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Are cultural adaptations of psychological therapies always necessary? A systematic review of adapted cognitive-behavioral therapy for Latin American patients

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Abstract

The current literature extensively recommends making cultural adaptations to psychological therapies, in order to address the differences in values, beliefs and attitudes that patients from different ethnic groups might hold. Although this approach has shown positive outcomes in some settings, it is not yet established whether such adaptations are needed for all therapies and in all cultures, even though adaptations of this sort inevitably have associated costs. The aim was to systematically review the literature regarding culturally-adapted and conventional cognitive behavioral therapy (CBT) for Latin American patients, within Latin American and non-Latin American countries. Sixty empirical studies regarding the effectiveness of culturally-adapted and conventional CBT met inclusion criteria. The type of cultural adaptation made to the therapy was also assessed. There were no differences between the sets of studies in terms of effectiveness, retention rates, methodological quality, or proportion of statistically significant interventions. Most of the cultural adaptations were peripheral or unspecified. The evidence to date indicates that both conventional and culturally-adapted CBT offer the same benefits for Latin American patients in terms of effectiveness and retention rates. Rather than focusing on cultural adaptations, clinicians might be encouraged to improve the way they deliver CBT through training and supervision.

Keywords: cognitive behavioral therapy; cultural adaptations; Latin America

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While psychological therapies are effective at treating a range of psychological problems (Magill & Ray, 2009; Mitchell, Gehrman, Perlis, & Umscheid, 2012; Nathan & Gorman, 2015; Twomey, O'Reilly, & Byrne, 2015), their development and most of their testing have taken place in a small number of Western countries. This cultural specificity has led clinicians and researchers to question the validity of such interventions for individuals from other cultural backgrounds, where values, beliefs and attitudes can differ from those in the Western world, and where resources are often less (Hwang, 2005; Organista & Munoz, 1996).

To address the possible differences in the applicability of therapies between populations, extensive recommendations have been made by researchers and psychological associations, which promote training and education in 'culturally-sensitive therapy' (e.g., American Psychological Association, 2003; Bernal & Domenech Rodriguez, 2012; Bernal, Jimenez-Chaffey & Domenech Rodriguez, 2009; Miranda, Azocar, Organista, Dwyer, & Areane, 2003; Organista & Munoz, 1996; Sue, Zane, Hall, & Berger, 2009). Numerous studies have tested culturally-adapted therapies, particularly in the United States with patients from diverse ethnic minorities (e.g., African American). These adapted approaches have shown positive outcomes (Miranda et al., 2003; Windsor, Jemal, & Alessi, 2015), suggesting that adapted therapies are valuable for ensuring fair access to effective psychotherapies.

In particular, several meta-analyses have investigated the effectiveness of culturally-adapted therapies for Latin American patients (e.g., Benish, Quintana, & Wampold, 2011; Griner & Smith, 2006; Hall, Ibaraki, Huang, Marti & Stice, 2016; Huey & Polo, 2008) showing moderate benefits (effect sizes between 0.45 and 0.52). However, in all such cases, it is important to consider whether it is the use of the therapy per se or the cultural adaptation that is the key clinical variable. Other research has shown that regular, non-adapted therapy is also effective in Latin America (Becerra Galvez, Reynoso Erazo, Garcia Rodriguez & Ramirez, 2016; Botero Garcia, 2005; Villalobos Perez, Araya Cuadra, Rivera Porras, Jarra Parra & Zamora Rodriguez, 2005), and that this seems to be particularly true of cognitive behavior

therapy (CBT). Therefore, it is unclear whether culturally-adapted therapies have benefits above and beyond those of the unadapted forms, especially among Latin American patients.

A key issue in reaching a conclusion about the benefits of cultural adaptations is that there is little consensus on when and how to adapt the therapies. Chu and Leino (2017) reviewed the types of cultural modifications commonly made to therapies. They showed that all of the studies considered had peripheral adaptations – modifications regarding to the engagement and treatment delivery. In contrast, 11.11% of the studies involved adaptations on the core elements of therapy. This useful framework of common concepts and terms to use when adapting psychological interventions shows clearly that that different clinical researchers use very different patterns and depths of cultural adaptation. It is also not clear whether adapting therapies such as CBT should be done only when working with other cultural groups in their 'home' culture, or when the patient lives in a more Westernised country.

Give the above gaps in our evidence and understanding, we are faced with two very real strategic issues to consider. First, should we assume that adapting CBT (with the associated costs) is universally positive and effective? Second, what are the comparative benefits of peripheral and core adaptations to CBT? The aim of this systematic review is to evaluate the current evidence on comparative effectiveness of regular and culturally-adapted CBT for Latin American patients with a range of psychological disorders. It will consider the impact of adapted and unadapted CBT for Latin American patients (e.g., Central and South America, Mexico, Cuba, Dominican Republic, and Puerto Rico), as conducted within Latin America vs non-Latin American countries.

Method

Design

This systematic review examined the effectiveness of CBT for a range of different disorders. It compared four types of studies evaluating: a) culturally-adapted CBT in Latin American countries; b) unadapted CBT in Latin American countries; c) culturally-adapted CBT for Latinos in non-Latin American countries; and d) unadapted CBT for Latinos in non-Latin American countries

Summary of search strategy

To ensure the representativeness and cultural diversity of the research considered, the search of papers was made through the following electronic resources: Dialnet, Scielo, Redalyc, PubMed and PsycInfo. Dialnet, Scielo and Redalyc collect predominantly publications from Hispanic countries published in the Spanish language, so they were utilized to gather mostly (but not exclusively) papers from Latin American countries. PubMed and PsycInfo were used to gather papers published in the English language and carried out in non-Latin American countries (mostly the United States, in this case). The literature search was carried out in March 2019, with no restriction regarding the publication date of the papers. Table 1 shows the search terms used. Those terms were intentionally broad, in order to gather as many studies as possible. The term "Hispanic" was omitted from the searches, in order to avoid papers from Spain, which are not relevant for the purposes of this study. Likewise, the British spelling of the word "behavioural" was not included in the searches, given that the studies in the English language were more likely to be conducted in the United States.

Insert Table 1 about here

Search process

Empirical, quantitative studies regarding the effectiveness of culturally-adapted conventional CBT were included in this review. Every study that specified that it involved any type of cultural adaptation to the therapy was included, regardless of the extent of that adaptation. However, the simple use of translated/validated measures was not considered as a cultural adaptation of the therapy. Participants were Latin American, residing in Latin American countries (Mexico, Puerto Rico, Dominican Republic, Central or South America and Cuba) or in other highly developed countries. The included papers were published in the English or the Spanish language. Brazilian studies were considered if they were in the English or the Spanish language. To obtain a better estimate of the effectiveness of CBT alone, studies

that included the simultaneous use of medication were omitted.

The search in the electronic databases resulted in 977 papers. After removing duplicates, 803 remained. After the screening process (see PRISMA diagram in Figure 1), 60 papers were included in the final review.

Insert Figure 1 about here

Classification of final paper set by type of cultural adaptation

To enable systematic analysis of the data, information from the 60 included papers was synthesized and organized according to: study aims, intervention, participants, measures, outcome, and type of cultural adaptation (see Table 2). As expected, the studies that evaluated regular and adapted CBT for Latin American patients in non-Latin American countries were all carried out in the United States. Therefore, these four groups (defined by the use of adapted vs non-adapted CBT either inside or outside Latin America) will be used henceforth.

Insert Table 2 about here

The typology of cultural adaptation was based on Chu & Leino's (2017) classification. This classification sorts cultural adaptations into two main categories: **core** and **peripheral**. **Core** adaptations could include: addition of an extra module or element to the original therapy; modification of a core component; complete change of the component; or no change at all. **Peripheral** adaptations relate to: engagement (which includes the *entry/access* aspect of the therapy, *retention/completion* of the therapy, and *psychoeducation* for patients with poor understanding of the psychological process); delivery of the therapy (*materials and semantics* relevant to the specific ethnic minority, and *cultural examples and themes*); and therapy framework (including: *session structure*, *provider-client relationship*, and *person/place).*

Most of the studies included in this review had peripheral adaptations. Only a handful of papers included core modifications, and some studies only mentioned making a "cultural adaptation", without providing any further details.

Quality of the included papers

The quality of each paper was assessed using the Critical Appraisal Skills Programme parameters (CASP; 2017). A score was assigned to each question of the CASP, giving a possible range of 11-37. The scores were divided into tertile groups based on lower (27-29), medium (30-31) or higher (≥32) CASP scores, thus classifying the papers as low, medium or high quality. The CASP scores for each paper are included in Supplementary Material 1.

The 22 papers excluded at the "screened by quality" stage (see Figure 1) were removed due to not having a clearly focused aim (first criterion on the CASP quality rating system), or for having a relatively poor quality score (26 points or less on the CASP evaluation). This poor quality might indicate that these studies could be methodologically weak or underpowered to make assumptions about their results. Therefore, these studies were excluded from further consideration, which resulted in the 60 papers included in this review. Supplementary Material 2 shows the 22 excluded papers.

In order to determine the validity of the quality ratings, a second rating was conducted with a proportion of the papers. Twelve of the 60 remaining papers (20%) were selected randomly, using a random number list generated in Excel. Each was assessed by an external reviewer. Given the non-binary assessment of the papers, it was not possible to calculate the inter-rater reliability with Cohen's kappa. Instead, a Pearson's correlation was utilized, which resulted in a correlation coefficient of 0.749, indicating a strong inter-rater agreement.

Results

Characteristics of the studies included in the review

Of the 60 papers included in the review, 68.3% included adult populations, 20% included adolescents, 5% children, and 6.7% elderly populations. Twenty-one studies were randomized controlled trials, whereas 49 were uncontrolled effectiveness studies. Twenty-two papers were conducted in the USA, 15 in Mexico, nine in Brazil, four in Chile, four in Colombia,

four in Puerto Rico, one in Argentina, and one in Costa Rica. Regarding the methodological quality of the reviewed papers, 43% were considered as having a high quality, 43% as medium quality, and 14% low quality.

