University of Nevada, Reno

¡Yo no estoy loca! A behavioral health telenovela style entertainment education video to reduce stigma and increase mental health literacy among Latina adults with limited English proficiency

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by

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Abstract

There are about 55 million Latinxs in the United States and a significant portion of this population experience some type of mental health problem throughout their lifetime. Although there are services available for this population, Latinxs have low rates of service utilization. Internal barriers, such as lack of knowledge and negative attitudes towards mental health services, have been linked to low utilization of services. Media campaigns, such as entertainment-education (E-E) videos, have been an effective intervention used to increase literacy and reduce stigma across different health domains but have been limitedly researched for mental health among Latinxs. The current study was conducted to develop an E-E video that would be accepted among the Latinx community and the see if the video would increase mental health literacy and decrease stigma. The current study was divided into three studies. The first study focused on the development of the video using qualitative methods, study two focused on assessing the acceptability of the video among Latinxs using qualitative and quantitative methods, and study three was a randomized control trial (RCT) to assess if those who watched the video would report increased mental health literacy and decreased stigma compared to those in the control group that did not watch the video. An E-E video was developed and well received among the Latinxs community. Results from study 3 indicated group mean differences for mental health literacy, with those who watched the video reporting an increase in scores compared to those in the control group. Differences in stigma were not noted but could be due to its complexity. Future research should focus on assessing the longitudinal effects of the E-E video on mental health literacy and stigma using a larger RCT study.

Dedication

To my Dad who has provided endless support

"Echale Ganas"

&

In loving memory of my Mom

(1950-2017)

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1: Introduction

According to the most recent United States census Latinxs are the single largest minority group in the United States (the population estimate is 55 million) and it is estimated that by 2050, the Latinx population will have doubled in size (U.S. Census Bureau, 2011). Among this group prevalence rates of mood disorders are high. It is estimated that 22-38% of Latinxs experience depression (Wassertheil-Smoller et al., 2014). Despite the high prevalence rates of depression among Latinxs, Latinxs have low treatment-seeking rates; 10-35% of Latinxs who require behavioral health services seek out behavioral health services (Anastasia & Bridges, 2016; Agency for Healthcare Research and Quality, 2015; Gonzalez & Follette, 2015) whereas 40% of non-Hispanic Whites seek behavioral health services when needed (Alegria et al., 2015; Anastasia & Bridges, 2016, AHRQ, 2015).

Addressing Internal Barriers to Treatment

Researchers have attempted to understand the discrepancy between the prevalence rates of depression and the treatment-seeking rates of Latinxs by investigating the barriers this population faces in accessing behavioral health services (Gonzalez & Follette, 2015; Bridges, Andrews, Villalobos, Pastrana, Cavell, & Gomez, 2014; Syed, Gerber, & Sharp, 2013). External or environmental barriers partly explain the discrepancy between an individual's need for services and their attempts to seek the needed services (Bridges et al., 2014; Syed, Gerber, & Sharp, 2013). External barriers are environmental factors and include lack of transportation, lack of child-care, inability to pay for services, and challenges getting time off from work (Gonzalez & Follette, 2015; Bridges et al., 2014; Bridges, Andrews, Deen, 2012); these barriers are attributable to economic status as

opposed to cultural characteristics (Gonzalez & Follette, 2015; Bridges et al., 2014; Bridges et al., 2012). External barriers account for part of the discrepancy between the need for services and treatment-seeking rates while internal barriers may account for the other part (Gulliver et al., 2012).

Internal barriers are beliefs, thoughts, stigma, and knowledge that influence the actions and behaviors of individuals (Hirai et al., 2016; Griffths, Batterham, Barney, & Parsons, 2011). Recent literature demonstrates that when internal barriers are addressed among Latinxs, treatment-seeking behaviors improve (Hirai, Stanley, & Novy, 2006; Interian et al., 2010; Jimenez, Bartels, Cardenas, Daliwal, & Alegira, 2012; Borrayo, Rosales, Gonzalez, 2016; Jibaja-Weiss, Volk, Granchi, Neff, Robinson, Spann, & Beck, 2011; Gulliver et al., 2012; Griffths et al., 2011). The increase in treatment-seeking rates among Latinxs has been attributed to interventions that focus on decreasing internal stigma, such as using media campaigns. Exploring the use of media campaigns to reduce internal barriers among Latinxs is essential given the high rates of depression among Latinxs and the low treatment-seeking rates that have been observed among this group (Kim, Loi, Chiriboga, Jang, Parmelee, & Allen, 2011; AHRQ, 2015).

Theoretical Framework: Transthoeretical Model for behavior change, Elaboration Likelihood Model & Social Cognitive Theory.

Media campaigns (e.g. Television or brochures) have been used to improve awareness, knowledge, attitudes, self-efficacy, and behaviors related to a variety of health problems (Wakefield, Loken, & Hornik, 2010) although this body of research has largely focused on non-Hispanic White participants. An Entertainment-Education (E-E) campaign is a popular media campaign that incorporates health and educational messages

in an entertaining, story-telling narrative. The E-E campaign incorporates characters who have characteristics, beliefs, attitudes, and behaviors that are similar to those of the targeted audience so as to maximize social validity (Moyer-Gusé, 2008; Khalid & Ahmed, 2014). The E-E campaign is rooted in the transtheoretical model for behavior change, the elaboration likelihood model (ELM), and Albert Bandura's social cognitive theory (SCT).

The transtheoretical model of health behavior change states that in order to change health behaviors there are six stages of change an individual must undergo: precontemplation, contemplation, preparation, action, maintenance, and termination (Prochaska & DiClemente, 1984, Prochaska & Velicer, 1997). At the first stage, precontemplation, individuals are not planning on seeking services in the near future. Individuals in this stage lack awareness regarding the consequences of not attending to their problem. These individuals may avoid discussing or thinking about the problem at hand (Prochaska & DiClemente, 1984). Some individuals in the precontemplation stage may have tried to attend to the problem themselves but have failed. Additionally, they may have developed negative views about their ability to change (Prochaska & DiClemente, 1984). Therefore, this is the ideal stage to use an E-E intervention, an intervention that addresses awareness of a problem and the consequences of ignoring the problem. After the topic of the message is identified, the next step is to focus on how to make the intervention message appealing to the audience so they may process the information.

The Elaboration likelihood model (ELM) states that there are two paths individuals can take when assessing a persuasive argument: Central and peripheral paths.

Per ELM under different conditions individuals will engage (or persuade the individual) into thinking (elaborating) about an issue or message presented to them (Petty & Cacioppo, 1984). Strong arguments and portraying appealing outcomes increase the message receivers' engagement and persuades them to listen to the displayed message (Petty & Cacioppo, 1984). The appeal of the ELM can be increased by simultaneously using SCT.

Bandura stated that there are three major components in social cognitive theory to promote psychosocial changes via media or symbolic communication (Bandura, 2001; Bandura, 2004). The first component is adopting a theoretical model that specifies the factors of change and the mechanisms through which they produce change (Bandura, 2001; Bandura, 2004). For this study the theoretical model is social cognitive theory. Per social cognitive theory individuals gain an understanding of causal relationships and expand their knowledge by information derived from personal and vicarious experiences (Bandura, 2001). Individuals then generate solutions to problems, evaluate outcomes, pick options, and make decisions (Bandura, 2001). The second component is a translational and implementational model that converts theoretical principles into an operational model; it specifies the content, mode of implementation, and the strategies made to cause change (Bandura, 2001; Bandura, 2004). In the case of this study, an E-E campaign will be implemented (more specifically a video will be developed). The third component is a social diffusion model on how to promote the adoption of the campaign and make it available to the rest of society (e.g. television or radio ads: Bandura, 2001; Bandura, 2004). While not an immediate focus of the proposed study, this would certainly be a future direction.

