenges related to client comprehension of a narrow set of CPT concepts, although they reported notably fewer challenges with client comprehension compared to the previous set of providers. One provider stated that it took longer to get through the materials in Spanish (compared to English), and that she wished that the clinic would accommodate more time for these types of treatments. This provider noted,

> Um, we added some [stuck points to the log] while we were in session, but I felt that the session is not long enough to cover all the material in a way that ... it [could] cement the idea a little bit more. ...I feel that we could have spent a little bit more time on finding those stuck points and writing them down, and processing them.

Another provider described her own limited fluency, but noted that the client was able to understand the terminology in the Spanish CPT Manual—Version 2.

> We did discuss it [the concept], but we didn't do it in the order, uh, indicated, and, um, I had a little trouble reading all the Spanish, it was a little bit... um... words that I don't usually use, but I felt like, um, the patient understood, and um, she was definitely able to get the idea because she came up with examples.

Provider also described how they were working to improve their ability to determine if client's misunderstanding of key concepts was related to cognitive difficulties, avoidance, or simply due to the sophistication of CPT concepts.

> The questions. I'm having a tough time interpreting it to the client and I'm not sure whether I'm doing as good of a job as I could be doing or if he's having other issues like avoidance or cognitive or – so I just don't know the language to use.

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Feedback gathered during an in-depth interview with the provider who used both versions of the Spanish CPT Manual suggested that the adapted version was much easier to use and a better fit for her clients' preferences. More specifically, the provider stated that,

> The pacing is better. It seems like some of the psycho ed [psychological education] is broken up more over the sessions. It's not a mad dash to just like get through it all. ...And I think the way they explain the symptoms of PTSD, now they're using language like... "*it affects you in memories*." Before, they [the manual] were using much more technical language, like there's hyperarousal, and there's the re-experiencing, and the avoidance. And now we still call it avoidance, but the other two terms [were] changed ... to *memorias* and ... *miedo*...which is so much simpler than *hyperarousal*. So I feel like the psycho ed is spread out better, [and] the language is clearer and at a more accessible level for my patients.

Discussion and Next Steps

This article describes the data-driven cultural adaptation of the CPT manual for use with Spanish-speaking Latinos, within the context of a larger implementation trial of CPT for PTSD in a community mental health setting, a study in which CPT was delivered in both English and Spanish. We detailed the cultural adaptation of the CPT manual to fit both client and provider preferences in community mental health settings. Specifically, we describe both superficial and deep structure adaptations related to cultural context (i.e., language, regional variation in word choices), urban community context (e.g., familial & community violence), and clients' levels of education and health literacy. We also used formative evaluation to document the implementation of the Spanish CPT Manual—Version 2. Our desired outcome for manual adaptation was to enhance implementation of CPT within the parent study. Our manuscript expands upon the current literature by describing how cultural adaptation methodologies and implementation science outcomes were dually applied to address the PTSD treatment needs of Latino community mental health clients. This integration of cultural adaptation and implementation science was informed by Cabassa and Baumann's (2013) call for a "two-way street" between these two fields, whereby the perspectives and target outcomes of each field inform and enhance one another.

Initial pilot testing of the Spanish CPT Manual—Version 1, revealed several aspects of the manual related to poor acceptability of the manual by providers, and, subsequently poor adoption of the EBT for use with Spanish-speaking clients. This feedback suggests that the initial translation of the manual was a poor fit with regard to terminology, sociocultural context, education level, and health literacy. Given that providers in this study were new to CPT, providers described experiencing marked difficulty generating varied ways of describing key concepts—concepts that they had recently learned themselves. As a consequence, many providers described "getting stuck" in session, and not being able to answer clients' questions regarding key terms or skills. This description of "getting stuck" underscores findings of previous studies (Guerra & Shea, 2007; Hilton & Skrutkowski, 2002; Ramos & Alegría, 2014;), which have argued for the need to expand cultural adaptations of interventions beyond direct one-way translations to include factors such as client education and literacy levels. Our findings also suggest that language match between

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translated interventions and clients is not sufficient, thus, we caution providers from using manuals that have been translated, but have not undergone cultural adaptation and pilot testing or simply do not match the regional dialect of clients. We understand that direct translations are often the best available option for clinicians, thus, we also encourage further systematic cultural adaption of manuals that have already been translated from English to Spanish to ensure that intervention language reflects the educational backgrounds and literacy levels of clients (Domenech Rodríguez & Bernal, 2012; Domenech Rodríguez & Weiling, 2004).