Summary of findings

Table 3 shows the outcomes of the CBT studies that were included in the review, including all available effect sizes and retention rates. The nature of CBT adaptations was mainly peripheral (Chu & Leino, 2017).

Insert Table 3 about here

Adapted CBT in Latin America. Half of the papers of this group involved peripheral cultural adaptations, specifically in the delivery domain. The remainder had unspecified cultural adaptations. Five of the six studies that formed this group had significant positive outcomes, meaning that the interventions had beneficial effects for the patients. Except for one study, the effect sizes were all moderate and medium, which indicates a considerable effect of the therapy. All of the studies retained more than 50% of the patients (three of them retained more than 80%), showing a relatively high level of acceptability. The papers ranged between medium and high quality.

Non-adapted CBT in Latin American countries. Except for one paper, all the 32 studies resulted in significant improvements for the patients. Many studies had effect sizes above d = 1.00, again indicating a large effect of the intervention. Most of the studies retained more of the 75% of the patients. There were a few papers of low and high quality. Most were of medium quality.

Adapted CBT for Latinos in the United States. Most of the cultural adaptations were peripheral, implemented in all of the delivery domains. A handful of studies included engagement adaptations, and only three of them had cultural adaptations at a core level. Only one of the papers had an unspecified type of cultural adaptation. All the 19 studies had

significant and positive outcomes. The effect sizes (d) varied widely, ranging from 0.13 to 4.18. Most of the studies retained more than 75% of patients. The majority of the studies were rated as being of high quality, a handful of studies were medium quality, and only one study was rated as low quality.

Non-adapted CBT for Latinos in the United States. There were only three such studies. One of did not disclose whether the results of the intervention were statistically significant, and did not provide the effect size or retention rate. The remaining two studies reported statistically significant outcomes. However, it should be noted that one of those two studies set the significance level at 0.1. The effect sizes in these papers were medium and large. It was possible to derive the retention rate for only one of the studies, which was 89%. Two studies were rated as being of high quality, and one was rated as being low quality.

Summary. It is noteworthy that there was no evidence that the adaptation of CBT made any difference to outcomes in either cultural setting. Indeed, the pattern of effect sizes suggests that unadapted CBT tended to be *more* effective than adapted CBT for Latinos, when used in Latin American countries.

Quantitative comparison between groups

Retention and quality scores. Given the low number of studies regarding non-adapted CBT in non-Latin American countries ($N = 3$), this group was omitted from subsequent consideration. One-way ANOVAs showed no significant differences between the groups in terms of retention rates or quality scores (see Table 4).

Insert Table 4 about here

Proportion of significant outcomes. To determine whether the number of effective interventions differed among the groups, a chi-squared test was implemented comparing the frequency of significant and non-significant P-values between the categories. There were five studies with significant outcomes and one non-significant in the group of adapted CBT in Latin

America; twenty-nine papers from the non-adapted CBT in Latin America resulted in significant outcomes, while only one was non-significant; and finally, all of the 19 studies from the adapted CBT in the USA had significant outcomes. There was no significant difference between the groups in the proportion of significant interventions ($X^2 = 4.084$, $df = 4$, $p = 0.395$).

Discussion

The main goal of this review was to evaluate the current evidence regarding the effectiveness of both regular and culturally-adapted CBT in different locations, in order to determine whether cultural adaptations of CBT result in better outcomes for patients, as is commonly assumed (Organista & Munoz, 1996; Sue et al., 2009). This is a key strategic issue, as the process of adaptation involves costs in terms of preparation and training time, so it is important to understand whether that investment is justified.

The example addressed was the use of adaptations to CBT for Latin American patients, in Latin American vs Western clinical settings. The type of adaptation was also assessed. The majority of the cultural adaptations made were peripheral or unspecified, rather than core adaptations (Chu & Leino, 2017). Unexpectedly, there were no differences between the different sets of studies in terms of effectiveness, retention rates or methodological quality. The effects tended to be in the opposite direction for Latinos in Latin American countries. In such cases, it appears that CBT is effective by itself, regardless of the adaptations.

Relationship with the existing literature

One of the most commonly cited studies on cultural adaptations of therapy was carried out by Griner & Smith (2006). Their meta-analysis found an average size effect of $d = 0.45$ for culturally-adapted therapy for Latinos in the United States, in comparison to non-adapted therapy. Similarly, Huey & Polo (2008) reported an average effect size of $d = 0.47$ for culturally-adapted therapy for Latino youths in the United States. While these studies indicate that cultural adaptations can be effective, it is important to note that these reviews included a wide range of therapies, not only CBT. Benish, Quintana, & Wampold (2011) carried out a meta-analysis of culturally-adapted “bona-fide” interventions. The average effect size for the primary outcomes was $d = 0.32$. Likewise, Hall et al. (2012) reported a medium effect size ($g = 0.52$)

on their meta-analysis for "culturally responsive interventions" over non-adapted versions. Besides including several types of therapy, these two studies did not report the specific effect sizes for Latino participants. Therefore, cultural adaptations are undoubtedly helpful, but the current review suggests that that is not always the case.

Adapting a therapy is commonly based on the premise that the relevant patients have characteristics that prevent them from getting full benefits from that therapy in its original form. However, there is an alternative perspective - that such adaptations of evidence-based therapies represent a form of "broken leg exception" (Meehl, 1957), where therapists assume that their patients are unique, due to their having a specific characteristic (in this case, being from a different culture). Meyer, Farrell, Kemp, Blakey & Deacon (2014) acknowledge this possibility, suggesting that clinicians might exempt patients from an ethnic minority from undertaking exposure therapy. Consequently, we are not aware of which adaptations are necessary and which are "broken leg exceptions".

Implications

Creating adaptations to CBT is time-consuming, and requires clinicians to learn multiple versions of the same method. As adaptation results in better outcomes in some settings (e.g., Griner & Smith, 2006), then the necessary effort is well-justified in those psychological interventions. However, in our efforts to follow recommendations to be inclusive (American Psychological Association, 2003; Bernal et al., 2009; Miranda, et al., 2003; Organista & Munoz, 1996; Sue et al., 2009), we might sometimes be investing our time and effort unproductively, at least in the delivery of CBT. Future research needs to consider whether peripheral or core adaptations have greater impact (Chu & Leino, 2017) or whether adaptations in general are effective for other non-Western populations, before one can recommend adaptations to CBT as being universally valuable. Adaptations should be clearly defined, so that they are replicable and comparable. Of course, therapy protocols need to be used flexibly with individual patients (Wilson, 1996). However, that can be done without assuming that such adaptations should be made on the basis of ethnicity per se.

Limitations

This review has a number of strengths and limitations. It is limited by the lack of studies of non-adapted CBT in Western cultures, by the focus on published studies, and by the diversity of disorders examined. It is also possible that the geographic and media-based proximity of the USA and Latin America and the United States might mean that they have more cultural similarities than other international comparisons might yield. Such studies should also consider the impact of adapting different therapies for different disorders, and consider the degree to which the individual patient is acculturated to the local norms.

One might question whether the group of studies labelled as "regular CBT delivered in Latin America" should be considered "regular", since the cultural context is already different, the providers are immersed in it, and the materials are translated. Some adaptations might have been already made to the therapy, even if they are not explicitly stated. However, even if that were the case, such adaptations would only be superficial and based on the therapist's own judgment. It should be also stressed that "translation" and "validation" are non-equivalent processes. Therefore, it is unlikely that such superficial changes modify CBT enough to consider it "culturally-adapted".

In terms of strengths, this study included Hispanic databases and included non-English language studies. Furthermore, the nature of adaptations was considered, and the quality of the papers was taken into account and assessed. This approach provides a novel and comprehensive approach to the topic, where Latin American studies are often disregarded, and the type of adaptation is mostly ignored.

Conclusion

The evidence to date does not support cultural adaptations of CBT for Latin American populations, in terms of effectiveness or acceptability/retention rates. Untile there is evidence to the contrary, therapists might be better encouraged to focus their efforts on improving the way they deliver CBT through training and supervision, rather than focusing on culturally adapting the therapy.

Disclosure statement

The authors of have no conflict of interest to declare.

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Data availability statement

The data from this study can be made available upon request to the corresponding author.

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Table 1

Search terms and filters (both in Spanish and English)

Resource	Terms	Filters
Dialnet	"cognitivo conductual" AND "intervención" AND "eficacia"	- Journal paper
	"cognitive behavioral" AND "intervention"	
Scielo	"cognitivo conductual"	- Latin American countries - Spanish / English papers - Paper / Journal paper
	"cognitive behavioral therapy"	
Redalyc	(advanced search) Title: cognitivo conductual Discipline: Psychology	---
	(advanced search) Title: cognitive behavioral Content: intervention Discipline: psychology	
PubMed	cognitive behavioral AND Latino	- Clinical trial
PsycInfo	(multifield search) cognitive behavioral [all fields] AND Latino [abstract] OR Latina [abstract] AND intervention [abstract]	- Intervention - Peer reviewed journal