Problem and Purpose of The Current Study

Specific to Latinxs, the E-E campaign has some documented success via the use of printed material both with regard to medical conditions (Borrayo et al., 2016; Kline, Montealegre, Rutsveld, Glover, Chauca, & Reed, 2016) and depression treatments (Hernandez et al., 2016; Cabassa, Oh, Himensky, Molina, Unger, & Baron, 2015). Despite this success, there remains room for improvement. Latinxs value health information that is disbursed through ethnic television sources more than health information that is disbursed through pamphlets, the Internet, and the radio (Wilken & Ball-Rokeach, 2006). Given the high prevalence of mood disorders (Kim et al., 2011) and the low levels of treatment-seeking rates among Latinxs (AHRQ, 2015), an E-E campaign (administered via video) represents a potential novel means to improve health literacy, reduce stigma, and thereby increase treatment-seeking rates for behavioral health services in Latinx populations. The purpose of the proposed study is to empirically test whether an E-E media video will improve health literacy, reduce stigma, and increase the treatment-seeking rates for behavioral health services among Spanish-speaking Latinxs.

According to Social Cognitive Theory individuals gain an understanding of causal relationships and expand their knowledge by information derived from personal and vicarious experiences (Bandura, 2001). By observing individuals (who have similar characteristics) engage in behaviors that improve their lives for the better, viewers are able to see strategies for how to accomplish this and experience an increase in self-efficacy i.e., the viewer begins to believe that s/he can also experience behavioral change (Bandura, 2001; Bandura, 2004). Thus, we hypothesize that if we present a video of Latina women discussing their own experiences, views, and opinions regarding personal

behavioral health problems, service utilization , and stigma towards mental illness and behavioral health services (moving from a negative view towards behavioral health service utilization to a positive view towards behavioral health service utilization) the participants who view this video will experience increased mental health literacy (i.e., an increase in knowledge) and decreased stigma towards mental illness (i.e., an attitude). Per Social Cognitive Theory (Bandura, 2004) and Elaboration Likelihood model this shift in knowledge and attitudes will generate behavioral change among participants; in the current study we hypothesize that participants will shift their treatment-seeking behaviors in favor of utilizing behavioral health services and they will also experience a shift in self-efficacy (i.e., if the characters in the video can change her attitudes and beliefs, so can I!).

The aims of the current study were as follows:

Aim 1: Develop an E-E video that is culturally sensitive, has high social validity, and is easily disseminable in a variety of settings.

Aim 2: Conduct a Randomized Control Trial [RCT] to determine if the E-E video increases mental health literacy and decreases stigma among Spanish-speaking Latinas. *Hypothesis 1*: Latina participants who view the E-E video will have higher levels of mental health literacy than those Latina participants who do not view the E-E video. *Hypothesis 2:* Latinas participants who view the E-E video will hold fewer stigmas than those Latina participants who do not view the E-E video.

Study 1 and study 2 were conducted to develop an E-E video and assess the acceptability of the video in the Latinx community (Aim 1) while study 3 was conducted to assess if the E-E video increased mental health literacy and decreased stigma among

Latinas (Aim 2). Study 1 focused on the development of the script of the E-E video using focus groups and consultants. The participants reported that the characters were found to share similar characteristics as the target audience. The participants reported that they felt they learned new information from the script and felt that the information from the video would help increase mental health service utilization. Study 2 focused on the assessing the acceptability of the video using qualitative and quantitative methods. Overall the video was reported to be entertaining and provided new information about depression. Participants reported that the video would encourage Latinas to seek mental health services. Since the results in study 2 were positive and the E-E video was well received we conducted Study 3. Study 3 was an RCT that assessed if the E-E video increased mental health literacy and decreased stigma. The findings from study 3 demonstrated that there was depression literacy mean differences between the control and E-E video condition at post-intervention, with participants in the E-E video condition reporting higher scores. Unfortunately, there were no mean differences in levels of stigma between conditions. Overall, the video was very entertaining and informative and may be a great intervention to increase mental health literacy.

Chapter 2: Brief Review of the Literature

Latinxs in the United States

According to the most recent United States census Latinxs are the single largest minority group, with over 55 million Latinxs living in the U.S. (U.S. Census Bureau, 2011). It estimated that by 2050, the Latinx Population would have doubled in size (U.S. Census Bureau, 2011). The word "Latinx" is a commonly used term to refer to and describe any individual who can trace their ancestry to Spanish Speaking countries in Latin America or Spain (U.S. Census Bureau, 2011). Latinxs originate from various countries throughout the world and are diverse with regard to history, family history, migration experience, social class, religion, degree of acculturation, dreams and values (U.S. Census Bureau, 2011; Pew Research Center, 2015). In the United States Puerto Ricans, Cubans, Salvadorans, Dominicans, Guatemalans, Colombians, Hondurans, Ecuadorians, and Peruvians, and Mexicans account for the majority of the Latinx population. The Mexican sub-ethnicity[1] continues to be the dominant sub-ethnicity in the U.S. with over 65% of the Latinx population reporting having Mexican roots (U.S. Census Bureau, 2011).

Immigration and migration trends are a common variable to track among the Latinx population. Latinxs in the U.S. have ancestors that immigrated to the United States while other Latinxs have recently migrated (Pew Research Center, 2015). Of the 55 million people who identify as Latinx in the United States, 36 million were born in the states while 19 million are foreign born (Pew Research Center, 2015). It estimated that Latinx immigration and migration to the United States has decreased in recent years due

to various factors, however there are still about 11.3 million unauthorized immigrants in the U.S., with 49% originating from Mexico (Pew Research Center, 2015).

Behavioral Health Problems Among Latinxs in the United States

Regardless of the immigration status and sub-ethnicity[1] of Latinxs in the United States, Latinxs face many psychological problems. In general, there have been high rates of behavioral health problems reported by Latinxs (Kim et al., 2011; Alegria, Mulvaney-Day, Torres, Polo, Cao, & Canino, 2007) with approximately 28-30% of Latinxs reporting a behavioral health problem in their lifetime (Alegria et al., 2007). The most common behavioral health problems reported by Latinxs are mood disorders (Kim et al., 2011).

Depression. It is estimated that Latinxs are twice as likely than Caucasians to experience depression in a given year (Alegria, Canino, Stinson, & Grant, 2006). According to Wassertheil-Smoller et al. (2014) 22-38% of Latinxs report symptoms of depression with Puerto Ricans reporting experiencing the most symptoms. As with anxiety, Latinxs tend to report somatic complaints versus cognitive complaints when describing psychological symptoms related to depression (Snipes, 2012). The most common depressive somatic symptoms reported by Latinxs are faintness, dizziness, hot or cold spells, numbness or tingling, feeling weak, and a heavy feeling in the arms (Carter, Mitchell, & Sbrocco, 2012; Chong, Reinschmidt, & Moreno, 2010). As noted previously with anxiety, Latinxs may use idioms of distress, such as *ataque to nervios* and *nervios,* to describe the distress they are experiencing (Guarnaccia et al., 2010; Hinton et al., 2008; Guarnaccia, Lewis-Fernández, & Marano, 2003).

[1] Sub-ethnicity refers to an ethnic group that forms part of a larger ethnic group.

