CRITICALLY APPRAISED TOPIC

FOCUSED CLINICAL QUESTION

What is the acceptability of translated and culturally adapted parent education materials for Spanish-speaking parents or caregivers?

AUTHOR

Prepared by	Leslie Sierra-Arevalo	**Date**	12/2/2020
Email address	sierraar@med.unc.edu		

CLINICAL SCENARIO

Minority patients, particularly those that do not speak English or have limited English proficiency (LEP), are at high risk of suffering from health disparities and experiencing barriers to appropriate healthcare within the American healthcare system. A specific barrier to appropriate healthcare is the lack of translated and culturally adapted patient education materials. Specific to Spanish-speaking parents, I want to know what is the acceptability of translated and culturally adapted parent education materials for the parents/caregivers regarding care for their children, and what qualitative research has determined to be effective methods for integrating these materials and other forms of education into the healthcare program(s) for the parents/caregivers and their children.

SUMMARY OF SEARCH

[Best evidence appraised and key findings]

Eight studies met the inclusion and exclusion criteria including 1 integrative review, 1 RCT, and 4 mixed method studies, and 2 qualitative methodology focus group studies.

- Spanish-speaking parents have overall positive experiences when education materials and/or programs are given and taught in Spanish and demonstrate improved adherence to parenting programs.
- Using *promotores* or group leaders that are culturally competent and ideally Hispanic are effective ways to conduct focus groups for Spanish-speaking participants so they may feel more comfortable sharing their thoughts and overall feel heard and related-to.
- Institutions often do not translate and culturally adapt education materials appropriately due to barriers such as financial constraints and limited resources to complete appropriate translation.
- High acceptability and social validity are seen amongst Spanish-speaking parents/caregivers when provided with translated and culturally adapted education materials that are catered towards their cultural differences.

CLINICAL BOTTOM LINE

Although institutions may see translating and culturally adapting patient education materials as not feasible due to various barriers including limited resources, appropriate education materials for patients regardless of their native language is a necessary part of appropriate healthcare and addressing health disparities. Spanish-speaking parents and their children experience positive outcomes, experiences, and acceptability of translated and culturally adapted patient education materials and/or programs. Focus groups geared towards the Spanish-speaking Hispanic participants provide valuable feedback about translated and culturally adapted materials for improved participant understanding, involvement, and adherence to parenting programs and parenting education materials.

This critically appraised topic has been individually prepared as part of a course requirement and has been peer-reviewed by one other independent course instructor

The above information should fit onto the first page of your CAT

SEARCH STRATEGY

Terms used to guide the search strategy				
Sample	**P**henomenon of **I**nterest	**D**esign	**E**valuation	**R**esearch Type
"Spanish speaking parent" "Spanish speaking caregiver" "Hispanic parent" "Hispanic caregiver" "Latin* parent" "Latin* caregiver" "Limited English Proficiency" (LEP)	-Translated parent education -Culturally adapted parent education	-Survey -Interview -Focus Group -Case Study/Series -Questionnaire	-Acceptability -Experiences	-Qualitative -Mixed Method

Final search strategy (history):

Show your final search strategy (full history) from PubMed. Indicate which "line" you chose as the final search strategy.

