Self-management of Chronic Low Back Pain in the Hispanic Population: A Feasibility Study

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Self-management of Chronic Low Back Pain in the Hispanic Population:

A Feasibility Study
Low back pain is the most common cause of disability worldwide, with its prevalence increasing as people get older (Global Burden of Disease, 2014). Furthermore, studies have shown that 80% of Americans will experience at least one episode of acute low back pain at some point in their lives (Chou, 2019), and 20% of those cases eventually develop chronic lower back pain if symptoms are left untreated (National Institutes of Health, 2018).

According to the National Institute of Health, chronic low back pain is characterized as pain that lasts for 12 weeks or longer. The characteristics of the pain are unique to each individual and can range from dull to stabbing pain. Causes of chronic low back pain may include reasons such as a traumatic injury, an underlying acute pain that does not resolve, and degenerative diseases, such as osteoarthritis (National Institute of Health, 2020).

Chronic low back pain is the leading cause of activity limitation (Vassilaki & Hurwitz, 2014), because those who suffer from chronic low back pain may fear activity and movement, due to the possibility of pain exacerbation. This is known as fear of movement (FOM) and is usually learned through direct pain experiences. Individuals may avoid hobbies that involve physical activity, or may even quit their job, due to the physical requirements (Richeimer, 2019). Fear of movement can be a detrimental obstacle in recovery, as inactivity can further aggravate the characteristics of the pain. Avoidance of activity can lead to decreased functional ability, increased anxiety and stress related to chronic pain, and eventually, depression (Larsson, et al., 2016).

Depression and chronic pain are commonly associated with one another, due to pain severity and pain interference in daily life activities. Decreased function, due to fear of movement, can exacerbate depression symptoms in patients with chronic low back pain (Holmes,
et al., 2013). Each individual’s experience with depression is associated with their own levels of pain and degree of disability. Toshinaga and colleagues (2016) investigated the impact of depression in the quality of life of individuals who suffered from chronic low back pain. Furthermore, the researchers also set out to examine the associations between depression and work impairment in individuals who suffer from chronic low back pain. Data was gathered through self-reported questionnaires from 30,000 participants in Japan, and the researchers found that individuals with chronic low back pain that were considered depressed reported significantly higher levels of pain compared to those without depression. Moreover, depression was related to a poorer quality of life, and compared to the patients without depression, led to twice as many healthcare provider visits in a six month span. Lastly, the results showed that work impairment was twice as high in chronic low back patients who suffered from depression, while their labor productivity levels were lower than those who did not suffer from depression. Currie & Wang (2004) sought to determine the relationship between depression and chronic back pain. While the researchers found that pain severity was the strongest predictor of disability, the combination of chronic back pain and depression also led to greater disability in individuals, compared to those who suffered from either condition independently. The results from both of these studies suggest that while there might not be a direct relationship between pain severity and depression, there is a strong association between pain interference and depression in individuals with chronic low back pain. While chronic low back pain is considered a physical disability, many fail to realize the impact it has on an individual’s mental health.

Chronic low back pain can affect multiple other areas of an individual’s life, resulting in a decreased quality of life. Individuals who suffer from low back pain often report having sleep disturbances and insomnia due to the intensity of their pain. Alsaadi, et al., (2012) investigated
the prevalence of sleep disturbance in individuals with low back pain and examined the relationship specifically between pain intensity and sleep disturbances. Based on the data from 1,941 participants, the researchers found that 58.9% of the participants reported that their sleep was disturbed by their low back pain. In addition, pain intensity and duration were associated with sleep disturbances in the individuals. Therefore, as an individual’s pain intensity and duration increased, the chances of them reporting their sleep disturbances were higher.

McCracken & Iverson (2002) investigated the role of sleep disturbance in daily functioning of people with chronic pain. The researchers found that sleep disturbances predicted pain intensity, fatigue, poor functioning and inactivity in individuals with chronic pain. The results support a bidirectional relationship between chronic pain and sleep disturbances. While pain can disturb sleep, disturbed sleep can also further exacerbate pain. This pain-sleep interaction can lead to poor physiological functioning, fatigue, depression and inactivity (Tang, N., 2008). These factors all contribute to the decreased quality of life that most individuals with chronic back pain experience.