Latinxs Underutilization of Mental Health Services and Treatments

Existing Services and Treatments. There are various evidence-based treatments available to treat anxiety and depression. Cognitive behavioral therapy (CBT) is an evidence-based treatment for anxiety and mood disorders (Beck, 1995; Borkovec, Matthews, Chambers, Ebrahimi, Lytle, & Nelson, 1987). Meta-analyses have identified CBT as a prime therapy for reducing symptoms of anxiety and depression among different groups and populations (Cuijpers, Berking & Anderson, 2013; Butler, Chapman, Forman, & Beck, 2006; Mitte, 2005; Gould, Safren, Washington, & Otto, 2004; Gould, Otto, Pollack, & Yap, 1997). Researchers (e.g., Interian & Diaz-Martinez, 2007; Organista & Muñoz, 1996) have advocated the use of CBT for Latinxs experiencing anxiety and depression. They believe that CBT is particularly suitable for Latinxs due to its directive, problem-solving approach that targets immediate symptom relief and guidance; and its style that helps to quickly orient clients to treatment.

Culturally adapted treatments. While there is strong evidence that CBT is effective among Latinxs, other researchers believe that CBT is more effective among Latinxs when it addresses cultural factors and is culturally adapted (Pineros-Leano, Liechty, & Piedra, 2016). Adaptations include changing the language, metaphors, content, concepts, and goals (Huey, Tilley, Jones, & Smith, 2014). Outcome studies of culturally adapted CBT (CA-CBT) on anxiety and depression among Latinxs describes CA-CBT as being an effective treatment that can be used in group or individual settings (Hovey, Hurtado, & Seligman, 2014; Piedra & Byoun, 2012; Aguilera, Garza, & Muñoz, 2010), in English or Spanish (Chavira et al., 2014), among immigrants and migrants (Pineros-Leano, Liechty, & Piedra, 2016; Hovey, Hurtado, & Seligman, 2014), in rural

or urban settings (Dwight-Johnson, Aisenberg, Golinelli, Hong, O'Brien, & Ludman, 2011), and with both female and male clients (Piedra & Byoun, 2012).

Although there is evidence that CA-CBT is effective among Latinxs there is evidence that culturally adapted treatments are less efficacious than (or at least equivalent to) conventional treatments (Huey & Polo, 2008; Huey, Tilley, Jones, & Smith, 2014; Benuto & O'Donohue, 2015). Small sample sizes and no clear explanation of how treatments are adapted, make it challenging to determine whether culturally adapted treatments are superior or equal to conventional treatments (Benuto & O'Donohue, 2015). Informal adaptations or adjustments to treatment such as matching clients with a therapist who speaks the preferred language of the client, may create greater outcomes than adapting a treatment (Griner & Smith, 2006; Benuto & O'Donohue, 2015).

Regardless of the debate between culturally adapted behavioral health treatments and conventional treatments, Latinxs benefit from behavioral health treatments. A most recent example is the work of Chavira and colleagues (2014) who examined CBT with Latinx Adults who had GAD and spoke either English or Spanish. Specifically, treatment engagement and response of three treatments for anxiety disorders among Latinxs was examined. The three groups were: 1) a 12-week traditional CBT treatment, 2) a medication only treatment, and 3) CBT combined with medication. Latinxs favored the CBT with medication condition over the other two conditions. The CBT and CBT with medication conditions were more effective than the medication only treatment condition in reducing symptoms of anxiety among Latinxs including among Spanish-speaking Latinxs. Although the evidence is in favor of the effectiveness of the available behavioral health treatments among Latinxs, they continue to underutilize behavioral health services.

Underutilization of Services. Although Latinxs report high rates of behavioral health problems and treatment options are available (such as the ones noted above) Latinxs continue to underutilize behavioral health services. It is estimated that at best only 27% of Latinxs who are in need of behavioral health services seek out behavioral services while 40% of non-Hispanic Whites seek behavioral health services when needed (Anastasia & Bridges, 2016, AHRQ, 2015). Gonzalez & Follette (2015) conducted a behavioral health needs assessment in a Latinx community where 52% of the participants reported psychological distress, and yet only 10% reported seeking behavioral health services. A study conducted by Alegria et al. (2015) examined depression prevalence rates and treatment-seeking behaviors among Latinxs and discovered that of those who were depressed only about 35% sought services for their depression. Among Latinx immigrants' similar trends were seen where 22% of Latinx immigrants who reported a behavioral health problem sought behavior health services. These results indicate that at best only one third of Latinxs who require behavioral health services are seeking out needed services.

Concerns with Under Underutilization of Behavioral Health Services. With low utilization of behavioral health services among Latinxs, various concerns arise. Instead of using behavioral health services, Latinxs who experience psychological distress tend to first seek help from medical providers (Jimenez et al., 2012; U.S. Department of Health and Human Services, 2001). A concern with this trend is that medical providers may lack knowledge of appropriate and effective assessment methods, diagnoses, and treatments for behavioral health problems. One study found high rates of misdiagnosis and lack of detection for major depression, bipolar disorder, panic disorder,

generalized anxiety, and social anxiety disorder among primary care patients (Vermani, Marcus, & Katzman, 2011). Downey, Zun, and Buke (2012) reviewed the accuracy of behavioral health diagnosis among medical providers in an emergency room setting and found that patients were misdiagnosed, or the providers did not detect any behavioral health problems when in reality the patient was experiencing behavioral health problems. Another study by Ani (2008) revealed that medical providers did not diagnose two thirds of their patients with depression even though they met the criteria. An additional concern with seeking behavioral health services from medical providers is that providers may try to treat patients themselves versus referring an individual to behavioral health services. This is problematic as the primary care provider may not use evidence-based treatments or use treatments that are inadequate for behavioral health problems (U.S. Department of Health and Human Services, 2001). Indeed, Alegria et al., (2015) reported that approximately 13% of Latinxs who presented with depression to their medical provider received inadequate treatment for depression. Although seeking help from medical providers is better than seeking no help at all, the services received are not adequate or insufficient.

The concerns above, not seeking behavioral health services or seeking services from untrained providers, can have great consequences among Latinxs. Suicide among Latinxs is the 12th leading cause of death (Suicide Prevention Resource Center, 2013; Bomyea et al., 2013) and is the 3rd cause of death for Latinx males ages 15-34. Increasing service utilization among Latinxs may reduce these untreated problems. Additionally, untreated psychological problems can cause, or complicate issues related to the physical well-being of individuals, which in turn can reduce quality of life. An individual with

cardiovascular problems experiences an increased risk for severe cardiovascular symptomology if they have depression and/or anxiety (Wassertheil-Smoller et al., 2014). Individuals with diabetes experience the same trend as those with cardiovascular problems, where their symptoms of diabetes worsen with a comorbid diagnosis with behavioral health problems (Ducat, Phillipson, and Anderson, 2014). For Latinxs the trend between physical illness and the comorbidity with behavioral health problems is the same; as untreated psychological problems among Latinxs put Latinxs at higher risk for their diabetes to worsen (Sorkin, Ngo-Metzger, Billmek, August, Greenfield, & Kaplan, 2011; Colon, Giachello, Mclver, Pacheco, & Vela, 2013).

In summary, there are effective evidence-based behavioral health treatments for Latinxs, however Latinxs continue to underutilize behavioral health services. Underutilizing behavioral health problems can be linked to a variety of consequences such severe behavioral health symptomology, suicidal behavior, and decreased physical well-being. The consequences to low utilization of behavioral health services have lead researchers have invested efforts in uncovering reasons as to why Latinxs seek behavioral health services and revealed various barriers to care.