- Spanish speaking OR Hispanic OR Latin* OR limited English proficien* OR LEP
    - (("hispanic americans"[MeSH Terms] OR ("hispanic"[All Fields] AND "americans"[All Fields]) OR "hispanic americans"[All Fields] OR "spanish"[All Fields]) AND ("speak"[All Fields] OR "speaking"[All Fields] OR "speaks"[All Fields])) OR ("hispanic americans"[MeSH Terms] OR ("hispanic"[All Fields] AND "americans"[All Fields]) OR "hispanic americans"[All Fields] OR "hispanic"[All Fields] OR "hispanics"[All Fields]) OR "latin*"[All Fields] OR (("limit"[All Fields] OR "limitation"[All Fields] OR "limitations"[All Fields] OR "limited"[All Fields] OR "limiting"[All Fields] OR "limits"[All Fields]) AND "English"[All Fields] AND "proficien*"[All Fields]) OR "lep"[All Fields]
- Parent OR caregiver
    - "parent s"[All Fields] OR "parentally"[All Fields] OR "parentals"[All Fields] OR "parented"[All Fields] OR "parenting"[MeSH Terms] OR "parenting"[All Fields] OR "parents"[MeSH Terms] OR "parents"[All Fields] OR "parent"[All Fields] OR "parental"[All Fields] OR "caregiver s"[All Fields] OR "caregivers"[MeSH Terms] OR "caregivers"[All Fields] OR "caregiver"[All Fields] OR "caregiving"[All Fields]
- Parent education
    - ("parent s"[All Fields] OR "parentally"[All Fields] OR "parentals"[All Fields] OR "parented"[All Fields] OR "parenting"[MeSH Terms] OR "parenting"[All Fields] OR "parents"[MeSH Terms] OR "parents"[All Fields] OR "parent"[All Fields] OR "parental"[All Fields]) AND ("educability"[All Fields] OR "educable"[All Fields] OR "educates"[All Fields] OR "education"[MeSH Subheading] OR "education"[All Fields] OR "educational status"[MeSH Terms] OR ("educational"[All Fields] AND "status"[All Fields]) OR "educational status"[All Fields] OR "education"[MeSH Terms] OR "education s"[All Fields] OR "educational"[All Fields] OR "educative"[All Fields] OR "educator"[All Fields] OR "educator s"[All Fields] OR "educators"[All Fields] OR "teaching"[MeSH Terms] OR "teaching"[All Fields] OR "educate"[All Fields] OR "educated"[All Fields] OR "educating"[All Fields] OR "educations"[All Fields])
- Education material
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- Education
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- Translated OR cultur* OR cultur* adapt*
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- Acceptability or acceptance
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- Experience
  - "experience"[All Fields] OR "experience s"[All Fields] OR "experiences"[All Fields]
- Infant OR child* OR baby OR babies
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- **(#1 AND #2) AND (#3 OR #4 OR #5) AND #6 AND (#7 OR #8) AND #14**
- **((("hispanic americans"[MeSH Terms] OR ("hispanic"[All Fields] AND "americans"[All Fields]) OR "hispanic americans"[All Fields] OR "spanish"[All Fields]) AND ("speak"[All Fields] OR "speaking"[All Fields] OR "speaks"[All Fields])) OR ("hispanic americans"[MeSH Terms] OR ("hispanic"[All Fields] AND "americans"[All Fields]) OR "hispanic americans"[All Fields] OR "hispanic"[All Fields] OR "hispanics"[All Fields]) OR "latin*"[All Fields] OR (("limit"[All Fields] OR "limitation"[All Fields] OR "limitations"[All Fields] OR "limited"[All Fields] OR "limiting"[All Fields] OR "limits"[All Fields]) AND "English"[All Fields] AND "proficien*"[All Fields]) OR "lep"[All Fields]) AND ("parent s"[All Fields] OR "parentally"[All Fields] OR "parentals"[All Fields] OR "parented"[All Fields] OR "parenting"[MeSH Terms] OR "parenting"[All Fields] OR "parents"[MeSH Terms] OR "parents"[All Fields] OR "parent"[All Fields] OR "parental"[All Fields] OR ("caregiver s"[All Fields] OR "caregivers"[MeSH Terms] 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In the table below, show how many results you got from your search from each database you searched.

Databases and Sites Searched	Number of results	Limits applied, revised number of results (if applicable)
Pubmed	**228** **220** **167**	
Web of Science	**96**	
CINAHL	**91**	Instead of parent OR caregiver, used the suggested search term of Parent OR caregiver OR family OR mother OR father

INCLUSION and EXCLUSION CRITERIA

Inclusion Criteria
• Parents/caregivers must speak Spanish as their native language • Patient population must be parents or caregivers to a child (<18 years old) • Education to parents/caregivers given including some form of written material for participants to read • Education materials must have been translated to Spanish • Study has some form of qualitative component (mixed methods acceptable) • Design methods accepted: survey, interview, focus group, questionnaire, case study, case series
Exclusion Criteria
• Not published in English or Spanish • Only quantitative research • Parents/caregivers were not native Spanish speakers • Participants are not parents/caregivers to a child • Education materials not translated (remained in English)

RESULTS OF SEARCH

Summary of articles retrieved that met inclusion and exclusion criteria

For each article being considered for inclusion in the CAT, score for methodological quality on an appropriate scale, categorize the level of evidence, indicate whether the relevance of the study PICO to your PICO is high/mod/low, and note the study design (e.g., RCT, systematic review, case study).

Author (Year)	Risk of bias (quality score)*	Level of Evidence**	Relevance	Study design
Stephen (2020)[1]	**AMSTAR: 8/10**	**3a**	**Mod**	**Integrative review**
Nitsos (2017)[2]	*****CASP: 8/9, highly valuable**	**3b**	**High**	**Feasibility Study/Mixed Methods**
Beasley (2017)[3]	**CASP: 8/9, highly valuable**	**3b**	**High**	**Qualitative Methodology (focus groups)**
Valencia (2016)[4]	**CASP: 8/9, highly valuable**	**3b**	**Low**	**Mixed Methods**

DuBay (2018)[5]	**CASP: 8/9, highly valuable**	**3b**	**Mod**	**Mixed Methods**
Davis (2019)[6]	**CASP: 7/9, valuable**	**3b**	**Low**	**Mixed Methods**
Hoeft (2015)[7]	**CASP: 8/9, highly valuable**	**3b**	**Low-Mod**	**Qualitative Methodology (focus groups)**
Magaña (2015)[8]	**PEDro: 9/11** **Jadad: 2/2**	**1b**	**Low**	**RCT (single-blinded) (focus groups held but not reported in this manuscript)**