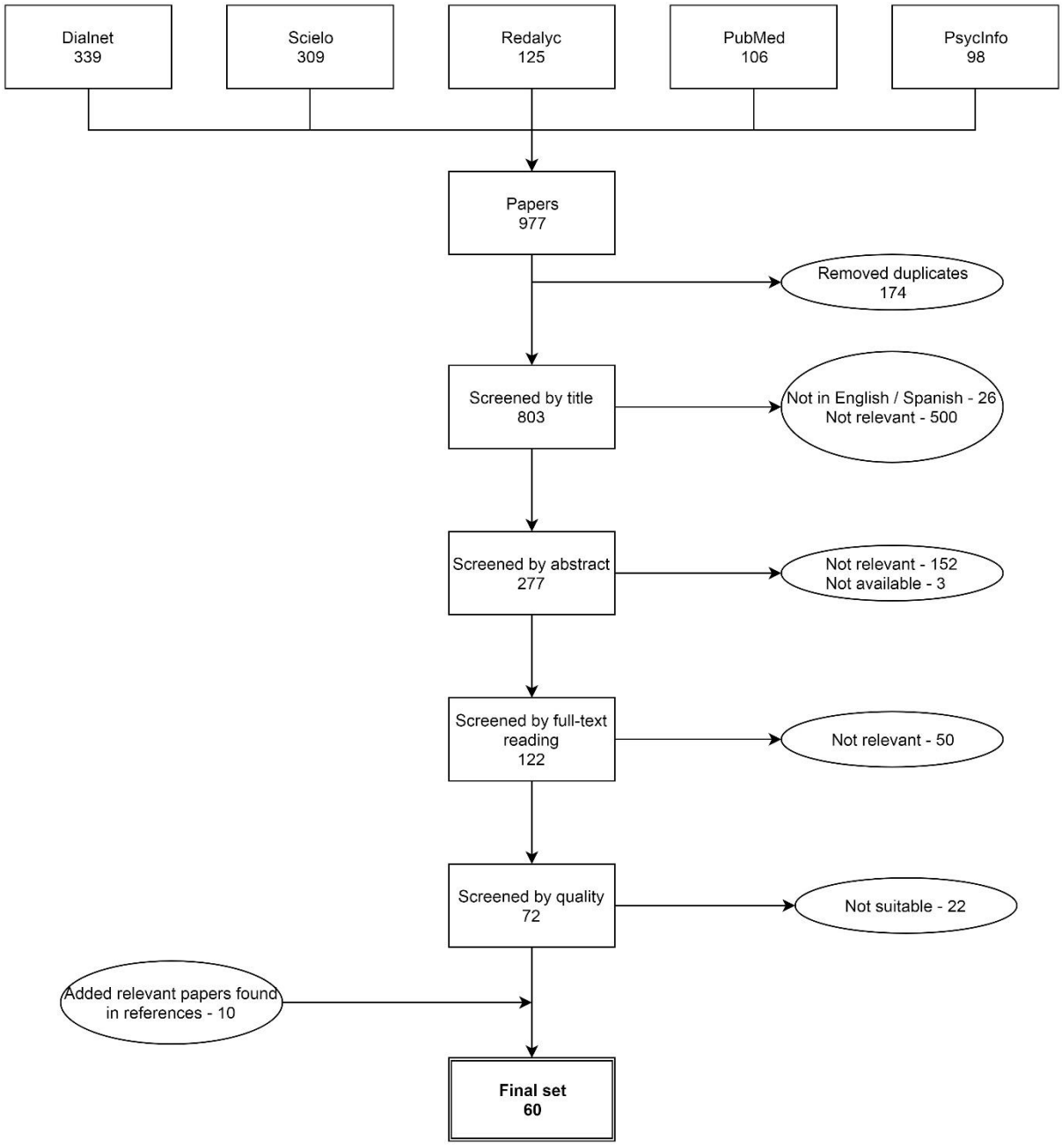

Figure 1

PRISMA diagram, showing the process of selecting papers for the final review process

Table 2. Raw data extracted from the analysed studies

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
Adapted CBT in Latin American countries						
1. Cabiya, Padilla-Coto, Gonzalez, Sánchez-Cestero, Martinez-Tabola & Sayers, 2008	To evaluate the effectiveness of a cognitive-behavioral intervention for children with disruptive disorders and depressed mood.	Twelve group sessions, average 50-minutes long on average (additional 10 minutes for social interaction).	278 participants, ages 8 to 13, were assigned to one of the two experimental groups (intervention and wait-list).	Bauermeister school behavior inventory; Child Depression Inventory.	Significant reductions in depressed mood and disruptive behaviors were found in the experimental group compared with control. Children in the treatment group showed further reductions at follow-up in both areas.	**Peripheral** – Delivery – Materials and semantics **Peripheral** – Delivery - Cultural examples and themes **Peripheral** – Delivery - Therapy framework – Provider-Client relationship
2. Díaz-Martínez, Díaz-Martínez, Rodríguez-Machain, Díaz-Anzaldúa, Fernández Varela & Hernández-Ávila, 2011	Examining the efficacy of individual or group Motivational therapy or CBT in reducing drinking among undergraduate students diagnosed with alcohol dependence	Patients were divided into four groups: Individual motivational therapy; group motivational therapy; individual CBT; group CBT. These were 1-hour manualized interventions, contextually adapted, and delivered in the course of 8 weeks.	158 university students diagnosed with alcohol dependence.	Spanish version of the Alcohol Use Disorders Identification Test; Composite International Diagnostic Interview, Retrospective Baseline adapted for Mexican population	There was a significant decrease of alcohol consumption frequency and quantity in all four study groups. There were no significant differences among groups.	**Unclear** - The study stated that the intervention was based on a manual adapted to the Mexican population. The individual cultural elements included in the therapy were not specified.
3. De la Rosa Gomez & Cardenas Lopez, 2012	To investigate the efficacy of virtual reality exposure therapy vs imaginal exposure for victims of	Bi-weekly, 90-minute long individual sessions of CBT with emphasis in prolonged exposition (virtual reality or	30 participants with PSTD symptoms were randomly allocated on both experimental conditions.	PTSD symptoms scale; State-trait anxiety inventory; Beck depression inventory	Statistically significant changes in all PSTD symptom scale and associated anxious and	**Unclear** - The study stated that the intervention was based on a manual

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
	criminal violence	imagination).	Only 20 ended the treatment.		depressive symptoms on both treatment groups. Higher therapeutic gains in prolonged virtual reality exposure.	adapted to the Mexican population. The individual cultural elements included in the therapy were not specified.
4. Rossello & Bernal, 1999	To evaluate the efficacy of CBT and Interpersonal Therapy in reducing depression, and improving self-esteem, social adaptation, and behavioral and family functioning, compared with each other and with a wait-list control.	Twelve one-hour long individual therapy sessions (CBT or IPT), held once a week over a period of 12 weeks.	71 adolescents between 13 and 17 years old, with diagnosis for major depressive disorder, dysthymia or both.	Children depression inventory; Piers-Harris children's self-concept scale; Social adjustment scale for children and adolescents; Family emotional involvement and criticism scale; Child Behavior checklist for adolescents.	Both treatments significantly reduced depressive symptoms when compared with waiting-list control.	**Peripheral** – Delivery – Materials and semantics **Peripheral** – Delivery - cultural examples and themes **Peripheral** – Delivery - Therapy framework – Provider-client relationship
5. Rossello & Jimenez-Chafey, 2006	To adapt and pilot test a cognitive-behavioral group therapy to treat depressive symptoms and improve glycaemic control in adolescents with type 1 diabetes	Twelve sessions of group CBT with a 2-hour duration. The sessions were based on the adapted CBT treatment manual.	11 Puerto Rican adolescents with T1DM completed the treatment (two males and nine females). Their ages ranged from 12 to 16 years old.	Children's depression inventory; Diabetic management information sheet; Beck anxiety inventory; Hopelessness scale for children; Piers-Harris children's self-concept scale; Summary of self-care activities; Self-efficacy for diabetes scale; Glycosylated	Participants showed a significant improvement in depressive symptoms, self-concept, diabetes self-efficacy, anxiety and hopelessness. However, no changes were observed in glycaemic control or self-care behaviors.	**Peripheral** – Delivery – Cultural examples and themes

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
				haemoglobin.		
6. Rossello, Duarte-Vélez, Bernal & Zuluaga, 2011	To examine treatment response to a cognitive behavioral therapy for depression that integrated a protocol for the management of suicide risk in adolescents.	Twelve manualized CBT sessions in individual format.	120 one Puerto Rican adolescents between 13 and 17.5 years old participated on this study. One hundred and fifteen completed the intervention.	Children's depression inventory; Suicide ideation questionnaire junior; Hopelessness scale for children; Global assessment scale for children.	CBT reduced the severity of suicide ideation on the 89% of the participants.	**Unclear** - The study stated that the intervention was based on a manual adapted for Hispanic adults diagnosed with depression. The individual cultural elements included in the therapy were not specified.
Non-adapted CBT in Latin American countries						
7. Aguilera-Sosa, Lejía-Alva, Rodriguez-Choreno, Trejo-Martínez & Lopez-De la Rosa, 2009	From the identification of maladaptive schemes in obese subjects, to evaluate the effectiveness of a group treatment with cognitive-behavioral bases for its modification, as well as anthropometry.	Group cognitive behavioral therapy, developed over 14 sessions, with an approximate duration of one and a half hour.	22 females from 18 to 40 years old, and a BMI between 30 and 40.	Young schema questionnaire (long form); Anthropometric measures (weight and height).	Significant decrease in maladaptive cognitive schemes such as emotional deprivation, abandonment, social instability, and failure. Participants decreased on average 4.7 kg after the intervention.	N/A
8. Alcázar-Olán, Merckel-Niehus, Toscano-Barranco, Barrera-Muñoz & Proal-Sánchez (2018)	To evaluate the effects of a group cognitive behavioral intervention in individuals with rumination and anger issues	9 manualized group CBT sessions	30 adult participants (28 female; 2 male) with anger issues	Inventario Multicultural Latinoamericano de la Expresión de la Cólera y la Hostilidad (ML-STAXI)	Participants with high session attendance showed statistically significant changes in variables such as revenge, angry afterthoughts, angry memories, and understanding the causes of anger	N/A