In addition, the cost of treatment for Americans with low back pain is high, which can place a heavy burden on these individuals. In 2016, lower back and neck pain expenses accounted for $134.5 billion in spending, of which $12 billion was paid out-of-pocket by patients themselves (Dieleman, et al., 2020). However, the cost does not simply refer to treatment and hospital cost, but also considers lost wages and missed work days in individuals who suffer from chronic low back pain. Work-related costs may be due to missing work or loss of productivity on the job, due to being distracted by the pain.
Chronic low back pain is predominant in all racial and ethnic groups, yet most of the literature focuses on non-Hispanic Whites’ pain experiences. Empirical evidence suggests that minorities are disproportionately more affected, due to socioeconomic factors and health disparities (Campbell & Edwards, 2012). However, there are few studies that focus on other ethnic populations and their interpretations to pain. As of 2020, Hispanics make up 18.5% of the country’s population (U.S Census Bureau, 2020). However, while there is a growing percentage of the U.S Hispanic population, little is known regarding their chronic low back pain experience. By focusing on a specific underrepresented group, we can further examine how cultural and social factors influence chronic low back pain.

While the incidence of chronic pain is greater in non-Hispanic Whites, Hispanics reported experiencing more severe pain. In 2019, the reported incidence of chronic pain in non-Hispanic Whites was 23.6%, while in Hispanic adults it was 13% (Zelaya, et al., 2020). Carey, et al. (2010) found that of those who suffered from neck and back pain, Hispanics reported higher pain intensity compared to non-Hispanic Whites. On a 0-10 scale, the mean pain intensity of the past three months for Hispanics was 7.9, compared to 6.3 in Whites. However, while pain intensity was higher, Hispanics reported greater physical functioning. Using the SF-12 Instrument, the physical functioning mean score was higher in Hispanics (36.2) compared to non-Hispanic Whites (32.5). Currently, there are no concrete explanations for the reasons for possible difference in pain intensity among Hispanics and non-Hispanic Whites. Further investigations need to be done in order to understand how pain intensity varies among Hispanic and Non-Hispanic Whites.

In addition to experiencing more severe pain, Hispanics report greater pain sensitivity than non-Hispanic Whites. Hastie, et al. (2012) examined differences in cold pain stimuli and
found that Hispanics had lower pain threshold scores than non-Hispanic Whites, which reflects increased pain sensitivity. Another experimental investigation led by Wang, et al. (2010) sought to determine if there were any ethnic differences in response to pain. Their results also suggested that the Hispanic participants had a lower pain tolerance and higher pain sensitivity compared to the non-Hispanic White participants. While both studies agreed that there were differences in pain threshold between Hispanics and non-White Hispanics, reasons for the differences in pain sensitivity have not yet been investigated.

Cultural factors may influence one’s pain experience, as ethnic differences can contribute to self-management strategies and perception of intensity (Shavers, et al., 2010). Torres and colleagues (2017) examined the influences behind pain self-management strategies of Spanish-speaking Hispanics. The researchers found that the participants preferred natural alternatives and noninvasive treatments to manage their pain, such as yoga, over-the-counter pain medication, homemade remedies and going to the chiropractor. One of the more popular methods involved distraction techniques, such as engaging in social activities, in order to cope with the pain. Some participants stated that they tried to distract themselves from the pain when they did not know what other interventions to do, as they thought the pain itself would eventually go away. Regarding medical treatment, none of the participants had ever been offered physical therapy, surgery or psychosocial treatments for pain management. Moreover, the participants expressed interest in learning more about different types of pain management treatments available. Many agreed that they would be interested in paying to join a psychoeducational group for chronic pain management, as it could possibly be an alternative to taking medications. For the most part, participants preferred not to use medication, but agreed that they would like to have access to medication as a last resort for their pain. In addition, participants admitted to
going to a provider only when their self-management strategies failed to manage their chronic pain, due to unsatisfactory past experiences with providers. Some participants shared that they felt like providers did not offer them medications because they assumed that they could not afford it. Therefore, participants felt that seeking medical attention was not the most optimal way to manage their pain, as they feel they are not getting treated well by providers. As a result many participants admitted to visiting providers from their home countries, or borrowing medications from friends and family to manage their pain. Together, the findings suggest that some Hispanic patients are dissatisfied with the U.S healthcare system regarding their pain management.