*Indicate tool name and score

**Use Portney & Watkins Table 16.1 (2009); if downgraded, indicate reason why

*** Critical Appraisal Skills Programme Qualitative Research Checklist

BEST EVIDENCE

The following 2 studies were identified as the 'best' evidence and selected for critical appraisal. Rationale for selecting these studies were:

- **Beasley LO, Silovsky JF, Espeleta HC, et al. A qualitative study of cultural congruency of Legacy for Children™ for Spanish-speaking mothers. Children & Youth Services Review. 2017;79:299-308. doi:10.1016/j.childyouth.2017.06.022**
  - This 2017 qualitative study translated and culturally adapted The Legacy for Children™ (*Legacy*) program for Spanish-speaking Hispanic mothers and their infants. Authors conducted Spanish-speaking focus groups with bilingual parenting program providers and supervisors to "examine the social validity and cultural congruency of the culturally adapted"[3] program. Data from the focus groups were gathered and analysed to determine recommendations for implementing and adapting the program. Of uniqueness, this article included direct quotes from the focus groups which gives extensive insight into participant experiences and their thoughts and opinions about the program and its accompanying materials. The study provided important themes and suggestions to successfully implement culturally adapted programs outside of just the Legacy for Children™ program. Due to the thoroughness of this study and its applicability to future research, this article was chosen as the best available evidence for this specific clinical question. The study scores 8/9 on the CASP qualitative research checklist and is also specific to the population of Spanish-speaking parents and their infants.
- **Nitsos A, Estrada RD, Messias DKH. Tummy Time for Latinos With Limited English Proficiency: Evaluating the Feasibility of a Cultural and Linguistically Adapted Parent Education Intervention. Journal of Pediatric Nursing. 2017;36:31-36. doi:10.1016/j.pedn.2017.04.004**
  - This 2017 mixed methods feasibility study translated and culturally adapted Tummy Time parent education materials for Spanish-speaking Latinx parents. This study completed mixed methods research through the forms of pre-/post- test data and on-site observations. The pre-/post-tests were only evaluated for face validity but all data indicated acceptability of the culturally and linguistically tailored Tummy Time education. This study scores 8/9 on the CASP qualitative research checklist and focuses on parents/caregivers of infants with an intervention geared towards infants which is the specific population of interest. This study was chosen as the second-best evidence available for this clinical question due to its research determining validity of linguistically and culturally tailored parent education materials, but lacks more concrete qualitative data and methods are not easily implemented into further research.

SUMMARY OF BEST EVIDENCE

(1) Description and appraisal of (A qualitative study of cultural congruency of Legacy for Children™ for Spanish-speaking mothers) by (Beasley et al., 2017)

Aim/Objective of the Study/Systematic Review:
The aims of this study were to "examine the social validity (satisfaction, relevancy, importance, and acceptability of the intervention) and cultural congruency"[3] of a linguistically and culturally tailored *Legacy* curriculum for Spanish-speaking Hispanic mothers and their infants.

Study Design

[e.g., systematic review, cohort, randomised controlled trial, qualitative study, grounded theory. Includes information about study characteristics such as blinding and allocation concealment. When were outcomes measured, if relevant]

Note: For systematic review, use headings 'search strategy', 'selection criteria', 'methods' etc. For qualitative studies, identify data collection/analyses methods.

This qualitative study by Beasley et al. used "purposive techniques to sample Hispanic bilingual providers and supervisors of local home-based parenting programs."[3] Seven focus groups were conducted with two to three of the providers and supervisors (from here on out known as participants) and each focus group lasted 1.5-2 hours. In each group, participants were shown a brief presentation of the Spanish *Legacy* program and all handouts were available to participants in both English and Spanish. The lead researcher developed an interview guide so the focus groups were semi-structured. Topics discussed in the focus groups based off the interview guide were thoughts on the curriculum as a whole, feedback on the translation and cultural congruency of the adapted curriculum, specific questions about topics, activities, and reading level of handouts, strategies for recruitment of program participants, and potential barriers to engagement and retention of families in the program along with recommendations for overcoming those barriers. The focus groups were moderated by English-speaking qualitative researchers, but Spanish-speaking note takers were present to address conversation and questions in Spanish as needed.

Transcriptions of each focus group session were completed by qualitative research members. Qualitative data analysis was then done on these transcriptions using NVivo 10 software. Researchers "used a template approach to identify broad themes within all participant focus group data".[3] Perspectives that were analysed within the template were "(1) current *Legacy* curriculum, (2) cultural appropriateness of the program for the Hispanic community, (3) logistical supports needed for recruitment, and (4) initial and sustained engagement of Spanish-speaking mothers."[3]

Setting

[e.g., locations such as hospital, community; rural; metropolitan; country]

Location of the focus groups and data collection were not disclosed, but the study and evaluation methods were approved by The Oklahoma University Health Sciences Institutional Review Board.

Participants

[N, diagnosis, eligibility criteria, how recruited, type of sample (e.g., purposive, random), key demographics such as mean age, gender, duration of illness/disease, and if groups in an RCT were comparable at baseline on key demographic variables; number of dropouts if relevant, number available for follow-up]

Note: This is not a list of the inclusion and exclusion criteria. This is a description of the actual sample that participated in the study. You can find this descriptive information in the text and tables in the article.