Barriers to Care

External Barriers. External or environmental barriers partly explain the discrepancy between an individual's need for services and seeking the needed services (Bridges et al., 2014; Syed, Gerber, & Sharp, 2013). External barriers are environmental factors that pose as barriers, such as lack of transportation, lack of child-care, inability to pay for services, and challenges getting time off from work (Gonzalez & Follette, 2015; Bridges et al., 2014; Bridges et al., 2012); these barriers are attributable to economic

status as opposed to Latinx cultural factors (Gonzalez & Follette, 2015; Bridges et al., 2014; Bridges et al., 2012). Various interventions have been implemented to reduce external barriers, for example, providing bus passes for transportation (Syed, Gerber, & Sharp, 2013), and the implementation of the Affordable Care Act to reduce personal cost of care and increase access to behavioral health care through integrated care facilities (Mechanic, 2012).

Internal Barriers. In the last decade there has been a shift in the healthcare field to examine the role of internal barriers on low-treatment seeking rates. Internal barriers are beliefs, thoughts, stigma, and knowledge that influence the actions and behaviors of individuals (Hirai et al., 2016; Griffths et al., 2011). Specific to Latinxs, internal barriers impact treatment-seeking rates in the health care field, especially for behavioral health (Hirai et al., 2015; Interian et al., 2010; Jimenez et al., 2012; Borrayo et al., 2016; Jibaja-Weiss et al., 2011; Gulliver et al., 2012; Griffths et al., 2011). Latinxs hold may have stigma against and negative beliefs towards, behavioral health services (Hirai et al., 2016; Kirmayer, & Young, 1998; Canino, Rubio-Stipec, Canino, & Escobar, 1992; Borkovec et al., 1987). Being labeled as “crazy” has been identified as the most common stigma that influences treatment-seeking rates among Latinxs (Hirai et al., 2016; Canino, Rubio-Stipec, Canino, & Escobar, 1992). Individuals who have severe behavioral health problems experience many prejudices and discrimination, which can be debilitating (Kramer, Guarnaccia, Resendez, & Lu, 2009). Since the Latinx culture is a collective society (Oyserman Coon, & Kemmelmeier, 2002), Latinxs depend on each other for various reasons and having a behavioral health problem can jeopardize this system (Schwartz, 2009). Thus, self-disclosure of behavioral health problems decreases so as to

avoid placing burden on one's family and community by being labeled "crazy" (Schwartz, 2009). To avoid being labeled as "crazy" Latinxs use somatic symptoms in lieu of cognitive to describe behavioral health problems (Snipes, 2012). Experiencing somatic symptoms are more socially acceptable than cognitive symptoms, since somatic symptoms can be linked to a medical condition, which is less stigmatizing (Snipes, 2012). The use of somatic symptoms for behavioral health problems is so common that Latinxs have developed idioms of distress to express behavioral health problems, which are more socially accepted among Latinxs over the use of behavioral health language (Guarnaccia et al., 2010; Hinton, Lewis-Fernández, & Pollack, 2009; Hinton et al., 2008; Guarnaccia, Lewis-Fernández, & Marano, 2003). Focusing on somatic problems leads Latinxs to first seek medical attention for their behavioral health problems versus a behavioral health provider (Cabassa, Zayas, & Hansen, 2006). In doing so Latinxs are reducing the risk of being exposed as "crazy" which is attached to fear, prejudices, and discrimination (Kramer, Guarnaccia, Resendez, & Lu, 2009).

Latinxs fears, prejudices, discrimination, and use of idioms of distress are all rooted in a lack of mental health literacy. Recent literature demonstrates that increasing health literacy among Latinxs decreases internal barriers, which then increases treatment-seeking rates (Hirai et al., 2016; Interian et al., 2010; Jimenez et al., 2012; Borrayo et al., 2016; Jibaja-Weiss et al., 2011; Gulliver et al., 2012; Griffths et al., 2011). The increase in treatment-seeking rates among Latinxs has been attributed to interventions that focus on decreasing internal stigma, such as using media campaigns. Exploring the use of media campaigns to reduce internal barriers among Latinxs is essential since Latinxs

experience higher rates of psychological distress and experience lower treatment-seeking rates than non-Hispanic Whites (Kim et al., 2011; AHRQ, 2015).

Interventions to Reduce Barriers to Care

Media Campaigns. Media campaigns (e.g. Television or radio ad's) have been used to improve awareness, knowledge, attitudes, self-efficacy, and behaviors related to a variety of health problems (Wakefield, Loken, & Hornik, 2010) for members of the majority culture. Various media campaigns incorporate health and educational messages in an entertaining, story-telling narrative. An example of a media campaign is the video "The Tamale Lesson: Narrative Education on Cervical Cancer", which uses Latina characters to educate Latinas about cervical cancer screening (See Figure 1 or for full video visit: https://www.youtube.com/watch?v=Lyhv9KmLroc). While educating the target audience, the video is also addressing issues of stigma, and shifting social norms while also entertaining the audience with its characters, settings, and topics. A media campaign can increase knowledge about an educational issue, creates favorable attitudes, shifts social norms, and can change overt behavior (Sabido, 1981). Media Campaigns are effective in increasing health literacy, decrease internal barriers, and increase behavioral health treatment-seeking rates since it is rooted in transtheoretical model of behavior change, Elaboration Likelihood Model, and social cognitive theory.

Figure 1. The Tamale Lesson: Narrative Education on Cervical Cancer

Media Campaigns, Transtheoretical model of behavior change, Elaboration Likelihood Model, and Social Cognitive Theory. Media campaigns are rooted in the transtheoretical model for behavior change, the elaboration likelihood model, and Albert Bandura's social cognitive theory.

Transtheoretical model of behavior change. There are six stages of change an individual must undergo in order to fully change their behavior: precontemplation, contemplation, preparation, action, maintenance, and termination (Prochaska & DiClemente, 1984, Prochaska & Velicer, 1997). The precontemplation stage, features individuals who are not planning on seeking services in the near future (within the next six months). Individuals in this stage lack awareness regarding the consequences of not attending to their problem. These individuals may avoid discussing or thinking about the problem at hand (Prochaska & DiClemente, 1984). Some individuals in the precontemplation stage may have tried to attend to the problem themselves but have failed. Additionally, they may have developed negative views about their ability to change (Prochaska & DiClemente, 1984). Therefore, this is the ideal stage to use an E-E

intervention, an intervention that addresses awareness of a problem, the consequences of ignoring the problem. Individuals in the contemplation stage have intend to seek services within the next six months (Prochaska & DiClemente, 1984, Prochaska & Velicer, 1997). They are contemplating changing by assessing the pros and cons of changing. In the preparation stage individuals have a plan they will take, typically in the next month (Prochaska & DiClemente, 1984, Prochaska & Velicer, 1997). In the action stage individuals have modified their behavior (Prochaska & DiClemente, 1984, Prochaska & Velicer, 1997). In the maintenance stage individuals are trying to prevent from returning to previous behaviors and are not active like those in the action stage (Prochaska & DiClemente, 1984, Prochaska & Velicer, 1997). In the final stage termination individuals have adopted the new behavior change 100%, and no longer in risk or relapsing. These change stages inform stake holders to develop interventions to address individuals in earlier stages of the process or to help them move to the termination stage. For this study, the preconteplation stage will be the target of our intervention; increasing awareness. After the topic of the message is identified, the next step is to focus on how to make the intervention message appealing to the audience so they may process the information.