There are many factors that may serve as a barrier to treatment in the Hispanic population. These factors may include lack of health insurance, reduced access to care, underutilization of preventative services and language barriers (Becerra, et al., 2017; Edward, et al., 2018; Luque, et al., 2018; Zhao, et al., 2019). In 2019, 16.7% of Hispanics in the United States were not covered by any health insurance, compared to 5.2% of non-Hispanic Whites (U.S Census Bureau, 2019). Nguyen and colleagues (2005) evaluated the influence of ethnicity on access to care for chronic pain. Data from the surveys showed that Hispanic ethnicity was a predictor for limited care access, as many socioeconomic factors influenced their access to pain care. For example, compared to non-Hispanic Whites and African Americans, Hispanics were significantly less likely to seek treatment from a provider for their pain. Furthermore, low access to care was associated with being Hispanic and speaking Spanish, and many Hispanic participants agreed that financial factors influenced their pain treatment.

Self-management interventions can help individuals control their pain and enhance their quality of life. Boyers and colleagues defined self-management of pain as ‘a single approach or combination of approaches that can be initially taught by any health professional or learned by
an individual to enable them to minimize the impact their chronic pain can have on everyday life’ (2013). Moreover, self-management interventions allow individuals to play an active role in managing their chronic condition through education (Foster, et al., 2007). Several factors play a role in the effectiveness of self-management of chronic pain and may include: utilization of available resources, social support, knowledge of one’s chronic condition and health literacy (Anekwe & Rahkovsky, 2018; Devan, et al., 2018; Hutting, 2019).

Health literacy refers to the ability to obtain basic health services and make appropriate medical decisions based on that information. In order to achieve health literacy, one must have certain skills, such as reading, writing, communicating and analyzing in order to correctly understand and interpret information (Koppen, et al., 2020). Low health literacy is associated with poor health outcomes due to poor communication between patient and provider and limited access to medical information (Jayasinghe, et al., 2016). Most Spanish-speaking Hispanics are at risk of low health literacy due to the U.S healthcare system being predominantly English-speaking (Jacobson, et al., 2016). Language plays an important role in health literacy, as it affects communication between patient and provider, as well as how we interpret health information. (Soto Mas, et al., 2015). Most chronic pain interventions are not as readily accessible to Spanish-speakers, as these services are usually limited to the English language (Soto Mas & Jacobson, 2018).

Increasing educational opportunities specific to the Hispanic population may be an effective strategy to improve health literacy levels. Furthermore, in order to ensure the effectiveness of pain education as an intervention, it is necessary for the study to be feasible, easily accessible and culturally appropriate to the Hispanic population. Several studies suggest that non-pharmacological pain interventions have been successful in improving quality of life
and physical functioning, while decreasing pain intensity and depression (Hilton et al., 2017; Khoo et al., 2019; Knoerl, et al., 2016). However, most of these interventions are created for English-speaking populations. While 13% of the U.S. Hispanic population suffers from chronic pain (Zelaya, et al., 2020), Spanish only speaking Hispanics often cannot access chronic pain information as readily as their English-speaking counterparts. Therefore, the purpose of this study was to examine the feasibility and acceptability of the Spanish version learning modules for SPINE (Sensitivity to Pain IN Me), a P20 funded chronic low back pain self-management pilot intervention. The study was directly aligned with the National Pain Strategy’s goal to promote an interdisciplinary patient-centered approach to chronic pain.

Methods

Design

This feasibility study used a series of four different virtual web-based focus groups to gain feedback on the Spanish version of the SPINE (S-SPINE) pain self-management learning modules. Revisions to the S-SPINE learning modules were made based on previous focus group feedback. The revised modules were then reviewed by the next focus group where additional feedback was provided for the next round of revisions.

Sample

The sample consisted of four different focus groups, with a total of 12 participants. Focus group size ranged from 3 to 5 participants. The sample consisted of 4 men and 8 women, with ages ranging from 22-51 years old. Participants were Spanish speaking adults with chronic low
back pain of at least three months duration and of at least moderate pain intensity (4 or greater on a 0 to 10 scale). Participants also needed to have internet access to participate in the study.