Participants were Hispanic bilingual parenting program providers and/or supervisors of local home-based visitation programs (i.e. Healthy Families, Parents as Teachers, and Safecare).[3] 19 participants were recruited for participation in focus groups. Among the 19 participants, one was a director of prevention programs, four were supervisors, one family assessment worker, five were family support workers, three were home visitation workers, three were parent educators, one group leader, and one class teacher. All participants were recruited through purposive sampling and were "invited to participate through presentations at supervisory group meetings."[3] Participants were compensated for their time and participation with a $30 gift card and a small meal during the focus group sessions.

Intervention Investigated

[Provide details of methods, who provided treatment, when and where, how many hours of treatment provided]

Control

Given as this was a qualitative study with use of focus groups, there was no intervention and therefore no control versus experimental groups. Information and specifics on the focus groups will be presented under *control*.

Seven focus groups consisting of two to three participants per group were conducted under a semi-structured format. Focus groups were moderated by English-speaking qualitative researchers, and Spanish-speaking

note takers were present to address conversation and questions in Spanish as needed. Each focus group lasted approximately 1.5-2 hours.

As demonstrated in Fig. 1 from page 3 of the article, all focus groups followed the same structure and organization in terms of order of presentation of materials and time spent on each topic: 10-15 minutes of focus group overview, 10-15 minutes of *Legacy* Spanish program overview, 25 minutes on a brief review of *Legacy* Spanish materials, and 50-75 minutes spent on the specific focus group questions and interviews.

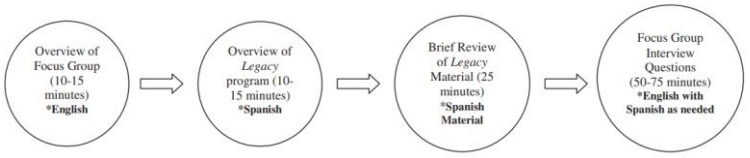

Fig. 1. Organization of Focus Group Data Collection.

Experimental

Given as this was a qualitative study with use of focus groups, there was no intervention and therefore no control versus experimental groups. Information and specifics on the focus group sessions will be presented under *control*.

Outcome Measures

[Give details of each measure, maximum possible score and range for each measure, administered by whom, where]

No outcome measures used in this qualitative study with use of focus groups.

Main Findings

[Provide summary of mean scores/mean differences/treatment effect, 95% confidence intervals and p-values etc., where provided; you may calculate your own values if necessary/applicable. You may summarize results in a table but you must explain the results with some narrative.]

Overall, focus group participants supported the translation and cultural adaptation of the *Legacy* program for Spanish-speaking mothers. Many strengths of the program were noted by participants and were classified into the following categories: "(a) child developmental focus, (b) establishment of a routine within the group, (c) discussion-based group setting, (d) effective handouts, (e) appropriate and straightforward wording, (f) development of a support system for families, (g) preparation for mothers to meet the changing needs of their child(ren) in advance, (h) sessions with mothers only (allows for connections between group members) and sessions with children (allows for mother and child bonding and activity modelling), (i) consistent space for sessions, (j) an incremental program that creates ease in learning and doing, and (k) important, relevant topics."[3] Participants agreed that they would recommend this program to Hispanic families for multiple added benefits to the families as well as the ease of understanding and organization of the program.

Focus group participants additionally provided feedback on how to improve the translated and adapted materials for the Spanish *Legacy* program. Areas of revision included: "(a) lowering reading level in specific portions throughout material, (b) adding images and pictures representative of Hispanics and Hispanic culture, (c) adding traditional songs, and (d) providing audio recordings of songs."[3]

In addition to revisions to the material, participants also touched on the importance of addressing barriers including child-care, transportation, center setting, group leader characteristics, and suggestions for recruitment and engagement of Hispanic mothers.

Participants emphasized the importance of having on-site child care for families and the need for transportation assistance such as carpooling, a transportation service, and/or bus passes in order to help overcome barriers that may prevent families from attending and not have sustained engagement in the program.

Participants also suggested that the location of the center should be familiar and easy to access for families. By obtaining a center that is familiar to families, participants may feel more comfortable in the location and that will encourage attendance and participation.

Suggestions were made about the group leader' personality as well as the individuals doing direct recruiting. Participants reported that that "group leaders need to be direct, caring, comfortable, culturally competent, ideally Hispanic, engaging, experiences, honest, humble, nice, not too serious, patient, Spanish-speaking, spontaneous, and nonjudgementa".[3] Participants explained that with characteristics such as these, families and mothers will feel they can trust the leader, not be judged, and will speak up and be more engaged. Similarly, participants suggested that recruiters should also ideally be Spanish-speaking, Hispanic, and need

to be well educated on the program. This will allow individuals being recruited to feel a more personal connection with the recruiter and will help build strong rapport and enthusiasm for the program.