Providers and clients reported a desire for case examples that reflected exposure to community violence, interpersonal violence (including physical assault and rape), and violence experienced prior to immigration to the U.S. (e.g., political violence). Further, providers reported that their clients were often experiencing ongoing violence, whereas the examples in the manual referred to veterans who were no longer being exposed to combat in their daily lives. Some providers expressed that the manual's inattention to ongoing trauma exposure made CPT for PTSD inherently less acceptable for their own clients. The need for culturally relevant intervention content has been demonstrated in prior studies of cultural adaptations of EBTs for Latinos (Parra-Cardona et al., 2012; Shea et al., 2012). Our findings also suggest that cultural adaptation may be necessary to increase provider adoption of EBTs for diverse clients.

Due to significant challenges in using the Spanish CPT Manual—Version 1 in session, some providers decided to not use the manual to guide sessions. The choice by some providers to abandon the manual altogether posed additional concerns regarding fidelity to CPT. A true strength of both cultural adaptation and implementation science methodology, in-depth interviews with providers allowed us to synthesize recommended revisions to the Spanish manual prior to training a second set of providers at the same community mental health center. Providers gave specific feedback on changes to the manual (beyond language and literacy adjustments) that could facilitate implementation, such as improving the visual organization of therapy materials (i.e., manual & handouts), and the addition of tools that could be used in-session to facilitate the delivery of newly learned skills that are integral to CPT. For example, we provided additional manual material regarding the use of Socratic Questioning (more specifically, an extensive list of example questions) and the identification of stuck points from clients' impact statements (i.e., sample stuck thoughts that corresponded with common themes from impact statements). These adjustments are consistent with Cabassa and Baumann's (2013) recommendations for integrating key components of cultural adaptation and implementation science.

There are some limitations to the current study that should be noted. The Spanish CPT Manual—Version 2 included a variety of linguistic, sociocultural, and health literacy-related changes that improved cultural fit of the intervention, measured by provider acceptability. However, these findings could be strengthened by documenting improvements in client acceptability—data which we lack at this stage of pilot testing. Consistent with the iterative nature of formative evaluation, there are also likely additional factors that may warrant further adaptation of the manual, such as provider modifications to delivery of CPT. Future studies should examine how providers make in-session modifications to manuals, because

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these data could identify areas in need of further adaptation. Further, given that implementation researchers are interested in increased adoption as well as fidelity to EBTs, more research is needed on the way that providers modify EBTs to fit their own style of practice and the needs of their clients. Training of providers in community health centers, particularly those with some resistance to delivering EBTs, may be enhanced by adaptations that are guided by feedback from providers. For example, having providers identify terminology to describe key CPT concepts that is more congruent with their own beliefs regarding diagnosis and treatment of mental health problems may increase adoption as well as fluidity with CPT principles. Although not a primary aim of this study, the training workshop for the Spanish CPT Manual—Version 2 included modified language of some terms that providers deemed too pathologizing or invalidating to clients (e.g., revising "challenging beliefs" to "questioning beliefs"). Cultural adaptations that enhance provider adoption of interventions warrant further exploration. Another limitation of the current study is that only one provider was trained in both versions of the Spanish manual, so data directly comparing the two manuals is limited. Interestingly, though, the Spanish CPT Manual—Version 2 did not emerge as a major barrier to implementation in subsequent interviews. This finding suggests that the manual revision improved the acceptability and appropriateness of CPT, as intended. Future studies may benefit from head-to-head comparisons of culturally adapted versus original EBTs; this research is needed to justify ongoing support of translational research.