Pain intensity of 4 as the cutoff was used because a pain level of 4-7 is considered moderate intensity (Dobscha, et al., 2015), and a study done by Mutubuki and colleagues found that a higher pain intensity resulted in greater non-linear associations with pain interference on function (2019). If potential participants were suffering from other chronic conditions that caused low back pain, they were ineligible for the study.

Measures

*Brief Pain Inventory Spanish Version (BPI-S)*

The BPI-S was used in our Qualtrics screening. The BPI-S measures pain intensity, interference with function, and location. Cronbach alpha reliability is 0.931 for severity and interference scales, showing good reliability for the Spanish version (de Andres Ares, et al., 2015).

*Demographic Measure*

Demographic measures assessed in the eligibility survey included age, sex, sexual orientation, ethnicity and primary language spoken. This information was obtained in order to ensure a diverse range of participants were involved in the study.

S-SPINE Intervention

The S-SPINE (Sensitivity to Pain IN mE) self-management modules are a P20 funded chronic low back pain self-management pilot intervention. The low back pain curriculum teaches participants about the different aspects of chronic back pain and the different systems involved in the process. For example, the modules touch upon body mechanics, the neurological system and
self-management strategies such as physical activity and stress regulation. Essentially, S-SPINE are different modules placed together to teach each patient how to self-manage their chronic pain. Moreover, the modules provide education on safe pain self-management for low back pain and ways to prevent exacerbations or acute flares of chronic low back pain. Table 1 describes content taught within each module. We translated the modules to a Spanish version (S-SPINE) in order to test the feasibility and acceptability of these modules in the Hispanic population. The modules were translated from English to Spanish by the first author who is a native Spanish speaker.

Procedure

The study was approved by the university institutional review board. Participants were recruited through online advertisements on Facebook, Craigslist and the university daily electronic newsletter. Interested individuals completed a Qualtrics screening to assess if they were eligible to participate in the study.

Once deemed eligible by the Qualtrics survey, participants accessed an information sheet and then decided on whether or not they would want to participate in the study. The information sheet explained the purpose of the study, measurements made in the study and what the participant was responsible for. If at any time during the study the participant decided they no longer wanted to be a part of the focus group, they could discontinue their participation in the study. If participants wanted to continue with the study after reading the information sheet, they were sent a consent form to sign prior to their involvement in the study. The participants then signed the consent and emailed back the consent.

Participants accessed the learning modules through Google-Suite platform and had two to three weeks to finish all of the modules on their own time. Following completion of the modules,
a focus group virtual meeting conducted by the first author was held to discuss feedback on the modules. The focus group was guided by specific questions that focused on their pain experiences, self-management strategies, and opinions concerning the modules. Regarding the modules, questions included which aspects of the modules they enjoyed, which aspects needed improvement, and their overall thoughts on the content. Focus groups were conducted in Spanish, audio-recorded, and transcribed in English for content analysis by two independent raters.

The four focus groups were divided into two waves to revise the modules accordingly. The first meetings were conducted with the first two groups, and then based on their feedback for improvement, we revised the modules and repeated the process with the remaining two focus groups. Modules were revised based on the content analysis results from the first two focus groups before continuing with the third and fourth focus groups. Following completion of each focus group, participants were compensated for their participation.

Analysis

Content analysis was used to analyze the focus group transcription following Krippendorff’s methods for content analysis. Two independent coders coded this data and discussed to agreement.

Results

Four major suggestions for increasing usefulness and acceptability of the S-SPINE modules emerged through the focus groups. In all four focus groups, almost every participant suggested including videos rather than relying entirely on slideshows to more effectively teach the information. Most participants said they would have learned the information easier if they were taught through videos, rather than reading modules. Furthermore, participants emphasized
the importance of videos and narration in specific modules such as guided imagery and relaxation therapy. Participants explained that they found it difficult to follow along with deep breathing therapies and guided imagery in the modules, as they had to keep their eyes open in order to read the instructions. They went on to say that video accompaniments to these modules would help engage the learner and allow them to follow along with the relaxation therapies. Some suggestions for visual accompaniments included narrations along with the modules, as well as visual presentations for the entire course. Including videos and animated graphics would add an element of more dynamic interaction to the modules, which would better grasp the attention of learners.