Numerous suggestions were made about recruitment and achieving sustained engagement of Hispanic mothers to be enrolled in the program. Participants mentioned that aside from having a well informed and Spanish-speaking recruiter, they should attempt to recruit in familiar areas that are frequently visited by the community. Suggestions for best placed to recruit included home visitation programs such as Nurse Family Partnership, health clinics, doctor offices, and hospitals. Other recruitment places that were suggested, though less frequently suggested, were churches, prenatal classes, Women Infants and Children clinics, probation offices, schools, and child care centers. Participants recommended that raising the overall awareness of the *Legacy* program would be useful and could be done by means of fliers, newspapers, radio, television, and workshops within a school setting. Specific to the Hispanic culture, it was suggested that an advertisement of the program during a telenovela (Spanish-speaking television soap opera) would be an excellent method to gain attention to the program. Participants again touched on the importance of readability and simplicity of the recruitment materials.

Authors concluded with three primary recommendations from the current study for future implementers and developers of culturally adapted programs (pg.7, section 4.2):

1. Providing all written material at an appropriate reading level can ensure that lal families are able to engage in parenting material. Additionally, using illustrations and songs that are culturally specific can help ensure that families relate to the parenting material.
2. Focusing recruitment strategies on areas where resources for Hispanic communities are prevalent, where Hispanic families frequent, and where they feel safe and comfortable can facilitate enrollment.
3. Incorporating efforts to reduce barriers to attendance such as the provision of child care and transportation has been associated with increased parent engagement. If these are not able to be addressed through tangible arrangements, periodic focused conversations with participants can help ensure that outside supports are in place to assist families.

Original Authors' Conclusions

[Paraphrase as required. If providing a direct quote, add page number]

The translation and cultural adaptation of the *Legacy* program into Spanish for Spanish-speaking Hispanic mothers and families was supported by focus group participants. This study is applicable to further research and supports the growing need for "linguistically accessible and culturally congruent parenting programs"(pg.8) in order to "promot[e] healthy physical and socio-emotional development in young children"(pg.8) and to address health disparities that are often a consequence of poverty and minority status.

Critical Appraisal

Validity

[Summarize the internal and external validity of the study. Highlight key strengths and weaknesses. Comment on the overall evidence quality provided by this study.]

This qualitative study scores a 3b on the Portney & Watkins Scale and an 8/9 on the Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist indicating its low risk of bias and overall high level of quality research. Of particular strength is that authors recruited Spanish-speaking Hispanic program providers and supervisors who are familiar with parenting programs and the population in question for feedback on the translated and culturally adapted *Legacy* program materials. The focus groups were also consistent in topics covered due to the semi-structured guide that ensured main topics and themes were covered in each interview session. The translation and adaption of the *Legacy* program and its accompanying materials were spearheaded by the CDC and a team of *Legacy* curriculum experts, CDC translators, and an independent group of translators were all involved in the creation of the Spanish *Legacy* program which ensure the high quality of translation and cultural adaption. Additionally, trained qualitative researchers completed the analysis and focus group sessions which supports the high quality of research completed. The data analyses was also conducted using NVivo 10 software which helped account for human measurement errors. An additional strength of this study is that the conclusions and recommendations can be implemented into future research and authors ensured to generalize as much of the suggestions of the materials as possible.

Although a very strong study, weaknesses in the study are still seen. The way the focus groups were divided, each participant did not see all of the Legacy printed handouts and materials. In order to reduce reviewer burden, researchers divided the materials so that "each portion of the program was reviewed by at least three participants"[3], but no participant saw all the materials together. This can make for inconsistencies across materials and all materials should be viewed by each participant so they may see the connection of materials throughout the entire program. Additionally, samples or excerpts of the translated and adapted

materials were not included in the article. It would have been helpful to read and review the materials as a reader to see examples of what was discussed in the article as well as view well-made materials as an example for future research and program design. Another weakness is this study assumes that a Spanish translation and cultural adaptation of the *Legacy* program will be applicable to all Hispanic populations and communities which is inaccurate. Authors briefly discuss this weakness in the limitations section on page 7 of the article and state that "Spanish-speaking Hispanics are a heterogeneous group [and] additional adaptations and evaluation may be necessary for determining the appropriateness and cultural congruency of these materials for other Spanish-speaking Hispanic of Latin[x] communities".[3]

Interpretation of Results

[This is YOUR interpretation of the results taking into consideration the strengths and limitations as you discussed above. Please comment on clinical significance of effect size / study findings. Describe in your own words what the results mean.]