Conclusion

The systematic inclusion of suggested revisions to the Spanish CPT Manual appears to have improved acceptability and appropriateness of the intervention, which, in turn, reduced the degree to which the manual was a barrier to implementation. Our qualitative findings suggest that attending to cultural context (beyond simply organizational culture) within implementation trials may improve implementation outcomes such as acceptability and appropriateness of EBTs. In addition, our findings highlight the utility of formative evaluation in both implementation science and cultural adaptation research. Future studies should further investigate the intersection between cultural adaptation and implementation science by examining the tension between latitude and fidelity. Because previous studies have found that culturally adapted interventions may be more effective among Latino clients, implementation scientists should aim to test how EBTs can be culturally adapted without reducing the potency of the intervention. Our findings suggest that community mental health providers are less likely to adopt EBTs that are perceived as cumbersome or ill-fitting to their clients; thus, cultural adaptation may be necessary to move EBTs from research to usual care settings. We recommend a full-scale mixed-methods clinical trial of the Spanish CPT Manual—Version 2 to facilitate a) more extensive culturally-informed modifications to the Spanish language manual, and b) provide quantitative data supporting the efficacy of the adapted intervention.

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Table 1

Demographics for Stage 3, 4, and 5 providers and clients

	Providers (N = 6)	Clients (N = 19)
Gender, n (%)		
Male	0 (0.0)	2 (10.6)
Female	6 (100.0)	16 (84.2)
Not reported	0 (0.0)	1(5.2)
Ethnicity, n (%)		
Non-Latino	5 (83.3)	0 (0.0)
Latino	1 (16.7)	19 (100.)
Age, n (%)		
20-29	2 (33.3)	3 (15.8)
30-39	1 (16.7)	6 (31.6)
40-49	3 (50.0)	4 (21.1)
50+	0 (0.0)	5 (26.3)
Not Reported	0 (0.0)	1 (5.2)
Origin, n (%)		
Mexico	-	1 (5.2)
Puerto Rico	-	4 (21.1)
Cuba	-	2 (10.6)
South or Central America	-	11 (57.9)
Other	-	1 (5.2)
Religion, n (%)		
Atheist	-	1 (5.2)
Christian	-	18 (94.7)
Relationship status, n (%)		
Single	-	6 (31.6)
Married/Co-habitating	-	4 (21.1)
Divorced/Separated	-	8 (42.1)
Not Reported	-	1 (5.2)
Educational level, n (%)		
Less than high school	-	7 (36.8)
High school graduate	-	9 (47.4)
Some college	-	1 (5.2)
College graduate	-	2 (10.6)
Employment Status		
Full-time	-	3 (15.8)
Part-time	-	5 (26.3)
Dependent on spouse/partner	-	3 (15.8)
Public or private assistance	-	1 (5.2)
Not applicable/Not reported	-	7 (36.8)