In the first two focus groups, participants suggested using a word other than catastrophizing to avoid the negative connotation often associated with catastrophizing. This suggestion was in reference to a specific module that explained the process of catastrophizing and taught how to identify catastrophizing triggers. One participant described the term as “blunt” and “mean” because it suggests that individuals are creating their own pain. As someone who was suffering from chronic low back pain, they felt that it was “mean” for people to tell them that they are responsible for catastrophizing their own pain. They emphasized that their pain was real, and while it could be true that they may be triggering more pain, the concept itself should be explained in kinder words. No concerns were raised by later focus groups after the catastrophizing term was replaced with the terms “cognitive restructuring” and “reframing.”

A third suggestion that emerged from the first two focus groups was integrating English translations for medical terms in the modules to help Spanish-speakers communicate with their English-speaking providers. Based on these suggestions, we adjusted the modules to include English translations of certain terms. Examples of these terms include stress reactivity,
neuropathic pain, kinesophobia, progressive muscle relaxation, breathing therapy, guided imagery, heat and cold therapy and desensitization. However, a comment from an individual in a subsequent focus group indicated dislike of any English terms in the modules.

Some participants expressed interest in adding a list of resources for those suffering from chronic low back pain. Most informational resources regarding chronic low back pain are only available in English, and participants suggested it would be helpful if the modules gave them access to available resources for Spanish-speakers. In addition, participants also were interested in learning about existing support groups for those suffering from chronic low back pain. While English-speaking support groups exist, participants wanted to know if any support groups were available for Spanish-speaking individuals. Moreover, participants were interested in support groups as they wanted to find opportunities to learn more about others’ experiences with their chronic low back pain. In addition to these suggestions, participants also expressed interest in hearing testimonials from individuals who have successfully managed their chronic low back pain. Some participants said that including testimonials would make the intervention seem more personal and, in turn, more effective in teaching the content.

Discussion

Our findings suggested that most people prefer visuals to text in learning, as participants suggested that they would have preferred visual aids to accompany the modules. In addition, we found that the term “catastrophizing” may have negative implications on self-management of pain, as it can suggest that individuals are to blame for their pain. Culturally, our findings suggest that Hispanics may benefit from integration of the English language in self-management interventions in order to help them communicate more effectively with their providers. Lastly, we found that Hispanics are interested in additional resources regarding chronic low back pain in
the community. Most published research and resources are in English, and individuals would enjoy having access to Spanish resources and support groups.

The Effectiveness of Visual Aids in Teaching Content

Results suggested that our intervention would have highly benefited from the use of visual accompaniments to our modules. Most participants agreed that the information would have come across more effectively had it been presented visually. Moreover, areas that would have benefited most from visual aids include content on guided imagery, relaxation and deep breathing techniques. Several studies in current literature have found that visual aids may be effective in teaching content and engaging learners (Ainsworth, 2014; Kalyuga & Singh, 2015; Seckman, 2018; Schnitz, 2014). These results are consistent with our findings of expressed interest in visual learning compared to text material. Most chronic pain information available to Spanish-speakers are in the form of text documents. While it is important that these resources are accessible to the community, future projects should consider implementing videos and digital content to accompany the text, as they may engage the learners more effectively.

Negative Implications of the term “Catastrophizing”

The term catastrophizing was first introduced in the context of individuals with depressive and anxiety-related disorders (Beck, 1979). Although it was originally seen as a cognitive disorder, it was later adapted into pain-related experiences and currently serves as the basis of many theoretical frameworks regarding chronic pain management. While catastrophizing has become one of the most recognized determinants in negative pain outcomes, our findings suggest that the term may potentially negate an individual’s chronic pain experience
by unintentionally minimizing their pain. Our findings suggest including terms other than “catastrophizing” may be beneficial when teaching individuals suffering from chronic pain. Some examples may include “reframing” and “reshaping.” While catastrophizing may play a role in an individual’s response to pain, the use of terms such as “maladaptive behaviors” and “catastrophizing” may possibly undermine an individual’s chronic pain experience, possibly shaming them for their behavior. There are no studies that explore the psychological impacts of the term “catastrophizing” on individuals with chronic pain. Future research should examine the psychological impact of the term and consequent effect on pain self-management.