This qualitative study by Beasley et al. has demonstrated further support for the need of translated and culturally adapted parenting programs for the Hispanic Spanish-speaking community. Specific to this study, authors concluded that that there was acceptance of the Spanish *Legacy* program amongst Hispanic bilingual parenting program providers and supervisors. This study provides exceptional focus group data about cultural considerations and barriers that need to be considered when creating an adapted program. Major themes that need to be considered for materials and programs for Spanish-speaking Hispanic parents are readability (i.e. simple sentences, lower reading level), the inclusion of pictures and graphics representing Hispanic children and families, the adaptation of songs and activities to correlate with the Hispanic culture, providing resources for childcare needs and transportation if parents are expected to be somewhere for the program, and the importance of relating to parents via recruiters and group leaders (Spanish-speaking, ideally Hispanic, non-judgemental, caring, humble, etc). Continuing to work towards adapting parent programs for the Spanish-speaking Hispanic population is a greatly needed to help promote healthy development of young children and build strong parent-child relationships which will affect the long term health and wellbeing of Spanish-speaking Hispanic families.

Applicability of Study Results

[Describe the relevance and applicability of the study to your clinical question and scenario. Consider the practicality and feasibility of the intervention in your discussion of the evidence applicability.]

This study is highly applicable to this clinical question and scenario. Not only does it translate and culturally adapt a previously existing program and its materials, the program is specific to parents and the target population was Spanish-speaking Hispanic mothers. Although fathers and other caregivers were not well incorporated (feedback was given in regards to this shortcoming) into the program, the program was heavily tailored towards mothers and their care and relationship towards their child(ren). Despite some of the study weaknesses, this study is overall very strong and has provided invaluable information and feedback for future research in this realm. Considerations that need to be made when adapting parenting programs and parent education materials for Spanish-speaking Hispanic parents and families were useful not just for the *Legacy* program but applicable to future parenting programs.

(2) Description and appraisal of (Tummy Time for Latinos With Limited English Proficiency: Evaluating the Feasibility of a Cultural and Linguistically Adapted Parent Education Intervention) by (Nitsos et al, 2017)

Aim/Objective of the Study/Systematic Review:

This feasibility study conducted by Nitsos et al. aimed to adapt Tummy Time parent educational materials for Spanish-Speaking Latinx parents, evaluate participant knowledge of Tummy Time before and after presentation of adapted materials, and assess the efficacy and acceptability of the Spanish translated and culturally adapted intervention.

Study Design

[e.g., systematic review, cohort, randomised controlled trial, qualitative study, grounded theory. Includes information about study characteristics such as blinding and allocation concealment. When were outcomes measured, if relevant]

Note: For systematic review, use headings 'search strategy', 'selection criteria', 'methods' etc. For qualitative studies, identify data collection/analyses methods.

This study by Nitsos et al. is a mixed methods feasibility study. After participants were recruited, researchers conducted 14 sessions of the Tummy Time educational intervention using the linguistically and culturally adapted materials. Two trained and bilingual and bicultural research assistants administered the Tummy Time educational interventions. Participants completed a pre- and post-intervention test to gauge knowledge and understanding of Tummy Time. These test results were evaluated for face validity and were analysed using IBM SPSS (v.23). In addition to the pre-/post-tests, research assistants made on-site observations on participants return demonstrations of techniques and activities taught in the Tummy Time intervention (using a baby doll) as well as on informal discussions with and between participants. "The research team reviewed observational notes to assess implementation fidelity and acceptability."[2]

Setting

[e.g., locations such as hospital, community; rural; metropolitan; country]

Exact locations of where the intervention was presented to participants and where data collection occurred were not disclosed, but Institutional Review Board permission was obtained from the Office of Research Compliance at the University of South Carolina. Additionally, recruitment occurred from a Catholic church in Lancaster, SC; a Methodist church in Columbia, SC; and a clinic offering obstetric services in Columbia, SC. Additionally, the *Limitations and Lessons Learned* section on page 5 lead the reader to understand that some, if not all, of the recruitment and intervention sessions were done in local clinic waiting rooms.

Participants

[N, diagnosis, eligibility criteria, how recruited, type of sample (e.g., purposive, random), key demographics such as mean age, gender, duration of illness/disease, and if groups in an RCT were comparable at baseline on key demographic variables; number of dropouts if relevant, number available for follow-up]

Note: This is not a list of the inclusion and exclusion criteria. This is a description of the actual sample that participated in the study. You can find this descriptive information in the text and tables in the article.

21 total participants were recruited for this study. Among the 21 was one father and 20 women- three of whom were pregnant at the time of the study. Inclusion criteria included "(1) parents, expectant parents, or caregivers of infants who self-identified as Latino or Hispanic; (2) self-identified Spanish as first language; (3) self-identified limited English proficiency; and (4) residing in South Carolina."[2] The sample was determined by availability and willingness of participants. Participants were recruited from a Catholic church in Lancaster, SC; a Methodist church in Columbia, SC; a clinic offering obstetric services in Columbia, SC; and through snowball referrals. Participants received a five dollar Walmart gift card after completing the post-intervention test.

Intervention Investigated

[Provide details of methods, who provided treatment, when and where, how many hours of treatment provided]

Control

Given as this was a feasibility study, there were no control versus experimental groups- only one group with that underwent the Tummy Time intervention. Information and specifics on the intervention will be presented under *control*.