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Table 2

Iterative development of the Spanish CPT Manual—Version 2

Stage 3: Preliminary Adaptation Test	Stage 4: Adaptation Refinement	Stage 5: Cultural Adaptation Trial
Difficult to use. Many providers perceived the manual as difficult to use, even if they had already used the English language version. One provider believed that, "The treatment manual in Spanish...is very different from the one in English...It's like a different procedure." Another provider identified discrepancies between specific session protocols in the manual and felt that these discrepancies hampered her ability to faithfully deliver the intervention. In general, providers were "confused," or "taken by surprise" by the differences between the English CPT Manual and the Spanish CPT Manual—Version 1. In addition, providers felt that many specific concepts from the manual were difficult to explain in Spanish or lacked suitable Spanish translations. Multiple key terms (e.g. *stuck points*) were translated in ways that didn't make sense to clients and didn't accurately reflect the meaning of the term.	**Terminology.** Based on the qualitative data integration, several terms used in the original CPT Spanish language manual were identified as either being poor translations (e.g. "pattern" to "patron") or nonsensical words (e.g. "stuck point" to "punto de estacionamiento"). **Manual layout**. Providers reported that one of the strengths of the English language manual is its visual organization. For example, each section is well-organized, with section headings, a readable font size, and other visual cues that assist in material comprehension. The Spanish language manual was adapted to mirror these aspects of the English language manual. Additionally, we added delineated checklists for session agendas, and separated therapist considerations from the bulk of the session material. These changes were made to facilitate provider administration of the intervention to clients.	**Difficult to use.** Some providers perceived the Spanish CPT Manual—Version 2 as difficult to use, although there were far fewer comments about challenges using this iteration of the manual than there were about using the Spanish CPT Manual—Version 1. One provider remarked that the Spanish used in the Spanish CPT Manual—Version 2 was different from the Spanish that she spoke, and thus she, "Thought, 'Well how would I say it?' And...just did my own script." Another provider believed that, "The Spanish worksheets are different than what we've learned (in English)," and, as a result, felt that she was "not doing a good job teaching them." In addition, a provider reported finding typographical errors in the Spanish CPT Manual—Version 2, which they felt hampered their comprehension of the manual and ability to use it with clients.
Fit with literacy and education level of clients. Providers felt that the language used in the manual was inappropriate for their clients' levels of education and verbal comprehension abilities. One provider stated that the vocabulary used on worksheets, "Just didn't make sense" to her client and, "could be far more basic." Another provider believed that the language used in the intervention materials, "Seem[ed] to overwhelm" her client and that, "when she goes home, she gets very confused with (the worksheets)." A third provider felt that, "Some of the language...is kind of confusing, even for myself, a college-level fluent Spanish speaker." Multiple providers stated that their clients had low levels of education and that they had to simplify the language they used to facilitate client comprehension. This was confirmed by statements made by clients, such as, "I didn't work on this (homework) because I don't get it...I'm not familiarized with all these terms." **Cultural relevance of Clinical Examples.** The Spanish CPT Manual—Version 1 was translated from the English CPT Manual developed for the veteran's health administration (Resick, Monson, & Chard, 2008a). The English CPT Manual provides several client dialogue examples that pertain exclusively to veterans. Although some therapists may be able to create novel and relatable examples for their clients based on these veterans examples, many providers expressed difficulty with this task.	**Clinical examples.** We added example dialogue that might be more related to the types of trauma often experienced by clients in community health centers, such as community violence, domestic violence, physical assault, and gang violence. Worksheets and handouts were also revised accordingly. **Integration of CPT-DRC Manual.** To address prominent concerns regarding literacy level of the material, we integrate another adaptation of the CPT manual, developed for use with clients with low education and literacy. **Handouts and worksheets.** Homework difficulty and compliance was one of the biggest barriers to implementation of CPT Spanish in this trial. In order to address the concerns of the providers and clients in this study, we revised client handouts and worksheets to be more easily understood, both visually and linguistically. In addition to changing the terminology, as discussed previously, we altered the formatting of the worksheets, and provided visual cues so that clients would be able to more easily complete homework outside of session.	**Fit with literacy and education level of clients**. Although no providers explicitly reported poor fit with regard to client literacy and education levels of the Spanish CPT Manual—Version 2, there were a few mentions of clients being confused by session materials and homework assignments. One provider, for example, noted that their client couldn't complete a worksheet because they were "baffled by the diagram. It requires a little interpretation." In addition, there were multiple instances of patients expressing confusion about session materials and homework assignments. A patient told their provider, that, "I read this (homework assignment) like ten times, and I don't know what I had to write." Another patient, speaking about their homework from the previous week, admitted that "I didn't understand it and I didn't do it." Overall, however, only a small handful of providers or patients expressed any concerns about the fit of the new version of the Manual with client literacy and education levels.

Note. CPT = Cognitive Processing Therapy; CPT-DRC=Cognitive Processing Therapy—Democratic Republic of Congo.

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Table 3

Key Terminology

English CPT Manual	Spanish CPT Manual—Version 1	Spanish CPT Manual—Version 2
Traumatic event	El acontecimiento traumático	La experiencia traumática / el trauma
Avoidance	La evitación	El vicio de evitar
Stuck point	El punto de estancamiento	El punto de bloqueo
Impact statement	La afirmación del impacto	La interpretación del trauma
A-B-C worksheet	Registro A-B-C (Acontecimiento activador-Creencia/Punto de estancamiento-Consecuencia)	Explorando pensamientos y sentimientos
Challenging questions worksheet	Registro de preguntas de discusión	Desafiando puntos de bloqueo
Patterns of problematic thinking worksheet	Registro de patrones de pensamiento problemático	Categorizando puntos de bloqueo
Challenging beliefs worksheet	Registro de discusión de creencias	Reemplazando puntos de bloqueo
Disorder of non-recovery	Un trastorno de no recuperación	Una recuperación interrumpida
Socratic questioning	El cuestionamiento socrático	El debate socrático
Fight-Flight-Freeze response	La respuesta de lucha-huida	La reacción de lucha – huida – parálisis
Identifying emotions handout	Folleto para identificar emociones	Identificando sentimientos
Mind-reading	Lectura de la mente	Telepatía

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