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
9. Arrivillaga Quintero, Varela Arévalo, Caceres de Rodriguez, Correa Sanchez & Holguin Palacios, 2007	To determine the efficacy of a program to decrease the levels of blood pressure in Colombian population.	Eighteen weekly sessions of cognitive behavioral therapy, lasting one hour and 30 minutes.	100 patients randomly allocated into the experimental or control group (wait list).	Systolic and diastolic levels of blood pressure; Perceived stress scale; Questionnaire of treatment adherence for hypertension.	The intervention significantly decreased systolic blood pressure, as well as perceived stress and treatment adherence. No changes in diastolic blood pressure.	N/A
10. Becerra Gálvez, Reynoso Erazo, Garcia Rodriguez & Ramirez, 2016	To decrease anxiety levels in female patients who underwent breast incisional biopsy for the first time.	The intervention consisted in proportioning psychoeducation and training in passive relaxation trough videos, audio files, and printed information.	Non-probabilistic sample conformed by 10 female patients between 25 and 54 years old, who attended for the first time at the oncologic service in a Mexican hospital.	State-trait anxiety inventory; Facial expression scale for anxiety	Scores significantly decreased on state anxiety and on the facial expression scale.	N/A
11. Botero Garcia, 2005	To assess the effectiveness of cognitive-behavioral therapy for Colombian veteran soldiers with PSTD	CBT based in prolonged exposure and stress inoculation procedures, along with other standard CBT techniques. Daily sessions of 2 to 3 hours, for 4 weeks	42 air force veterans in process of rehabilitation for illness or injury, with a PTSD diagnosis	Post-traumatic stress scale; Beck Depression Inventory; Subjective Units of Distress Scale	Significant decrease in symptomatology and severity level after the intervention both in depression and PTSD symptoms.	N/A
12. Cáceres-Ortiz, Labrador-Encinas, Ardila-Mantilla & Parada-Ortiz, 2011	To evaluate the effectiveness of a psychological treatment focused in the trauma of women victims of intimate partner violence	Group CBT focused on relaxation, pleasant activities, exposure, assertiveness and coping. Eight sessions with a duration of 100 minutes.	73 women, 40 years old or less, from medium-low socioeconomic status.	Interview; Beck anxiety inventory; Beck depression inventory; PSTD Severity Scale; Rosenberg's Inventory (self-esteem); Maladjustment Scale; Inventory of posttraumatic cognitions	Improvement on each dependent variable for most of the participants. The results were maintained during the follow-ups, on a clinical and statistical level	N/A
13. Castro, Daltro, Campos Kraychete &	To test the effectiveness of CBT in patients with chronic musculoskeletal pain as for	10 weeks of CBT.	93 patients with musculoskeletal pain were divided in experimental	Visual analogue Scale; Hospital anxiety and depression scale; Quality of	The intervention reduced the intensity of pain and depressive symptoms, and	N/A

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
Lopes, 2012	intensity of pain, presence of anxiety and depressive symptoms, and quality of life.		(n=48) and control group (n=45).	life scale.	to improved quality of life. The experimental group presented higher reduction on the intensity of pain compared to the control group.	
14. Contreras, Moreno, Martínez, Araya, Livacic-Rojas & Vera-Villaroel, 2006	To evaluate a brief cognitive behavioral intervention targeted to a sample of elder adults, aiming to decrease anxiety and depression symptoms.	Eight sessions delivered bi-weekly and with a 2-hour duration.	38 Chilean elder adults diagnosed with low/moderate depression and anxious symptomatology.	State-trait anxiety inventory; Geriatric depression scale.	Results indicated statistically significant differences between experimental and control group in all measures. Effects were moderate/high for state anxiety and depression, and moderate for trait anxiety.	N/A
15. Cordioli, Heldt, Bochi, Margis, De Sousa, Tonello, Teruchkin & Kapczinski, 2002	To develop a cognitive-behavioral group therapy protocol and to verify its efficacy to reduce obsessive-compulsive symptoms.	Behavioral group therapy protocol composed by 12 weekly sessions of 2 hours each.	32 subjects (22 females and 10 males), suffering obsessive-compulsive symptoms.	Yale-Brown obsessive-compulsive scale; Hamilton anxiety scale; Hamilton depression scale.	Short cognitive-behavioral group therapy reduced the intensity of obsessions and compulsions. A decrease in symptoms of anxiety and depression was also found. The treatment was efficient in 78.1% of the patients.	N/A
16. Cruz-Almanza, Gaona-Márquez & Sánchez-Sosa, 2006	To evaluate a cognitive behavioral intervention over assertiveness, self-esteem and coping, to rehabilitate women abused by their problem-drinker spouses.	Treatment was administered through 18, 150-minute weekly group sessions.	Initial pool of 35 women; only 18 completed the treatment.	Assertion inventory; Self-esteem inventory; Birmingham coping inventory	The intervention generated relatively stable middle and long term improvements in three out of the four dimensions featured in the study (self-esteem, coping strategies, and likelihood of behaving assertively).	N/A
17. De	To evaluate the	Manual-based group CBT	28 youths between 10 and	Clinical global impression	CBT produced substantial	N/A

	Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
	Souza, Salum, Jarros, Isolan, Davis, Knijnik, Manfro & Heldt, 2013	effectiveness of a group CBT protocol for youths with anxiety disorders in a community sample of low and middle income countries.	targeted at treating anxiety in children. The intervention consisted of 14 weekly, 90-minute long sessions. Two more concurrent sessions with parents were included.	13 years old were included. Twenty patients completed the treatment.	rating scale; Paediatric anxiety rating scale; Screen for child anxiety related emotional disorders; Children's global assessment scale; Children's depression inventory; Youth quality of life instrument-Research version; Assessment of attention deficit hyperactivity.	treatment effects for anxiety symptoms, although it did not result in a significant decrease in depressive symptoms, nor an improvement in quality of life.	
18.	Duchesne, Appolinario, Pimentel Range, Fandino, Moya & Freitas, 2007	To assess the effectiveness of a manual-based cognitive Behavior therapy, adapted to a group format, in a sample of Brazilian obese subjects with binge-eating disorder.	Nineteen sessions of group CBT, for 22 weeks, 90-minute long	21 adult patients (85.7% female) diagnosed with binge eating disorder, and a BMI between 30 and 45.	Frequency of binge-eating assessed as the number of days per week in which patients had at least one binge-eating episode; Binge-eating scale; Beck depression inventory; Body shape questionnaire; Changes in weight and BMI	Significant improvement in binge-eating frequency, body shape concerns and depressive symptoms, along with a considerable decrease in body weight.	N/A
19.	Escoto Ponce de León, Camacho Ruiz, Rodríguez Hernández & Mejía Castrejón, 2010	To evaluate the impact of a selective prevention program designed to modify body image alteration on three levels (perceptual, cognitive-affective, and behavioral).	Seven bi-weekly CBT sessions, with a 2-hour duration.	15 Mexican females from 15 to 18 years old, sampled from a public high school.	Body shape questionnaire; Body image avoidance questionnaire.	Reduction in body dissatisfaction and avoidance of social activities.	N/A
20.	Furlan, 2013	To evaluate the effectiveness of a program to decrease anxiety towards exams, academic	Twelve sessions, 2-hour long, with a weekly frequency.	19 students (13 females and 6 males) between 22 and 41 years old.	Tuckman procrastination scale; German test anxiety inventory; Self-efficacy for learning form	Comparing pre and post results, moderate improvements were found in all measures.	N/A

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
	procrastination, and to increase regulatory self-efficacy.					
21. Garduno, Riveros & Sanchez-Sosa, 2010	To examine the effects of a cognitive behavioral intervention on the quality of life of patients with breast cancer	Individual CBT in weekly, one-hour consultations. Average of 16 sessions.	60 Mexican women between 31 and 67 years of age, with confirmed, non- terminal breast cancer	Inventory of Quality of Life and Health	Most patients showed positive changes, clinically and statistically in the following domains: Daily life, free time, preoccupations, body perception and isolation	N/A
22. Gil-Bernal & Hernandez Guzman, 2009	To investigate the efficacy of the "Intervention in adolescents with social phobia" (Olivares, 2005), adapted for Mexican children with social phobia. Likewise, investigate the role of information to parents on the disorder when their children undergo treatment.	The intervention consists of 9 sessions lasting 90 minutes each. Participants were randomly assigned to the three experimental conditions: (1) treatment of social phobia only to children, (1) information to parents about social phobia while their children underwent treatment, and (C) waiting list.	17 children between 7 and 12 years old, with a diagnose of social phobia	Children Behavior Checklist; Diagnostic instrument for social phobia; Spence children's anxiety scale.	Both groups exposed to treatment showed improvement after treatment. No advantage was detected in the case of parental involvement.	N/A
23. Gomez, Leyton & Nunez, 2009	To examine the efficacy of cognitive-behavioral therapy in patients suffering from drug-resistant obsessive-compulsive disorder	Standard CBT with a maximum duration of 1 year, conducted in weekly, fortnightly, or monthly sessions	23 adult outpatients diagnosed with drug-resistant OCD (at least 2 different drugs had been prescribed)	Interview; DSM IV-TR criteria for OCD; Yale-Brown Obsessive Compulsive Scale; Clinical Global Impression Scale	From the 18 patients who completed the process, eight recovered completely, nine remitted, and one had a full response.	N/A
24. Gonzalez Fragoso, Ampudia Rueda & Guevara Benitez, 2012	To test the effects of a program to develop social skills on institutionalized children, as well as its impact on psychological	Fourteen sessions of cognitive behavioral therapy in group format, with a 2-hour duration.	36 children under the care of an institution, ranging from 8 to 12 years old.	Assertive behavior scale for children; Depression scale for children; Self-esteem inventory for children; Scale of manifest anxiety on	Children on both experimental and control (wait list) conditions showed an improvement on social skills. Children on	N/A