14 sessions of the Tummy Time educational intervention were led by two trained bilingual and bicultural research assistants. Components of the educational intervention included (pg.4-5):

- "Explain the concept of Tummy Time, using simple, non-medical terminology.
- Reinforce that parents should first discuss Tummy Time with the infant's primary care provider, as it is not approved for all babies.
- Instruct parents that Tummy Time Is performed to promote healthy and strong neck and back growth; promotion of learning to sit, crawl, and stand; and keeping the head round without flat spots.
- Stress the importance of assuring the child was awake and supervised by a responsible adult at all times during Tummy Time, which is reiterated by the saying, "Back to sleep; Tummy to play", or "*Boca arriba para dormir; Boca abajo para jugar*". This also address the fear that many parents have involving putting their baby on his/her stomach.
- Review the 1, 2, 3s: Tummy Time on day one (1) at home from the hospital; two (2) to three times a day; for three (3) to five minutes at a time.

- List the steps as they are shown in the brochure while demonstrating with a life-size baby doll, thin receiving blanket, and a rattle.
- Include as many of the answers to the frequently asked questions as possible.
- Encourage the participants to perform Tummy Time with the props for reassurance and consolidation of the teaching.
- Encourage participants to ask any questions or address any concerns they may have had, and make note of any comments or suggestions.
- Administer post-intervention test.
- Ensure each participant has a pledge care and brochure before they leave, so that they will have a reminder of the Tummy Time steps, and to encourage discussion with their child's healthcare provider."[2]

No further information on the intervention was provided.

Experimental

Given as this was a feasibility study, there were no control versus experimental groups- only one group with that underwent the Tummy Time intervention. Information and specifics on the intervention will be presented under *control*.

Outcome Measures

[Give details of each measure, maximum possible score and range for each measure, administered by whom, where]

On-site observations of participants' return demonstrations or correct positioning using the props and informal discussions with and between participants were made by research assistants.

The same test was administered to participants pre- and post-intervention in order to gauge their knowledge and understanding of Tummy Time. Below are the questions from the test that are presented in Table 1 on page 5 of the article.

The pre-/post-test data were analysed using a calculated Wilcoxon signed rank test: "a non-parametric test suitable for small sample sizes and repeated observations from the same participant."[2] These calculations helped determine whether participants improved their Tummy Time knowledge based on their test scores.

Table 1
Pre- and post-intervention test results.

Pre- and post-test questions
What is Tummy Time?
How often should my baby do Tummy Time?
Why should my baby do Tummy Time?
What do I do if my baby falls asleep during Tummy Time?
I should start doing Tummy Time with my infant as soon as we get home from the hospital (T or F).
I should do Tummy Time with my baby right after feedings (T or F).
I should speak to my child's primary care provider before performing Tummy Time (T or F).

Main Findings

[Provide summary of mean scores/mean differences/treatment effect, 95% confidence intervals and p-values etc., where provided; you may calculate your own values if necessary/applicable. Use a table to summarize results if possible.]

On page 5 of the article, authors summarize that results demonstrated z=-2.03 and p-0.04. These values were interpreted to mean that there was an increase in knowledge about Tummy Time after the intervention was implemented. In the pre-intervention test, the topics/questions that reflected the largest knowledge deficits were when to start Tummy Time and how often to implement Tummy Time interventions. "These questions also had the most significant increases in knowledge"[2] as reflected in the post-test data. This data is reflected in Table 1 from page 5 of the article (pictured below).

In regards to the on-site observations, participants demonstrated correct return of skills during the hands-on part of the intervention. Additionally, "informal conversations revealed that the participants said they were thankful for this information, as it could improve the lives of their children, and expressed a readiness to perform this intervention at home."[2]

Table 1
Pre- and post-intervention test results.

Pre- and post-test questions	Pre-test correct responses n (%)	Post-test correct responses n (%)
What is Tummy Time?	17 (81%)	15 (71%)
How often should my baby do Tummy Time?	4 (19%)	21 (100%)
Why should my baby do Tummy Time?	15 (71%)	21 (100%)
What do I do if my baby falls asleep during Tummy Time?	14 (78%)	18 (86%)
I should start doing Tummy Time with my infant as soon as we get home from the hospital (T or F).	9 (43%)	19 (90%)
I should do Tummy Time with my baby right after feedings (T or F).	17 (81%)	18 (86%)
I should speak to my child's primary care provider before performing Tummy Time (T or F).	15 (71%)	19 (90%)

Original Authors' Conclusions

[Paraphrase as required. If providing a direct quote, add page number]

With the pre-/post-test results and on-site observations indicating acceptability, authors concluded that "this feasibility study demonstrated that a culturally and linguistically tailored Tummy Time intervention, accompanied by the translated brochure and pledge care, enhanced parental and caregiver awareness of the importance and ease of implementing Tummy Time"[2] (pg. 6). Additionally, authors concluded that the success of this feasibility study is reflective of the need of culturally and linguistically tailored parenting programs for Latino parents with LEP and how these tailored programs can help address unique barriers that this population faces in regards to implementing developmental strategies and practices with their newborns.