Language and Communication Barriers in Hispanic Individuals with Chronic Pain

Our findings suggested that Spanish-speaking Hispanics are actively interested in communicating more effectively with their healthcare providers. Some participants felt that integrating English terms into the modules could help the Hispanic community integrate with the community better. They explained that whenever they go to places like the pharmacy or their provider’s office, all the medical information they receive is in English. Including translated terms in self-management resources for Spanish-speakers may help individuals learn the English terms related to their chronic pain and, in turn, communicate more effectively with their providers. Current literature suggests that language barriers may play a role in a Hispanic individual’s decision to seek care and may contribute to poor adherence and lower satisfaction levels (Alcala, et al., 2016; Hyungsung, et al., 2020) Limited English Proficiency (LEP) may act as a significant barrier in primary access care for Hispanic individuals, as Spanish-speaking patients cannot comfortably communicate with their English-speaking providers. When these language barriers are not accommodated, misinterpretations and language errors may occur,
potentially resulting in harmful situations. Most participants acknowledged the issue of language barriers that Spanish-speaking Hispanics face when seeking medical care, and current literature supports our findings of the importance of overcoming language barriers in order to establish clearer communication between patients and providers. Future recommendations for chronic pain self-management programs would be to include topics on how to communicate with English-speaker providers in order to help the Spanish-speaking individuals feel more involved in their care. In addition, Spanish-speaking patients should be made aware of their rights regarding translator services. Section 1557 of the Affordable Care Act now requires providers to provide translation services to patients with limited English proficiency, free of charge (Affordable Care Act, 2016). Requiring translation services for Spanish-speaking patients and their providers can help eliminate the language barriers and ensure that the patients understand the medical information they are receiving.

Resources and Support Groups in Hispanic Individuals with Chronic Pain

Utilization of resources and social support play an important role in the effectiveness of managing chronic pain (Anekwe & Rahkovsky, 2018; Devan, et al., 2018). Our findings suggest that Spanish-speaking Hispanics are interested in utilizing resources to manage their chronic pain, but have difficulty finding resources in Spanish language. Several studies have suggested that online support groups may be an effective intervention strategy in individuals with chronic pain (Finlay & Elander, 2016; Ventura & Chung, 2019; Young, et al., 2019). However, none of the literature focused on Spanish-speaking support groups and there are very few resources available regarding these chronic pain support groups for Spanish-speaking individuals.
Participants voiced interest in adding a personal element to the modules in order to more effectively reach the target audience. An example given was including testimonials from Hispanic individuals suffering from chronic low back pain. Current studies have shown that there are fewer chronic pain informational resources for Spanish-speakers compared to English-speakers (Hollingshead, 2016). Several online programs are available for Spanish-speakers suffering from chronic pain. One of the main resources was a Stanford University self-management program, called Self-Management Resource Center. The program consists of small group workshops led by trained Spanish-speakers where participants share their experiences, learn about subjects related to chronic pain management and how to communicate with their healthcare providers. Interested facilities must be trained through the Stanford University program in order to offer this program to the community. Currently, there are over 100 programs offered nationwide and interested individuals may visit their website to find a program near them (Evidence-Based Leadership Collaborative, 2021). While these support groups are a great resource for Spanish-speakers, the course has an in-person commitment, which may prove as a hindrance to some people. Stanford University also offers a web-based support group program, however, this is only for English-speakers. In addition, the program offers informational resources on chronic pain management to Spanish-speakers on their website, free to the public (Self-Management Resources Center, 2021).