The Elaboration likelihood model.. The Elaboration likelihood model (ELM) states that there are two paths individuals can take when assessing a persuasive argument: Central and peripheral paths (Petty & Cacioppo, 1984). The central path is used or taken by the individual when the individual is motivated to assess and think about the message (Petty & Cacioppo, 1984). If the topic of the message is something the individual cares about and there are minimal distractions, then the individual is more likely elaborate on the message (Petty & Cacioppo, 1984). The peripheral path is used when the individual

has little or no interest in the topic of the message. Peripheral cues (e.g. adding or using something the individual thinks positively towards) in the message attracts the individual to assess the message. Therefore, per ELM under different conditions individuals will engage (or persuade the individual) into thinking (elaborating) about an issue or message presented to them. Strong arguments and portraying appealing outcomes increase the message receivers' engagement and persuades them to listen to the displayed message (Petty & Cacioppo, 1984). The appeal of the ELM can be increased by simultaneously using SCT for a media campaign.

Social Cognitive Theoretical Model. The first component of media campaigns is the use of the social cognitive theoretical model. This model states that learning can occur through social modeling (Bandura, 1977; Bandura, 2009). Individuals gain understanding of causal relationships and expand their knowledge by information derived from personal and vicarious experiences (Bandura, 2001). With social modeling, individuals become more aware and knowledge able about topics and situations. Social modeling also allows individuals to generate solutions to problems, evaluate outcomes, pick options, and make decisions, without having to go through a laborious behavioral search since they can reference back to the actions of their role models (Bandura, 2001). Social modeling creates inspiration, competencies, and motivation by targeting the target audiences' self-efficacy (Bandura, 2009). Self-efficacy is defined as ones belief in his or her ability to carry out a certain action; it is the driving force for human behavior change (Bandura, 1977). Unless people believe they can produce a desired effect by their actions, they have little incentive to act or to persevere in the face of difficulties (Bandura, 2009). Seeing others gain desired outcomes by their actions creates outcome expectations that

serve as positive motivators (Bandura, 2009). By using characters who share similar characteristics as the target audience, media campaigns produce social models that the target audience can identify with and influence behavioral changes.

Translational and Implementational Model. The second component to Bandura's social cognitive theory to produce psychosocial change via media communications is adopting an operational model that translates the theory, such as the Entertainment-Education campaign. The entertainment-education (E-E) campaign is the most popular media campaign that is rooted in Bandura's social cognitive theory. The E-E campaign incorporates health and educational messages in an entertaining, story-telling narrative. The E-E campaign incorporates characters (role models) who have characteristics, beliefs, attitudes, and behaviors that are similar to those of the targeted audience so as to maximize social validity (Moyer-Gusé, 2008). In the E-E campaign the characters are shown adopting new attitudes and behaviors that the audience is targeted to adopt (Bandura, 2001; Bandura, 2004). Seeing people similar to themselves change their lives for the better not only conveys strategies for how to do it, but also increases viewers' self-efficacy in believing that they too can succeed (Bandura, 2001; Bandura, 2004). Viewing individuals struggle and overcome obstacles similar to the target audience attracts the target audience and increases the likelihood of attitude and behavioral change (Bandura, 2001; Bandura, 2004). Three types of modeling influences are used in the E-E approach: positive, negative, and transitional (Bandura, 2001; Bandura, 2004). The E-E video uses positive model portraying beneficial life styles while others use negative models exhibiting detrimental views and lifestyles. Transitional models are shown transforming their lives by moving from adverse behaviors in favor of beneficial ones

(Bandura, 2001; Bandura, 2004). The E-E campaign is effective in producing change since it therefore provides a variety of characters modeling different behaviors, in order for the target audience to feel connected to the characters and produce behavioral changes.

Social Diffusion Model. The third component to Bandura's social cognitive theory to produce psychosocial change via media communications is the social diffusion model. The purpose of this model is to diffuse the media campaign into the general population to produce awareness, knowledge, attitude and behavioral changes in large audiences (Bandura, 2004). This process involves creating a campaign that portrays varies characters with diverse backgrounds, beliefs, and attitudes (Bandura, 2004). Media campaigns are typically distributed to larger audiences through television series, television public service ads, or public radio (Bandura, 2004). In summary, creating a media campaign video, which is rooted in social cognitive theory, to address internal barriers such as stigma and health literacy can be effective in changing people's thoughts, feelings, and actions towards seeking health services. There is evidence in the health sector literature demonstrating the effectiveness of the Entertainment-Education media campaign in reducing internal barriers and increasing treatment-seeking behaviors.

The Effectiveness of the Entertainment-Education Campaign in the Health Sector. As noted before the entertainment-education is the most commonly used media campaign to reduce internal barriers by increasing awareness and knowledge, changing attitudes, shifting social norms, and influencing behavioral changes among individuals (Moyer-Gusé, 2008). The E-E campaign began in developing countries, mainly in the form of radio and television soap operas educating individuals about a variety of health-

related topics (Singal & Rogers, 2009). The first E-E video was developed in 1958 for a Methodist church in the U.S., which focused on developing coping strategies for people in crisis (Sabido, 1981). It wasn't until 1973 when that the E-E method was further developed and used in different countries for different such as Costa Rica, Mexico, Brazil, China, and India (Sabido, 2009). The E-E campaign has been successful in improving health literacy across a variety of physical health domains including cancer (Jibaja-Weiss et al., 2011; Volk et al., 2008), HIV/AIDS (Booker, Miller, & Ngure, 2016) and organ donation (Khalil & Rintamaki, 2014) for majority culture members. The E-E campaign has also been successful at creating positive behavioral change to increase positive health outcomes; it has been successfully used to increase participation in preventative cancer screenings (Jibaja-Weiss et al., 2011; Volk et al., 2008), improve the use of safe sex practices (Booker, Miller, & Ngure, 2016), and reduce alcohol intake (Kim, Lee, & Macias, 2014) in majority culture members. The E-E is an effective campaign to increase health literacy, decrease internal barriers, and increase behavioral health treatment-seeking rates since it is rooted in social cognitive theory.

Latinxs and E-E Campaigns. Media campaigns using an E-E campaign rooted in social cognitive theory have been effective in increasing treatment-seeking rates among Latinxs. Borrayo (2004) designed an E-E video focused on motivating Latinxs to engage in mammograms. Borrayo used the E-E methodology to create an 8- minute video that would increase awareness about breast cancer and to motivate low-literacy Latinas to consider engaging in mammography screening (2004). Thus, the video presents a compelling story of a Latina with whom the target audience can identify and become involved with the unfolding events of her story as she realizes her risk for breast cancer

and struggles with the decision to engage in mammography (Borrayo, 2004). The content and format of the video include culturally relevant clues and modeling to influence Latinas' cognitive and subjective processes involved in making the decision to change. Borrayo conducted focus groups and used key informants to provide feedback on video script and video content. As with other E-E videos in the health sector, actors were recruited to portray similar characteristics, beliefs, and attitudes as the target audience. The final video was assessed for effectiveness in changing behaviors and intent to seek mammogram services through a study conducted by Borrayo, Rosales, and Gonzalez (2016). The study compared the effects of the E-E video versus a non-narrative intervention to educate and motivate Latinas to get a mammography screening. Self-efficacy, behavioral norms, behavioral intentions to engage in a mammography screening, were used as pre- and post-test measures to assess and compare the differences of between the a control group, the non-narrative intervention, and the E-E intervention. The E-E narrative and non-narrative interventions significantly increased Latinas' breast cancer knowledge, mammography self-efficacy, and behavioral norms from pretest to posttest, however, the E-E narrative participants' pretest to posttest difference in mammography self-efficacy was significantly higher. The effect of the E-E narrative intervention on self-efficacy and behavioral norms was moderated by the participants' absorption in the story and identification with the story characters. Borrayo (2004 & 2016), E-E video on breast cancer and mammogram screening awareness is a great example of the positive outcomes that can arise when targeting reducing stigma and increasing health literacy, among the Latinx population. Limited E-E literature targeted at Latinxs in the behavioral health sector holds promising outcomes that should be further

explored.