Critical Appraisal

Validity

[Summarize the internal and external validity of the study. Highlight key strengths and weaknesses. Comment on the overall evidence quality provided by this study.]

Based on the CASP qualitative research checklist, this study by Nitsos et al. scored an 8/9 and demonstrated low-moderate bias. A strength of the study is that education materials were linguistically and culturally adapted for participants and copies of the materials were included in the article for readers to view. Aside from gauging acceptability of the adapted materials, researchers included intervention tests to provide numerical data that the translated and culturally tailored Tummy Time materials were effective. This is a major strength of the study as it provided quantitative data in addition to qualitative observations that this intervention was useful and effective.

A weakness of the study is that the test data was only evaluated for face validity, and the tests only determined immediate knowledge uptake- not long-term effectiveness. The study also only included 21 participants which is a small sample so results of this specific intervention are not generalizable. The qualitative data (on-site observations) also seemed unstructured and weak. I believe this study would have been stronger if they would have performed a more structured interview with participants, such as a focus group, so that specific questions about the program and materials could have been asked and participants would have had more of an opportunity to provide feedback. Although the pre-/post-tests determine the effectiveness of the adapted materials, nowhere in the test are there questions specific to the materials (i.e. acceptability of the materials, usefulness of the materials, readability, etc.)

Interpretation of Results

[This is YOUR interpretation of the results taking into consideration the strengths and limitations as you discussed above. Please comment on clinical significance of effect size / study findings. Describe in your own words what the results mean.]

The linguistic and cultural adaptation of Tummy Time parenting materials were effective in teaching Latinx parents with LEP about the importance of Tummy Time as well as how to safely and appropriately implement Tummy Time with their child(ren). Quantitative test results as well as qualitative observations demonstrated the acceptability of the materials and interventions. The study concluded that these methods and interventions were a feasible way to teach Latinx LEP parents about Tummy Time and give support that

health promotion activities and parent education need to be linguistically and culturally tailored in order to have the best and most appropriate outcomes for the target population.

Applicability of Study Results

[Describe the relevance and applicability of the study to your clinical question and scenario. Consider the practicality and feasibility of the intervention in your discussion of the evidence applicability.]

This study was highly relevant to the clinical question and scenario presented for this review paper. The target population of the study was exactly the population that I wanted to research, and materials were linguistically and culturally adapted for these Latinx LEP parents. The questions of whether they were acceptable to the participants was answered through both qualitative and quantitative data which greatly supported the clinical question. The methods in adapting and presenting the materials were a feasible way to teach parents about this particular parenting intervention for the development of their baby and can be easily implemented into further similar research.

SYNTHESIS AND CLINICAL IMPLICATIONS

[Synthesize the results, quality/validity, and applicability of the two studies reviewed for the CAT. Future implications for research should be addressed briefly. Limit: 1 page.]

Both studies reviewed for this CAT linguistically and culturally adapted parenting programs/parent education materials for Hispanic and/or Latinx parents with LEP. Though the Beasley et al. study interviewed parenting program supervisors and not the parents themselves, these supervisors are incredibly familiar with the target population and have experience with what methods are effective in engaging, recruiting, and teaching those parents. Both studies addressed the clinical question and scenario presented with qualitative methods, and Nitsos et al. included quantitative data for their feasibility study. Beasley et al. went more in depth about specific suggestions and recommendations for adapting parent materials for this particular population, but Nitsos et al. included visuals and copies of their materials so readers could physically see the successful materials. On the flip side, even though Beasley et al. did not include copies of their materials, their focus group methods appeared a more in-depth and effective manner to interview participants about the materials to gain meaningful opinions, feedback, and overall acceptability of the materials.

Due to Nitsos et al. being a feasibility study, it appeared to have a higher risk of bias than Beasley et al.'s study. Beasley et al. integrated more methods to help minimize bias within their study (semi-structured focus groups and an interview guide) which overall contributes to its better quality than the Nitsos et al. study.

Overall, based on these two high quality studies, I conclude that there is a great need for linguistically and culturally adapted parenting materials for Hispanic, Latinx, Spanish-speaking parents. Tailored programs and materials clearly improve outcomes for parents and children and are a rather easy way to help address health and care inequalities and disparities faced by this population. Parent education materials need to be culturally adapted, not just linguistically adapted, because of the inherent cultural differences and barriers faced by this population. Barriers commonly faced by this population need to be carefully considered when adapting and tailoring future parenting programs if there is to be any success with the program. Cultures differ widely not just between ethnicities and race, but even within the Latinx and Hispanic communities. Qualitative methods and interviews should be conducted with a variety of Latinx and Hispanic parents, or providers incredibly familiar with this population, in order to ensure materials are appropriate, acceptable, and successful before being implemented. Further research is needed to develop more concrete methods and measures to determine acceptance of culturally and linguistically adapted materials, but overall I believe that culturally and linguistically adapted materials for Hispanic, Latinx, and Spanish-speaking parents are scarce and any efforts towards closing this gap in bicultural and bilingual healthcare is welcome and necessary.

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