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
	variables such as depression, self-esteem and anxiety.			children.	experimental condition additionally reduced their depressive symptomatology.	
25. Gonzalez García, Gonzalez Hurtado & Estrada Aranda, 2015	To show the efficacy of CBT in patients with breast cancer, which objective was reducing levels of anxiety and depression, as well as developing coping skills to improve quality of life perception.	Manual-based CBT, 10 sessions (average), 60-minutes long, with a frequency of 2 to 4 weeks.	15 patients diagnosed with breast cancer in non-advanced stage.	Healthcare anxiety and depression scale; Stress coping questionnaire for oncologic patients; World Health Organization Quality of Life (brief).	Improvement in quality of life subscales (physical health and interpersonal relationships), as well as healthcare anxiety and depression.	N/A
26. Guerra Vio, Fuenzalida Vivanco & Hernandez Morales, 2009	To evaluate the efficacy of a CBT workshop, aiming to increase self-care behaviors and decrease the levels of secondary traumatic stress on clinical psychologists.	CBT workshop focused on self-care based on Fuenzalinda et al (2008) model. Five weekly, 90-minutes sessions.	21 clinical psychologists with high scores of secondary traumatic stress. Nine participated in the intervention, and 12 remained in the control group (no intervention).	Scale of self-care behaviors for psychologists; Secondary traumatic stress scale	The experimental group increased significantly self-care behaviors, and decreased secondary traumatic stress levels. In contrast, participants in control group remained stable on self-care frequency, but increased their levels of secondary traumatic stress.	N/A
27. Habigzang, Pinto Pizarro de Freitas, Von Hohendorff & Koller, 2016	To evaluate the effectiveness of a cognitive-behavioral group therapy model in reducing symptoms of depression, anxiety, stress and PTSD in child and adolescent victims of sexual violence. In addition, its effectiveness	Cognitive-behavioral group therapy based in Habgzang et al (2013) model, consisting of 16 semi-structured weekly sessions with an average duration of one hour and thirty minutes.	103 Brazilian girls victims of sexual violence, aged between 7 and 16 years old.	Children's depression inventory; Childhood stress scale; State-trait anxiety inventory for children; Structured interview based on the DSM IV.	Significant reduction in the symptoms of depression, anxiety, stress, and PTSD. The comparison between the results obtained by the two groups of practitioners in the application of the model indicated no significant differences in the rates of	N/A

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
	was investigated when applied by trained practitioners and by the researchers / psychologists who developed it.				improvement of the participants.	
28. Habigzang, Schneider, Petroli Frizzo & Pinto Pizarro de Freitas 2018	To develop and evaluate an intervention protocol, based on cognitive-behavioral therapy, for women in situations of domestic violence	Individual cognitive-behavioral intervention consisting of 13 sessions with a weekly frequency. The sessions included structured activities of one-hour duration.	11 women that were victims of psychological, physical, and/or sexual violence perpetrated by their partners	Beck Anxiety Inventory (BAI); Beck Depression Inventory (BDI); Satisfaction with Life Scale (SWLS); Lipp Inventory of Stress Symptoms for Adults (LISS); Structured interview based on DSM-IV/ SCID to assess PTSD	Significant reduction in depression, anxiety and stress symptoms; increase in life satisfaction. No change in PTSD symptoms.	N/A
29. Meyer, Shavitt, Leukefeld, Heldt, Souza, Knapp & Cordioli, 2010	To examine if adding two individual sessions of Motivational interview + thought mapping before starting CBT in an adult OCD outpatient treatment program would facilitate changes in the OC symptoms when compared with CBGT alone.	CBGT was conducted in a closed-ended group during the course of 12 weekly two-hour sessions, based on a structured, manual-based approach. The MI+TM approach consisted of two 60-minute individual weekly sessions before the patients started the 12 CBGT sessions. In the control group, the therapist provided information only.	40 outpatients with a primary diagnosis of obsessive-compulsive disorder	Dimensional Yale-Brown obsessive-compulsive scale; Yale-Brown obsessive compulsive scale; Clinical global impressions scale (severity sub-score)	Both groups significantly improved. MI+TM treatment had slightly better outcomes in aggression, contamination, and compulsions.	N/A
30. Montero Pardo, Jurado Cárdenas,	To develop and evaluate a cognitive behavioral intervention to decrease	Manualized intervention, delivered in a Mexican hospital once per day during five days.	20 women with a mean age of 34 years old.	Caregiver Burden Interview; Beck depression inventory; Beck anxiety inventory.	The intervention showed a moderate effect on depression, affective-	N/A

	Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
	Robles García, Aguilar Villalobos, Figueroa López & Méndez Venegas, 2012	burden in informal primary caregivers of children with cancer, and to decrease their anxious and depressive symptoms.				cognitive symptoms, and burden; however, the effect on depression increased at the follow-up. The intervention had a small effect on anxiety.	
31.	Pegado, Alckmin-Carvalho, Leme, Carneiro, Kypriotis, Camacho & Fleitlich-Bilyk (2018)	To assess the applicability and effects of a group CBT program for Brazilian adolescents with anorexia nervosa, compared to usual care	24 manualized sessions held in a group setting, lasting 90 minutes, over a six-month period. The group was led by psychotherapists specialized in CBT	22 patients diagnosed with anorexia nervosa	Eating disorders examination questionnaire; Development and Well-Being Assessment	Participants in both groups regained weight and decreased symptoms of eating disorders at the end of groups. The CBT group presented a statistically significant difference in restraint	N/A
32.	Pérez Baquero, Ruiz Santos & Parra Ocampo, 2014	To determine the effects of a cognitive-behavioral intervention in a marital conflict for infidelity	10 weekly sessions of CBT based in Baucom et al (2009) model, with techniques such as infidelity management impact, examination of context and decision making	5 Colombian couples; 4 cases of male infidelity and one of female infidelity	Couple needs inventory; Scale of difficulties in emotional regulation; Self-registry of frequency of discussions; Self-registry of positive interactions	Significant increase in positive interactions on three couples, and significant decrease in the frequency of discussions on all couples.	
33.	Reyes Jarquin & Gonzalez-Celis Rangel, 2016	To assess the effects of a cognitive behavioral intervention for formal caregivers of elder adults, aiming to diminish burnout.	Cognitive behavioral intervention delivered in 9, hour-long sessions.	15 caregivers with a mean age of 46 years old (14 females and 1 male).	Questionnaire to assess burnout syndrome; World Health Organization quality of life scale (brief version)	Decrease in burnout dimensions such as physical wear, work disappointment and guilt. Improvement in quality of life, particularly physical health, psychological health and social relationships.	N/A
34.	Riveros, Ceballos, Laguna &	To examine the effects of a cognitive-behavioral procedure over anxiety,	Sixty minute-long CBT sessions on individual format. Participants received 16 to 30	20 patients diagnosed with hypertension.	Inventory of quality of life and health; Beck anxiety scale; Moos' coping scale;	Clinical and statistical significant changes for most patients on quality of life,	N/A

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
Sanchez-Sosa, 2005	therapeutic adherence, well-being, and other quality of life-related areas, in hypertensive patients.	sessions, according to each case.		Behavioral self-registration system (to evaluate therapeutic adherence).	therapeutic adherence, wellbeing and anxiety in pre and post-test, as well as follow-up measures.	
35. Tapia, Chana, Araneda, Canales, Curihual, Rivas, Salazar & Baldwin, 2014	To evaluate the effectiveness of thermal-tactile stimulation in addition to cognitive-behavioral treatment, aiming to decrease the salivation perception in patients with Parkinson	CBT plus thermal-tactile stimulation (technique that triggers the swallowing reflex with cold stimulation in the isthmus of the fauces), compared to CBT alone. The intervention was carried out two times per week.	18 patients with Parkinson disease, presenting sialorrhea	Sialorrhea Clinical Scale for Parkinson Disease	Both groups showed a statistically significant difference pre-post intervention. There were no differences between groups; both treatments resulted effective.	N/A
36. Vergara Lope-Tristan & Gonzalez-Celis Rangel, 2009	To adapt a manualized cognitive behavioral intervention to the specific characteristics of elderly people, as well as evaluate its effect on irrational ideas, depression, anxiety and subjective wellbeing.	Eight sessions with a duration of 2 hours.	37 elder adults between 57 and 85 years old.	Mini-mental state examination; Beck anxiety inventory; Subjective wellbeing scale; Questionnaire of irrational ideas; Geriatric depression scale; Behavioral registry	Small improvement on irrational ideas, depression and behavioral registry. Moderate and large improvement on depression and subjective wellbeing, respectively.	N/A
37. Villalobos Pérez, Araya Cuadra, Rivera Porras, Jara Parra & Zamora Rodriguez, 2005	To decrease depression through cognitive behavioral group therapy in patients with fibromyalgia	15 sessions of cognitive-behavioral group therapy, 2 hours each, 2 sessions per week	10 female participants diagnosed with fibromyalgia, with a score over 60 in the Multiscore Depression Inventory	Berndt's Multiscore Depression Inventory	Decrease of depression scores in an average of 50%	N/A
38. Zimmer, Duncan, Laitano, Ferreira &	To determine the effect of a twelve-session cognitive-behavioral intervention compared to that of	CBT delivered in weekly 60-minute sessions for a period of 3 months.	56 participants (20 intervention, 36 treatment as usual) between 18 and 65 years of age,	Operational criteria checklist for psychotic illness; Brief psychiatric rating scale; Mini-mental state examination	The intervention demonstrated superiority over treatment as usual in its effects on cognition, social	N/A

	Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
	Belmonte-de-Abreu, 2007	treatment as usual on the social functioning of schizophrenic patients.		diagnosed with schizophrenia or schizoaffective disorder	and word-span; Global assessment of functioning scale; Social and occupational functioning assessment scale; World Health Organization brief quality of life assessment instrument; Social adjustment scale	adjustment and quality of life.	
	Adapted CBT for Latinos in the United States						
39.	Alegria, Ludman, Kafali, Lapatin, Vila, Shrout, Keefe, Cook, Ault, Li, Bauer, Epelbaum, Alcantara, Pineda, Tejera, Suau, Leon, Lessios, Ramirez & Canino, 2014	To evaluate treatment effectiveness of telephone or face-to-face cognitive behavioral therapy and care-management intervention for low-income Latinos, as compared to usual care for depression.	CBT intervention delivered by telephone or face-to-face. The first four sessions were conducted weekly, and the 5th and 6th were biweekly, up to a total of 8 sessions.	257 adult Latinos, who scored 10 or more on the Patient health questionnaire-9, and met criteria for major depressive disorder. Patients were either living in the US or Puerto Rico.	Patient Health Questionnaire-9; Hopkins Symptom Checklist; World Health Organization disability assessment schedule.	Both telephone and face-to-face versions of the intervention were more effective than usual care. Larger effect was reached in the US sample than in the Puerto Rico sample.	**Peripheral** – Engagement – Psychoeducation **Peripheral** – Delivery – Materials and semantics, Cultural examples and themes
40.	Burrow-Sanchez & Wrona, 2012	Evaluating the feasibility and initial efficacy of a culturally relevant group CBT intervention in Latino adolescents with substance abuse.	Standard vs culturally accommodated CBT, delivered in a group format via weekly one and a half-hour sessions, over consecutive 12-week periods.	35 Latino adolescents who ranged in age from 13 to 18, diagnosed with drug abuse or dependence. The 80% of the sample completed the treatment.	Timeline follow back; Structured clinical interview for DSM–IV; Client satisfaction questionnaire; Acculturation rating scale for Mexican Americans-II; The multi ethnic identity measure; Familism scale	Substance use levels significantly decreased from pre to posttreatment, and then slightly increased at 3-month follow-up for both treatment conditions. Parents with adolescents in the experimental condition	**Core** – Addition **Peripheral** – Delivery – Cultural examples and themes **Peripheral** –

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
					were more satisfied with the program compared to parents in the control condition; however, the satisfaction scores for adolescents by condition did not differ.	Delivery – Therapy framework – Person / place
41. Cachelin, Shea, Phimphasone, Wilson, Thompson & Striegel, 2014	To examine the feasibility, acceptability and preliminary efficacy of a culturally adapted CBT-based self-help intervention with a community sample of Mexican-American women with binge eating disorders.	The intervention consisted of following a self-help manual, and eight guidance sessions (25 minutes in duration each). They were distributed in weekly sessions followed by four biweekly sessions over a 12-week period.	31 Mexican-American women experiencing problems with overeating or binge eating. Only 20 ended the treatment.	Clinical interview for the DSM-IV-TR; Acculturation rating scale for Mexican Americans-II; Eating disorder examination; Beck depression inventory; Brief symptom inventory; Rosenberg self-esteem scale; Body mass index; Client satisfaction questionnaire; Program evaluation questionnaire	Sixty-two percent of the participants agreed to enrol in the program, which indicates a good rate of acceptability. Significant reduction in episodes of binge eating between baseline and post-treatment. Significant improvement in secondary associated variables of eating pathology, BMI and self-esteem.	**Core** – Addition **Peripheral** – Engagement – Retention/Completion **Peripheral** – Delivery – Cultural examples and themes **Peripheral** – Delivery – Provider-client relationship
42. Dwight-Johnson, Aisenberg, Golinelli, Hong, O'Brien & Ludman, 2011	To test the effectiveness of culturally tailored, telephone-based CBT for improving depression outcomes among Latino primary care patients living in rural settings.	CBT was provided at no charge in eight telephone sessions; each focused on a chapter from a patient workbook that had been translated to Spanish for this study.	101 participants were enrolled. Half of them were randomly assigned to the experimental condition, and the other half to the control.	Hopkins Symptom Checklist depression items; Patient health questionnaire-9; Patient satisfaction measure.	Participants in the experimental condition were more likely to experience improvement in depression over the six-month follow-up period compared to control group. Patients in the CBT group reported high treatment satisfaction.	**Peripheral** – Delivery – Materials and semantics **Peripheral** – Delivery – Cultural examples and themes

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
						Peripheral – Delivery – Therapy framework – Session structure **Peripheral** – Delivery – Therapy framework – Person/Place
43. Evans-Hudnall, Stanley, Clark, Bush, Resnicow, Liu, Kass & Sander, 2014	To pilot a brief stroke self-care treatment adapted for underserved ethnic minority groups, improving their stroke knowledge and assessing the effects on health behaviors.	Three 30 to 45 minute-long CBT sessions focused on self-care. The first session was provided after the baseline assessment in the acute care setting, and the remaining two sessions were delivered bi-weekly via phone over the 4 weeks after discharge.	52 primarily African American and Hispanic participants of low socioeconomic status, from the stroke intensive care unit of a large county hospital.	Behavioral surveillance survey; Brief symptom inventory depression and anxiety subscales.	Intervention group improved stroke knowledge, and significantly reduced tobacco and alcohol use. Some effects of anxiety on stroke self-care behaviors were also found.	**Peripheral** – Delivery – Materials and semantics **Peripheral** – Delivery – Therapy framework – Person/Place
44. Feldman, Matte, Interian, Lehrer, Lu, Scheckner, Steinberg, Oken, Kotay, Sinha & Shim (2016)	To compare the effect of a culturally adapted cognitive behavior psychophysiological intervention (CBPT) to music and relaxation therapy (MRT) in panic disorder (PD) severity, asthma control, and other anxiety and asthma-related measures.	Both treatments were administered on a weekly basis over 8 weeks	53 Latino (primarily Puerto Rican) adults with asthma and PD	Structured Clinical Interview for DSM-IV Axis I Disorders; Panic Disorder Severity Scale - Clinical Global Impression Scale (CGI)	Both groups showed improvements in PD severity, asthma control, and several other anxiety and asthma outcome measures from baseline to post-treatment and 3-month follow-up. CBPT showed an advantage over MRT for improvement in adherence to inhaled corticosteroids.	**Peripheral –** Delivery – Materials and semantics; Cultural examples and themes **Peripheral –** Delivery – Therapy framework – Provider-Client relationship **Core –** Addition

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
45. Gallagher-Thompson, Gray, Dupart, Jimenez & Thompson, 2008	To compare "Coping with caregiving" (CWC) group intervention to a telephone based control condition (TSC) in the treatment of non-Hispanic white and Hispanic-Latino female caregivers. Also, to determine if the caregivers were learning and implementing new skills, and to ascertain the effects of skill utilization on level of stress and depressive symptoms	CWC is based on cognitive behavioral principles. Both interventions were 13 to 16 week, protocol driven treatments. It was conducted in a small-group format (4-8 caregivers per group) and met weekly for 2-hour sessions.	156 female adults completed the assessments. They provide a minimum of 8h of care per week (for at least 6 months) to an elder relative with significant memory loss/ deterioration in cognitive ability	Centre for epidemiologic studies depression scale; Perceived stress scale; Revised Memory and Behavior Problem Checklist (conditional bother subscale); 21-item questionnaire of various cognitive and behavioral strategies helpful for caregivers to improve their coping skills	Improvement in depressive symptoms, reduction in overall "life stress", and reduction in caregiving-specific stress for the experimental group. Caregivers in experimental group also greater increase in coping strategies.	**Peripheral** – Delivery – Therapy Framework – Provider-Client relationship
46. Gesell, Katula, Strickland & Vitolis, 2015	To evaluate feasibility and initial efficacy of a 12-week excessive gestational weight gain intervention among low-income minority women (Latinas).	The experimental condition consisted of twelve weekly 90-min CBT group sessions (8–10 women and one facilitator).	135 women started the intervention, but only 110 finished it. They were eligible if they were 10-28 weeks pregnant, 16 years or older, in prenatal care, and Spanish or English-speaking.	Feasibility and fidelity were measured by patient retention and length, number and adherence to content; Pre and post-intervention BMI; Gestational gain weight.	Compared to usual care, fewer normal-weight women in the intervention exceeded the Institute of Medicine's recommendations. Likewise, retention rate was very high (81%).	**Peripheral** – Delivery – Cultural examples and themes **Peripheral** – Delivery – Therapy framework – Provider-client relationship
47. Gonyea, López & Velásquez (2016)	To test the effectiveness of a culturally-sensitive cognitive behavioral (CBT) group intervention in supporting Latino families' ability to manage the	The 2 manualized interventions (CBT vs Control [Psychoeducation]) had the same structure: 5 weekly 90-minute group sessions, followed by telephone coaching	67 caregivers were assigned to the CBT experimental condition or the psychoeducational (PED) control condition, and interviewed at	Center for Epidemiological Studies-Depression scale; Neuropsychiatric Inventory-Distress scale; Neuropsychiatric Inventory-Severity scale; Revised	Compared with the PED participants, CBT participants reported lower neuropsychiatric symptoms in their relative, less caregiver distress about	**Peripheral –** Delivery – Materials and semantics; Cultural examples and themes