E-E Campaigns, Latinxs, and Behavioral Health. The E-E campaign has increased mental health literacy and reduced stigma towards behavioral health services among Latinxs (Ritterfeld & Seung, 2006; Hernandez et al., 2016; Cabassa et al., 2015). One example of E-E focused on behavioral health problems among Latinxs is a fotonovela for individuals with depression. A fotonovela is like a booklet in a comic book layout with photographs and bubble dialogue, that disseminates health information to groups of Latinxs (Cabrera, Morisky, & Chin, 2002). Fotonovelas are more readable than other health pamphlets or brochures, since they are intended for people with low health literacy. Cabassa et al., (2015), created a fotonovela on depression, that would decrease stigma, change attitudes, and increase health literacy using the methodology associated with the E-E campaign. Cabassa, and colleagues evaluated the impact of the depression fotonovela in increasing knowledge of depression symptoms and treatments and reducing stigma among Latinxs. Individuals were assigned to receive the fotonovela or a depression brochure and were assessed on knowledge and stigma measures before and after reading the material and one month later. No significant differences were found between groups in symptom knowledge, social distance, and perceptions of dangerousness; however, gains in depression treatment knowledge were significantly greater for the fotonovela than for the depression brochure group. Another study by Hernandez and Oraganista (2013), also evaluated the effectiveness of the depression fotonovela among Latinxs. Compared to the control group those who viewed the fotonovola showed improvements in depression knowledge, self-efficacy to identify the need for treatment, and decreased stigma. Despite that media campaigns have been

effective in the medical field, the research on these campaigns in the behavioral health field is limited to just fotonovelas. There are no media campaign videos available to Latinxs that address stigma and mental health literacy.

Summary. The success of the depression fotonovela, along with the success of other E-E interventions used for Latinxs in the various health sectors, demonstrates that the E-E campaign is effective in reducing stigma and increasing health literacy among Latinxs. Surprisingly, the literature surrounding Latinxs, behavioral health, and E-E interventions is minimal. With behavioral health problems being highly prevalent among Latinxs and Latinxs low utilization of behavioral health services a unique intervention is needed. An E-E video targeting internal barriers such a low mental health literacy and stigma, is an innovative method that may increase treatment utilization among Latinxs.

The Current Study

The Latinx population is the largest minority group in the United States (U.S. Census, 2011) and Latinxs have been noted to have high prevalence rates of behavioral health problems (Alegría et al., 2007; Asnaani et al., 2010; Wassertheil-Smolleret et al., 2014). Despite the numerous evidence-based services available to this population, Latinxs continue to underutilize behavioral health services (Anastasia & Bridges, 2016; AHRQ, 2015; Gonzalez & Follette, 2015). Among Latinxs with behavioral health problems, barriers to care, such as external and internal barriers, influence treatment-seeking behaviors (Bridges et al., 2014; Bridges et al., 2012). While external barriers have been emphasized in the past, recently researchers have focused on the effect of internal barriers, such as stigma, attitudes, and knowledge (Hirai et al., 2016; Griffths, Batterham. Barney, & Parsons, 2011). Internal barriers such as stigma and mental health

literacy have been easily targeted using media campaigns, which are rooted in Social Cognitive Theory including the E-E campaign (Bandura, 2001; Bandura, 2004).

Per social cognitive theory individuals gain an understanding of causal relationships and expand their knowledge by information derived from personal and vicarious experiences (Bandura, 2001). Individuals then generate solutions to problems, evaluate outcomes, pick options, and make decisions (Bandura, 2001). By observing individuals (who have similar characteristics) engage in behaviors that improve their lives for the better, viewers are able to see strategies for how to accomplish this and experience an increase in self-efficacy i.e., the viewer begins to believe that s/he can also experience behavioral change (Bandura, 2001; Bandura, 2004). Thus, we hypothesized that if we presented a video of Latinx women discussing their own experiences, views, and opinions regarding personal behavioral health problems, service utilization , and stigma towards mental illness and behavioral health services (moving from a negative view towards behavioral health service utilization to a positive view towards behavioral health service utilization) the participants who view this video will experience increased mental health literacy (i.e., an increase in knowledge) and decreased stigma towards mental illness (i.e., an attitude). Per Social Cognitive Theory (Bandura, 2004) this shift in knowledge and attitudes will generate behavioral change among participants; in the current study we hypothesized that participants will shift their attitudes towards behavior health services and will also experience a shift in self-efficacy (i.e., if the characters in the video can change their attitudes and beliefs, so can I!). The current study targeted a female audience due to issues of feasibility but certainly we recognize that men would also benefit from such an intervention. The aims of the current study were to 1) develop

an E-E video focused on reducing stigma and increasing mental health literacy among Latinas; and 2) to empirically test whether an E-E video will improve increase mental health literacy and decreases stigma among Spanish-speaking Latinas. We used a Randomized Controlled Trial (RCT) recruiting individuals from community settings. Latinas were randomly assigned to the intervention condition where they watch the E-E video or TAU (they will just receive the behavioral health phone number). Individuals in the intervention condition viewed a four-minute E-E video while the second group received TAU (did not view the video) but were given the number to behavioral health services. Individuals in each group were provided with a phone number where they could obtain more information about behavioral health services and where to receive services. Individuals were assessed a pre-test and post-test for mental health literacy, stigma, and attitudes towards behavioral health services.

Study Aims and Hypotheses:

Aim 1: Develop an E-E video that is culturally sensitive, has high social validity, and is easily disseminable in a variety of settings.

Aim 2: Conduct a Randomized Control Trial [RCT] to determine if the E-E video increases mental health literacy decreases stigma among Spanish-speaking Latinas.

Hypothesis 1: Latina participants who view the E-E video will have higher levels of mental health literacy than those Latina participants who do not view the E-E video.

Hypothesis 2: Latina participants' who view the E-E video will hold fewer stigmas than those Latina participants who do not view the E-E video.

Chapter 3: Development of the E-E Video

Research Method & Results of Study 1

The purpose of Study 1 was video development. Using the transtheoretical model of health behavior change, our goal was to target Latinas who are in the precontemplation stage i.e., Latinas who had not considered seeking behavioral services (Prochaska & DiClemente, 1984). Individuals in this stage lack awareness regarding the potential consequences of not seeking and receiving services. These individuals may avoid discussing or thinking about the problem at hand, may have experienced a failed attempt at resolving their problem, and may have developed negative views about their ability to change (Prochaska & DiClemente, 1984). Our goal was to develop a culturally specific video focused on a Latina contemplating whether or not she should seek behavioral health services. The video development and production were modeled by Borrayo's (2004) "Where's Maria" video on breast cancer and mammogram screening. We focused on Latinas due to issues of feasibility and certainly we recognize that men may also benefit from such an intervention; however, women tend to report more psychological distress than men (Albert, 2015) and therefore we opted to target Latinas in this study.