The American Chronic Pain Association offers web-based support groups for individuals with chronic pain. The web-based meetings are facilitated by the group members themselves and provides a way for individuals to share their experiences and learn from one another (American Chronic Pain Association, 2021). There are several options for groups, depending on your state residence. In addition, individuals who are interested in starting their own support group for
those in their area can contact the American Chronic Pain Association. This style of support
group is less structured and its web-based platform is more accessible to the community.
However, these support groups are also only in English, which excludes the Spanish-speaking
community. The National Institute of Health is also a valuable resource for Spanish-speakers
with chronic pain, as they have an entire website dedicated to Spanish resources and
informational PDFs (National Institute of Health, 2021). In addition, if individuals have
questions regarding their chronic pain, they can call the NIH Spanish hotline to learn more.
Another interactive feature on the website is “Ask Carla,” where people can submit questions
regarding their conditions and a designated NIH employee will answer those questions and
provide further resources (National Institute of Health, 2021). Their website has additional
resources for those looking for reliable and updated information regarding their chronic pain.
However, the NIH does not offer interactive programs like support groups or courses.
Suggestions for future practice would be to implement group-led, web-based support groups
similar to the American Chronic Pain Association and Stanford University’s web-based
self-management program, but for Spanish-speakers. Web-based groups are more accessible to
the community and may encourage more people to join, compared to in-person commitments.

Limitations

limitations for this feasibility study included the small number of participants involved
in the study. In addition, most of the participants had experienced chronic pain for a while, and
they reported not learning as much new information from the modules. Therefore, it is difficult to
examine the effectiveness with our sample population. The intervention should be revised with a
larger sample size and a new target group of recently-diagnosed chronic low back pain patients.
Another limitation was that the researcher who conducted the focus groups also analyzed the results, so there may have been potential for bias in the analysis. Use of a second independent reviewer reduces the bias concern, however. An additional limitation was that the study was conducted online as a result of the Coronavirus pandemic to maintain participant safety. Spanish speaking Hispanics without internet access or comfort in using an online platform for a focus group were therefore less likely to participate. It remains unclear if in person focus groups would have resulted in additional results.

Conclusion

This study sought to evaluate the feasibility and acceptability of S-SPINE self-management interventions in the Spanish speaking Hispanic population. The results from the intervention suggested several implications for clinical practice and future research. Overall, we found that people prefer digital content in self-management modules and want to communicate better with their providers regarding their chronic pain. In addition, while there are a few support groups and resources online regarding chronic pain for Spanish-speakers, there are not many, nor are they as accessible as other support groups for English-speakers. Our findings support that providing the Spanish version of the SPINE chronic low back pain self-management modules is acceptable and feasible for Spanish-speaking Hispanics with chronic low back pain. The Spanish version S-SPINE modules need to be revised and pilot tested with a new target group of recently-diagnosed chronic pain individuals to assess the effectiveness of the informational content and mode of delivery in Spanish-speaking individuals.
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Table 1

*S-SPINE Intervention Modules*

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physiology of Chronic Low Back Pain</strong></td>
<td>Provides participants with information about the physiology of pain, the different causes of low back pain, and how the body works on its own to help reduce pain.</td>
</tr>
<tr>
<td><strong>Stress Reactivity</strong></td>
<td>Discussing the effects of stress on one’s chronic pain and the ability to reframe your attitude towards stressors that will help you in your chronic pain journey.</td>
</tr>
<tr>
<td><strong>Reshaping Our Response to Pain</strong></td>
<td>Understanding what factors influence our response to pain and how to reframe negative thinking regarding pain in order to build adaptability and resilience.</td>
</tr>
<tr>
<td><strong>Fear of Movement</strong></td>
<td>Provides an overview on proper body mechanics and emphasizes the importance of physical activity when living with chronic pain.</td>
</tr>
<tr>
<td><strong>Progressive Muscle Relaxation</strong></td>
<td>Teaches how to progressively tense and relax muscle groups throughout the body as a form of therapeutic exercise. The use of proper breathing in relaxation is also taught.</td>
</tr>
<tr>
<td><strong>Breathing Therapy</strong></td>
<td>Explains different techniques used in therapeutic relaxation therapy. Techniques taught include belly breathing, tactical breathing, alternate nostril breathing and mixed breathing.</td>
</tr>
</tbody>
</table>
### Guided Imagery

Exercises regarding guided imagery and distraction are discussed here. Video resources are provided for participants who want to follow along.

### Heat Ice and Stretching

Pain management strategies, such as heat therapy, ice packs and stretching are discussed in this module.

### Strategies for Self-Monitoring

Provides tips on how to take an active role in managing your health every day. Strategies such as self-monitoring, consistency and goal tracking are introduced.

### Problem Solving in Chronic Low Back Pain Management

Discuss appropriate use of analgesics as well as non-pharmacological methods to help alleviate chronic low back pain.