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
	disease's neuropsychiatric symptoms and improve caregiver well-being	at 3, 6, 9 and 12 weeks post-intervention.	baseline, post-group, and 3 months follow-up.	Scale for Caregiving Self-Efficacy; State Anxiety Inventory-State	neuropsychiatric symptoms, a greater sense of caregiver self-efficacy, and less depressive symptoms over time.	**Peripheral –** Delivery – Therapy framework – Provider-Client relationship
48. Hinton, Hofmann, Rivera, Otto & Pollack, 2011	To compare a culturally adapted CBT to applied muscle relaxation (AMR) in the treatment of Latino patients with PTSD.	The treatment was delivered in groups of six participants. Both treatments were manualized, and offered across 14 weekly sessions, with each session lasting an hour.	24 Latino patients who were considered to be treatment resistant for PSTD.	PTSD checklist; Anxiety subscale of the symptom checklist; Nervios scale; Emotion regulation scale	In both treatment conditions, patients improved on all measures, however, the experimental condition had a greater effect.	**Core** – Modification **Peripheral** – Engagement – Psychoeducation **Peripheral** - Delivery – Cultural examples and themes
49. Holden, Shain, Miller, Piper, Perdue, Thurman & Korte, 2008	To evaluate the impact of depression on a CBT-based intervention, and its efficacy at 6 month, 12 month, and 0 to 12 month cumulative follow-up about high-risk behavior and clinically confirmed reinfection.	The behavioral-cognitive intervention aims to reduce sexual risk behavior and associated STI reinfections among Mexican and African American women.	477 English-speaking women (149 black and 328 Mexican-American) aged 14 to 45, who had a current non-viral STI.	Reinfection with chlamydia and/or gonorrhoea; sexual risk behaviors reported by participants during interviews.	The intervention was equally successful in reducing reinfection and high-risk behaviors among depressed and non-depressed participants.	**Peripheral** – Engagement – Psychoeducation **Peripheral** – Delivery – Cultural examples and themes
50. Kanter, Santiago-Rivera, Rusch, Busch & West, 2010	To explore the feasibility and initial effectiveness of behavioral activation for Latinos (BAL) in a community mental health setting.	BA consists on activating clients to obtain and maintain stable sources of positive reinforcement. 12 BAL sessions over 20 weeks were delivered to participants.	10 adults (18 or older) with a formal diagnose of depression. Although men and women were recruited, the sample consisted of all women. 40 years of age in average, mostly from Mexico (60%)	Primary care evaluation of mental disorders; Pan Hispanic familismo scale; Treatment adherence checklist; Beck depression inventory; Hamilton's depression inventory.	The majority of the participants responded to BAL and approximately half achieved remission. Across clients, a mean of 7.7 sessions were completed over a mean of 12.4 weeks. Therapists reported	**Peripheral** – Delivery –Materials and semantics **Peripheral** – Delivery - Cultural examples and themes

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
			and Puerto Rico (30%).		engaging in a mean of 3.24 BA techniques per session (of 4 possible techniques)	**Peripheral** – Delivery - Therapy framework – Session structure **Peripheral** – Delivery - Therapy framework – Provider –client relationship **Peripheral** – Delivery - Therapy framework – Person / place
51. Le, Perry & Stuart, 2011	To evaluate the efficacy of a CBT intervention to prevent perinatal depression in high-risk Latinas.	Eight weekly, 2-hour long CBT psycho-educational group sessions to prevent perinatal depression. Participants also received three individual booster sessions at 6 weeks, 4 and 12 months postpartum.	217 Latina women participated in the study.	Centre for epidemiological studies depression scale; Beck depression inventory; Mood screener.	Women in the intervention group had lower depressive symptoms than women in the usual care group immediately after participating in the intervention. However, the intervention did not reduce depressive symptoms during the postpartum period.	**Peripheral** – Engagement - Psychoeducation **Peripheral** – Delivery – Therapy framework – Provider-client relationship
52. Mauldon, Melkus & Cagganello, 2006	To test the feasibility, acceptability, and efficacy of a culturally appropriate, Spanish-language	Weekly, 3 hour-long, cognitive-behavioral educational sessions conducted in Spanish in a health centre.	17 Spanish-speaking patients with type-2 diabetes were enrolled, between the ages of 21	Physiologic measures (HbA1c, body mass index and lipids); Diabetes mellitus-related	Over the 6 months of the study, most of the participants showed an increase in knowledge	**Peripheral** – Engagement – Psychoeducation

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
	cognitive-behavioral diabetes intervention for Hispanic Americans with type 2 diabetes.		and 65 years old.	health belief instrument; Diabetes knowledge questionnaire; *Cuestionario sobre sus problemas con la diabetes* / Problem areas in diabetes; Language-based acculturation scale.	scores, improvement in lipid profiles, and reduction in HbA1c levels. Excellent acceptance for the intervention, although women fared better than men in the study.	**Peripheral** – Delivery – Materials and semantics **Peripheral** – Delivery – Cultural examples and themes
53. Miranda, Azocar, Organista, Dwyet & Areane, 2003	To determine if adding clinical case management to traditional CBT for depression would reduce dropout and improve outcomes for ethnically diverse, impoverished outpatients.	Cognitive-behavioral treatment in a group format lasting for 12 weekly sessions. The case management intervention took place over a six-month period and assessed patient's particular needs and goals.	199 participants were included on the study. Thirty-eight percent of them were Spanish-speakers.	Structured clinical interview for DSM-V; Beck depression inventory; Social adjustment scale. Translated versions of the measures were used when necessary.	The patients in the experimental condition had lower dropout rates than those in control condition. The improvement was greater for patients whose first language was Spanish.	**Peripheral** – Delivery – Materials and semantics **Peripheral** – Delivery – Therapy framework – Provider-client relationship
54. Penedo, Traeger, Dahn, Molton, Gonzalez, Schneiderman & Antoni, 2007	To evaluate the efficacy of a cognitive behavioral-based intervention on quality of life (including sexual functioning).	Ten-week cognitive-behavioral stress management intervention for prostate cancer (Penedo et al., 2000). Groups in the experimental condition met once per week, and each session lasted two hours.	93 Hispanic men, age 50 or older, who were monolingual Spanish speakers and who had undergone either surgery or radiation therapy for prostate cancer.	Functional assessment of cancer therapy -General module; expanded Prostate cancer index composite.	Regarding quality of life, participants showed significant improvements in total, physical, and emotional well-being, as well as in sexual functioning.	**Peripheral** – Engagement – Access/Entry **Peripheral** – Delivery – Materials and semantics **Peripheral** – Delivery – Cultural examples and themes Peripheral –

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
						Delivery – Therapy framework – Session structure
55. Perez Foster, 2007	To investigate the feasibility of treating depression in two socioeconomically burdened groups of women seeking services in community settings.	Manualized CBT for depression delivered in a group format (six participants per group), women only, and conducted for 16 weeks. Control group consisted of a supportive/exploratory group.	91 women seeking treatment for depressive complaints at a homeless shelter program and a municipal psychiatric clinic for Latino patients.	Beck depression inventory; Centre for epidemiological studies - Depression scale; Duke health profile.	Both treatment conditions were equally effective in decreasing depressive symptoms up to 4 months after treatment. Improvements in self-reported physical health. No significant differences between conditions were found.	**Peripheral** – Delivery – Materials and semantics **Peripheral** – Delivery – Therapy framework – Person/Place
56. Pina, Silverman, Fuentes, Kurtines & Weems, 2003	To examine treatment response and maintenance to exposure-based CBT for Hispanic/Latino relative to European-American youths with phobic and anxiety disorders.	Ten to twelve group sessions were conducted by trained therapists. Manuals were used, and the therapy was administered primarily in English.	Data was collected from a total of 131 youths (46% girls) and their parents. The ages ranged between 6 and 16 years of age. Sixty percent of the participants were European-American, and the 40% were Hispanic/Latino.	Anxiety disorders interview schedules for children; Revised children's manifest anxiety scale (and the parents' version); Child behavior checklist.	The intervention was equally effective for Hispanic/Latino youths as with European-Americans.	**Peripheral** – Delivery – Therapy framework – Provider-client relationship
57. Pina, Zerr, Villalta & Gonzales, 2012	To examine the effects of a program with varying degrees of parent involvement on Hispanic/Latino and Caucasian children with anxiety.	The conditions were: Child only condition; Child plus parent condition. Each condition lasted 12 weeks and was manualized and culturally sensitive.	88 youths were randomized to one of the two conditions. Forty percent of the participants were Caucasian, and sixty percent were Hispanic/ Latino. Only 73 participants completed the	Anxiety disorders interview schedule for DSM-IV (Child and parent version); Revised children's manifest anxiety scale; Children's depression inventory.	Child anxiety symptoms improved significantly on both conditions, although additional gains were found for children in the child plus parent condition. Program effects did not vary by Latino ethnicity or	**Unclear** – Authors claim to 'emphasize core therapeutic components (e.g., systematic and gradual exposures) and the use of culturally

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
			interventions.		Spanish language use in the intervention.	responsive implementation strategies'. No further details are given.
Non-adapted CBT for Latinos in the United States						
58. Gil, Wagner & Tubman, 2004	To examine the effects of an alcohol and other drug use intervention among African-American, Mexican-American and foreign Hispanic juvenile offenders.	Brief motivational, cognitive behavioral intervention. Participants were assigned randomly to the individual format, the family-involved format, choice of one of these two, or a waiting list control condition.	2013 juvenile offenders referred for treatment (14 to 19 years old). Ninety-seven of them completed the treatment.	Time-line follow-back Interview; Problem recognition questionnaire; Williams' perceptions of discrimination measure; Ethnic mistrust measure; Ethnic orientation and pride measure; Acculturation for Hispanics measure; Acculturation stress questionnaire .	There were significant reductions in alcohol and marijuana use for all ethnic groups from baseline to post-intervention.	N/A
59. Marchand, Ng, Rohde & Stice, 2010	To test whether a brief indicated cognitive-behavioral depression prevention program produced similar effects for Asian American, Latino, and European American adolescents with elevated depressive symptoms.	The experimental group consisted of four weekly 1 hour-long sessions utilizing cognitive and behavioral procedures to reduce negative cognitions and increase pleasant activities. Groups were composed of 6-10 participants. Control group was wait-list.	167 students aged 14 to 24 from diverse ethnic backgrounds: European American (n=98), Latino (n=32), or Asian-American / Pacific Islander (n=37).	Beck Depression Inventory; Adapted version of the Schedule for affective disorders and schizophrenia for school-age children; Beck depression inventory II.	Depressive symptom reductions were significantly greater for intervention than control participants. The intervention was similarly efficacious for Asian American, Latino and European American adolescents.	N/A
60. Melnyk, Jacobson, Kelly, O'Haver, Small & Mays, 2009	To evaluate the preliminary efficacy of an educational, cognitive and behavioral intervention (COPE TEEN)	Fifteen manualized sessions delivered 2 to 3 days per week, during the teen's health class. Control	19 adolescents (mean age = 15.5 years old) attending an urban, predominantly Hispanic	Healthy lifestyle beliefs scale; Nutrition knowledge; Healthy lifestyle choices scale; Beck youth inventory	The program was well received by Hispanic adolescents, and had a positive effect on depression	N/A

Authors	Goal	Intervention	Participants	Measures	Outcome	Type of adaptation
	on Hispanic adolescents' healthy lifestyle choices, as well as mental and physical health outcomes.	group received instructions in health topics that were not contained in the intervention program.	high school.	– II; Anthropometric measures & laboratory work.	and anxiety symptoms, as well as in healthy lifestyle choices.	