Video development: pre-production phase. The video "¡Yo no estoy loca!" was created using both basic research and formative research. Basic research (i.e., exploratory research) is meant to increase our knowledge. This type of research is theoretical and allows researchers to develop a better understanding of problems and concepts surrounding the problem at hand (Borrayo, 2004). Basic research is not focused on finding a solution to a problem. For the purpose of Study 1, our aim was to gain information from the target audience about what should be included in the E-E video (i.e.

characters, plot, content). Formative evaluation research uses expert consultants (formal sources) in the field to evaluate the content of the basic research and for the purpose of this study was applied during the production and post-production of the E-E video (Atkin & Freimuth, 2001; Borrayo, 2004). The purpose of the formative research was to create a media message that was culturally sensitive, appealing, and comprehensible to create awareness of behavioral health problems and services and motivate Latinas to seek behavioral health services.

Pre-production phase 1: basic research. Following Borrayo's (2004) methodology to developing the "Where's Maria?" video, we used focus groups to gather necessary information to develop the content of the video. Per results from an earlier focus group (see Gonzalez & Benuto, 2019), Latinas described negative attitudes, values, and high levels of stigma regarding mental illness and behavioral health services. Participants stated that individuals who had mental health problems or sought out behavioral health services were at risk for being labeled as "*loca*" or crazy. Some participants were unsure of where to seek services especially those in the community setting, while others believed individuals had misconceptions regarding what types of problems or symptoms required seeking behavioral health services. Stigma was reported as the most common reason Latinxs would not seek mental health services. Finally, participants also expressed concern about the level of "*confianza*" or trust and confidentiality an individual had with professionals. These findings served as a basis for the overall premise of the video; our goal was to target misconceptions, stigma, confidentiality etc. To further develop the script, we asked participants questions about the plot and characters for the E-E video.

Methods.

Participants. For the pre-production phase 28 Latinas participated in two focus groups. Inclusion criteria for the study were that the participant be a Spanish-speaking Latina who was 18 years old or older. Data was collected at a community center (n = 15) and a community health clinic (n = 13). Participants were women between the ages of 20 to 64 (M = 47; SD = 8.93). The majority of participants were born in Mexico (n = 20), at a minimum had attended some high school (n = 17) and had not used behavioral health services in the past.

Procedure. Participants were recruited via flyers, social media outlets, and by word of mouth. After participants provided informed consent (this study was approved by the first author's affiliated institutional review board), participants were provided with a synopsis of our objectives. Participants were informed that the researchers were interested in creating a video that would encourage Latinxs to seek behavioral health services. Researchers informed participants they were interested in learning about what content, language, and character characteristics should be present in the video. Specifically, participants were asked six questions. The focus group was audio recorded and the recording was later transcribed and assessed using classical content coding (Morgan, 1997).

Materials. The only materials used in this study were the focus group interview questions which were:

1) How many women should be in the video?
2) What should the relationship between the women be?
3) Where should they be gathered?

4) What should they be doing?

5) What would you like to see in the video?

6) Should the video have famous or well-known actors?

Results. Participants reported that there should be three to four women who are relatives. The characters should be having a conversation while having coffee and desserts (*pan y café* a quintessential Latinx cultural activity) at one of the characters home. The actors should not be famous people, but rather everyday people that the audience can relate to. The characters should each have a different role. The content the participants wanted to see in the video included explanation of mental health issues (e.g. anxiety and depression), explanation of mental health symptoms, explanation of how to access treatment, a discussion of the benefits of seeking treatment, and a discussion that normalized both the experience of psychological distress and the treatment thereof. Using basic research methods, we developed characters for the video and a video story line aimed at educating Latinas about mental health problems and demonstrating that seeking behavioral health services is a noble option. To confirm that the findings from our basic research phase would capture the purpose of the E-E video we conducted formative research.

Pre-production phase 2: formative evaluation research.

Methods.

Participants. For the pre-production phase, two Latina professors (one with experience in Latina mental health and one with experience with media campaigns) provided expert consultation on the E-E video. The consultants were experts in working with Latinxs; one consultant had experience in developing EE videos with Latinxs in the

medical field while the other consultant had experience researching barriers to mental health care among Latinxs. We also had 11 Latinas participate in a focus group to review the drafted script. Data was collected at two community centers (n = 6; n = 5). Participants were women between the ages of 19 to 49 (M = 39.20; SD = 11.20). All participants were born in Mexico and at a minimum had attended 6th grade and had not used behavioral health services in the past (n = 8).

Procedure. The two consultants were contacted (separately) via phone to assist in preproduction and production of the video, specifically for developing the storyline and script. The consultants were asked the same questions that were asked during the basic research focus groups; the calls were placed on speaker phone and were recorded. The recorded calls where then transcribed and assessed using classical content analysis (Morgan, 1997). The information gathered (along with the information gathered in the focus groups that were conducted as part of the basic research) was used to develop a plot and script. Once the script was drafted, the script was emailed to the consultants and subsequently a second phone call was held to give consultants the opportunity to comment on the script and suggest any edits to make the script fit the needs of the target audience. Suggested edits were made. The second draft of the script was then completed and presented to two additional focus groups (n = 11). The participants were asked to review the script and provide feedback on the content, characters, and plot. The focus group was audio recorded and transcribed.

Results. The consultants also endorsed stigma and lack of mental health literacy as the main reason's Latinxs do not seek behavioral health services. Lack of awareness of the symptomology of different mental health problems and the fear of being labeled as

"crazy" were the two main pieces of content that the consultants recommended to be added into the video. The consultants suggested adding a conversation about the family's support in seeking help and how seeking god or prayer to solve problems may be insufficient. The consultants advised having characters who are family members to increase the audience's attention, especially if one of family members is an antagonist. The consultants provided examples of the dialogue that should occur between the characters. The dialogue should also be directed for the target audience that is in the precontemplation stage of behavior. After having a draft of the script, it was presented to two focus groups who provided feedback on the impressions of the script for content, characters, and the plot. The participants reported finding the plot relatable particularly given that the conversation occurred over *pan y café*. The participants reported that they felt that they could relate to the characters and/or knew someone in their life that were similar to the characters in the script. The participants reported that they were presented with new information that helped them understand more about behavioral health issues and access to treatment. They also reported that the content of the script could influence Latinxs to think more positively towards seeking behavioral health services. Using formative evaluation research methods (using focus groups and consultants), we were able finalize characters for the video, video story line, and begin to develop the script that would educate Latinas about mental health problems and encourage Latinas to consider seeking mental health treatment. The next step of Study 1 was video production.

Video Content.

The video was titled "¡Yo no estoy loca!". In the four-minute video, the character Ana is seen moving from the precontemplation stage to the contemplation stage. In the

beginning of the scene there are two characters, Maria (Ana's cousin) and Carmen (Ana's aunt, and Maria's mother) drinking coffee and having pastries (pan dulce) in a Maria's kitchen. Maria and Carmen are discussing how good Carmen's coffee is. Seconds later enter Ana (*protagonist/transitional character*) with her younger sister Rosa (*antagonist*). After refusing her aunts coffee, Ana, is asked by Maria and Carmen what's wrong. They mention that she looks different, maybe sad or sick. At first Ana states that she is fine but after more questioning by her cousin Ana finally admits she has been feeling sad but doesn't want anybody to know. She eventually begins to mention other symptoms like lack of sleep, difficulty concentrated, and feeling easily irritated (*educational material*). Ana mentions that she doesn't feel like herself.