Table 3. Summary of the main outcomes

Reference	Was the adaptation effective? (p-value)	Effect size (d)	Retention rate	Score on quality rating
Adapted CBT in Latin America				
1. Cabiya et al., 2008	0.04	0.25 for depression scores	54%	High (33)
2. De la Rosa Gomez & Cardenas Lopez, 2012	0.02	1.25 for depression scores	75% virtual reality 53% imagination	High (35)
3. Díaz-Martínez et al., 2011	0.07	Not known	82% for CBT group	Medium (30)
4. Rossello & Jimenez-Chafey, 2006	<0.05	1.23 for anxiety scores	55%	Medium (31)
5. Rossello & Bernal, 1999	<0.01	CBT vs ITP= 0.35 CBT vs WL= 0.75	CBT = 84% IPT = 83% WL = 78%	High (32)
6. Rossello et al., 2011	<0.0001	0.83 for suicidal ideation scores	95%	Medium (31)
Non-adapted CBT in Latin American countries				
7. Aguilera-Sosa et al., 2009	<0.01 on BMI pre-post intervention	1.19	Not known	Medium (31)
8. Alcázar-Olán et al., (2018)	Yes, for participants with high session attendance (8 or more sessions – all outcomes <0.05)	0.62 on average for main outcomes (medium)	66%	Low (28)
9. Arrivillaga Quintero et al., 2007	0.031	0.68 for systolic blood pressure pre-post treatment	88% for the experimental group	High (34)
10. Becerra Galvez et al., 2016	<0.05 for anxiety on both measures (pre-post intervention)	1.2 for anxiety outcomes	Not known	Medium (31)
11. Botero Garcia, 2005	<0.05 on main outcome (PSTD severity)	1.4 on average for number of symptoms, severity and depression	100%	Low (29)
12. Caceres-Ortiz et al., 2011	<0.001	1.98 for PSTD symptoms (Hedges' g. equivalent to 1.9 Cohen's d)	100%	Medium (31)
13. Castro et al., 2012	0.034 in comparison with control	-0.44	Not known	Medium (31)
14. Contreras et al., 2006	<0.05 for all the outcome measures	0.64 on average	Not known	High (34)
15. Cordioli et al., 2002	<0.001 for Y-BOCS global	1.75	93%	Medium (31)
16. Cruz-Almanza et al., 2006	<0.01 for self-esteem and coping after follow-	1.3	83%	High (35)

Reference	Was the adaptation effective? (p-value)	Effect size (d)	Retention rate	Score on quality rating
	up 1			
17. De Souza et al., 2013	<0.05	0.96 on average for anxiety scales	71%	Medium (30)
18. Duchesne et al., 2007	<0.01 for all outcomes (pre-post)	2.7 for binge eating frequency	Not known	Medium (31)
19. Escoto Ponce de León et al., 2010	Not known	-1.93 for body image dissatisfaction scores	100%	High (35)
20. Furlan, 2013	<0.05 for most of the outcome measures	0.44 on average (Cliff's delta, equivalent to a d=0.7)	50%	Medium (30)
21. Garduno et al., 2010	<0.05	Not known	Not known	Low (28)
22. Gil-Bernal & Hernandez Guzman, 2009	<0.05 for both of the intervention groups	-0.52 for the group on which parents participated	Not known	High (34)
23. Gomez et al., 2009	<0.0001	2.16 for OCD symptoms	83%	Medium (31)
24. Gonzalez Fragoso et al., 2012	0.05 for sentiment expression and depression on 2nd and 3rd follow-ups, respectively	Not known	Not known	Low (28)
25. Gonzalez Garcia et al., 2015	0.014 for anxiety and depression	1.5	100%	Medium (30)
26. Guerra Vio et al., 2009	0.08 for self-care	1.01 for self-care pre-post intervention	100%	Medium (30)
27. Habigzang et al., 2016	≤0.001	0.55 on average between all measures	Not known	Low (27)
28. Habigzang et al., (2018)	Yes, for all outcome variables ($p \leq 0.001$) except PSTD.	1.06 on average for significant outcomes (no PSTD)	100%	High (32)
29. Meyer et al., 2010	<0.01	5.9 on average pre-post intervention.	100% for experimental group 90% for control	High (37)
30. Montero Pardo et al., 2012	0.033 for burden pre-post intervention	0.51	Not known	Medium (30)
31. Pegado et al., (2018)	Yes (p=0.01)	0.52 for restraint at follow-up (intervention vs control) (medium)	91%	High (33)
32. Perez Baquero et al., 2014	<0.001	Not known	100%	Low (28)
33. Reyes Jarquin & Gonzalez-Celis Rangel, 2016	<0.001 for physical and psychological wear	2.50	Not known	Medium (31)
34. Riveros et al., 2005	<0.01	Not known	100%	Low (28)
35. Tapia et al., 2014	<0.001 pre-post intervention for experimental	2.9 for salivation perception	90%	Medium (30)

Reference	Was the adaptation effective? (p-value)	Effect size (d)	Retention rate	Score on quality rating
	group. No differences between groups.			
36. Vergara Lope Tristan & Gonzalez-Celis Rangel, 2009	<0.05 for all outcomes right after the intervention, non-significant on follow-ups	Not known	Intervention = 58% Control= 76%	Low (27)
37. Villalobos Perez et al., 2005	<0.001	4.87 for depression scores	66%	Low (29)
38. Zimmer et al., 2007	<0.05 for global assessment and mini-mental state	Not known	85% for experimental group 83% for control	High (34)
Adapted CBT for Latinos in the United States				
39. Alegria et al., 2014	<0.05 for both adapted interventions	0.55 on average for both adapted intervention, pre-post treatment	66% for both adapted interventions	High (33)
40. Burrow-Sanchez & Wrona, 2012	Not known	0.53 pre-post intervention	82%	Medium (32)
41. Cachelin et al., 2014	<0.001 for binge eating frequency	0.70 pre-post treatment	64%	Medium (30)
42. Dwight-Johnson et al., 2011	0.003 for depression at 6-month follow-up	-4.18 between control and intervention	84%	High (37)
43. Evans-Hudnall et al., 2014	<0.05 for tobacco use, alcohol use, and medication adherence.	0.13 for exercise (minutes) between control and intervention	90%	Medium (31)
44. Feldman et al., (2016)	Yes (<0.001)	1.07 for panic disorder severity symptoms (large)	59%	High (34)
45. Gallagher-Thompson et al., 2008	<0.05 for all the outcome measures (depression, stress and bother)	0.36 on average for depression and perceived stress for Hispanics on experimental group.	85%	High (34)
46. Gesell et al., 2015	0.036 for IOM recommended weight gain in normal-weight women	Not known	81%	Medium (32)
47. Gonyea et al., (2016)	Yes ($p < .001$) for all outcome measures except for anxiety	0.19 on average for main outcomes (small)	94%	High (33)
48. Hinton et al., 2011	<0.01 for all outcome measures	1.4 on average between interventions	100%	High (35)
49. Holden et al., 2008	0.03 for reinfection rate at 12-month follow up	Not known	Not known	High (33)
50. Kanter et al., 2010	<0.01 for depression on both measures	1.62 on average	30%	Medium (30)
51. Le et al., 2011	0.03 for depression right after intervention	-0.28 between control and intervention	68%	High (35)

Reference	Was the adaptation effective? (p-value)	Effect size (d)	Retention rate	Score on quality rating
52. Mauldon et al., 2006	0.003 for diabetes knowledge	1.8 pre-post intervention	94%	Medium (30)
53. Miranda et al., 2003	0.04 for Spanish speaking participants	Not known	76%	High (32)
54. Penedo et al., 2007	< 0.001 for quality of life (intervention vs control)	Not known	77%	High (34)
55. Perez Foster, 2007	<0.001 from baseline, post-test and 4-month follow-up.	Not known	100%	Low (28)
56. Pina et al., 2003	< 0.01 for manifest anxiety	0.19 for Hispanics/Latinos pre-post treatment	Not known	Medium (30)
57. Pina et al., 2012	<0.0001 for total anxiety on both experimental conditions	3.9 pre-post intervention for both experimental conditions	77%	High (34)
Non-adapted CBT for Latinos in the United States				
58. Gil et al., 2004	Not known	Not known	Not known	Low (27)
59. Marchand et al., 2010	<0.001 for depression	0.92 on average for each assessment (post, 1-month follow-up and 6-month follow-up)	Not known	High (35)
60. Melnyk et al., 2009	<0.10 only for anxiety and healthy life choices (significance was established at <0.10)	0.45 on average for all the outcome measures, pre-post treatment	89%	High (34)

Table 4. Quantitative comparison between the groups of analysed papers

	Latin America				United States				ANOVA	
	Adapted		Non-adapted		Adapted		Non-adapted [a]		*F*	*P*
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Retention rate (%)	72.33	17.025	86.00	16.470	79.50	17.123	89.00	-	1.736	0.189
Quality score [b]	31.83	1.835	31.23	2.473	32.10	2.404	31.00	4.359	0.842	0.437

Note: [a] Not included in the ANOVA analyses, due to small N (= 3); [b] Possible scores range from 11 to 37