Carmen begins to inquire more about Ana's symptoms and their duration, as she herself has gone through similar symptoms. At this moment Rosa (Ana's sister) interjects and tells everyone that Ana is fine. However, Ana admits that she has being feeling her symptoms for a few weeks. Maria turns to her mother, Carmen, and admits that she remembers her mother feeling this way a few years ago. Carmen didn't want to talk to anyone, so Maria didn't know how to help her. Rosa is surprised by this information since her aunt seems to be such a strong person and that she could not imagine her going through a hard time (*belief/misconception*). Maria steps in and corrects Rosa that people can be strong and still go through a difficult time (*educational material*).

Carmen begins to describe her situation. She explains how she grew up in a time were people didn't talk about how they felt (*norm*). She furthers expands on other symptoms she felt (*educational material*). Ana returns into the conversation by saying she doesn't have hope that anything can help her. Rosa is upset that her aunt never told

anyone about her problems

(*value*), and inquiries about what she did afterwards. Carmen responds by saying that she spent a lot of time suffering, wishing her symptoms would disappear. It didn't matter how much she wished or prayed (*value*) she would get better. Carmen mentions that her sister (Angela) told her to talk to a professional, who could help reduce her symptoms.

Carmen provides a business card to Ana. Rosa intercepts the card and is concerned that her aunt visited a behavioral health specialist, making the assumption that it was a psychiatrist (*belief/misconception*). Rosa then turns to her aunt in disbelief that she saw a specialist when she's not crazy (*misconception*). Carmen responds stating that she is not crazy. She called the number and made an appointment with a professional who educated her on her symptoms. The symptoms were attributed to anxiety and depression (*education material*), which are common among Latinas (*education material*). They explained ways that she could feel better. Ana interjects and says she wishes she could feel better (*precontemplation stage*).

Rosa is appalled that Ana is considering possibly seeking professional help, mentioning that you cannot trust professionals (*belief/misconception*) and that the medications can cause you to become crazy (*belief/misconception*). Maria responds to Rosa's comments by indicating that she is misinformed, and the Latinxs try to be tough (*belief*) and not get help. Maria also states that Latinxs are also afraid of getting hurt just because they don't know what professionals do (*belief*). Carmen adds to what Maria is saying by mentioning that Latinxs are also worried about people talking badly about someone who seeks behavioral health services. Carmen mentions that the professionals

keep everything confidential. Carmen urges Ana to take the business card and asks Ana to promise her to think about it.

In the last scene Ana states that maybe she does need help since she can't do it herself. She states she will add the phone number into her phone (*Contemplation Stage*). We see Ana grab the business card and enter the phone number into her cellphone (*Contemplation Stage*).

Chapter 4: Acceptability of the E-E video

Research Method & Results of Study 2

After the video was produced and reviewed by our consultants, the video was shown to Latinas in the community. The video was first shown to two focus groups which consisted of 17 Latinas and subsequently shown to 61 Latinas so that we could collect quantitative (survey) data on acceptability. The purpose of the focus groups was for participants to assess if the video message was clearly portrayed in the video and to assess the acceptability of the video (qualitative evaluation),

Methods: Qualitative Evaluation of Acceptability.

Participants. A total of 17 Latinas participated in a focus group to review the E-E video. Data was collected at one community health center (n = 5) and from a community center (n = 12). Participants were women between the ages of 36 to 64 (M = 48.76; SD = 8.40). The majority of participants were born in Mexico (n = 13) at a minimum had attended middle school and had not used behavioral health services in the past (n = 15).

Procedure. Participants were recruited via flyers, social media, and word of mouth. After participants were provided informed consent, they were shown the 4-minute video. Participants were asked to review the content and assess if the message was being portrayed clearly by the actresses. Additionally, questions were asked regarding whether the video would captivate the audience's attention, was culturally appropriate, and would encourage individual's behavior change. Participants were asked "What are your thoughts on the video?", "What did you learn?", "Would people who see this video feel encouraged to seek behavioral health services?", and "Should any changes be made to the video?". The focus groups were video recorded, transcribed and assessed for content.

Results. In response to the question "*What are your thoughts on the video*?", participants reported positive praise towards the video indicating that they thought the video was good (n = 9) and entertaining (n = 7). In response to the second question "*What did you learn*?", participants reported that they learned more information about depression (n = 5). Regarding the third question "*Would people who see this video feel encouraged to seek behavioral services*?", participants reported that they felt the video would help encourage people to seek help (n = 7). The final question asked was "*Should any changes be made to the video*?". Participants reported that they felt no changes were needed to be made (n = 6). They felt they could connect with the characters (n = 2). Overall, participants reported enjoying the video and felt no changes were needed, the message was clear, and they reported learning about depression and behavioral health services. The participants also reported that they could personally connect with the characters and the story line.

Methods: Quantitative Evaluation of Acceptability.

Participants. Individuals who were 18 years old or older, Spanish speaking Latinas, and who could read at a sixth grade reading level, were eligible to participate in our study. The sample was collected from a larger RCT study (Gonzalez & Benuto, 2019) where participants were randomly assigned using a research randomizer (Urbaniak & Plous, 2013) into the E-E video or TAU condition to control for group differences. Data was collected from churches and two community events. Participants (N = 61) who provided information on acceptability of the E-E video were women between the ages of 18 to 72 (M = 38.31 years old; SD = 13.94); mostly self-identified as Mexican (n = 48),

and had not used behavioral health services in the past (n = 39). See Table 1 for demographic information.

Table 1

Demographic Information

Characteristic	n	%
Subethnicity		
Mexico	48	79%
Central America	9	15%
South America	2	3%
Other	2	3%
Income		
Less than $10,000	18	31%
$10,001- $20,000	8	14%
$20,001- $29,000	9	15%
$29,001- $39,000	5	9%
$39,001- $49,000	9	15%
$49,001- Above	10	16%
Education		
6th Grade or Under	13	11%
Middle School	18	16%
Some High School or Graduated	33	29%
Graduated from trade school	25	22%
Some College or Graduated college	18	16%
Some Graduate school or Graduate Degree	7	6%
Citizenship Status		
Undocumented	7	12%
Documented	9	15%
Citizen	40	67%
Prefer not to answer	4	6%
Used Behavioral Health Services		
Yes	17	30%
No	39	68%
Prefer not to Answer	1	2%

Procedure. After watching the video, the participants completed a survey. There was a total of three questions on the survey: "*Will the video help people seek therapy?", "What did you learn?"* and *"Where should the video be shown?".* There was also an option for participants to write any additional comments about the video.

Results. A summary of the survey responses can be found in Table 2. Participants were asked "*Will the video help people seek therapy?".* A total of 57 participants answered yes. Participants were then asked to identify *what they learned (*Table 3*)*. Two common themes were identified: 1) Latinxs are not informed about depression and anxiety; 2) Not to feel shame for seeking help. Specifically, participants said that they learned "*it was okay to ask for help"* while another participant learned that "*getting help doesn't mean you're crazy*". One participant wrote "*This is very accurate. I've known people in my life that have told me what Maria said to Ana*", another participant wrote "*It has helped me to decide to seek help*". Participants were asked to provide any comments they had; one participant stated that she would like to see more videos that talk about different mental health situations. Finally, Participants were asked "*Where should the video be shown*?" table 4 demonstrates the participants answers with school/universities being the most popular answer.

Table 2

Quantitative Survey Question and Response

Survey Question	n	%
Will the video help people seek therapy?		
Yes	56	86%
Maybe	3	5%
No	3	5%
Did not answer	3	5%

Table 3

Quantitative Survey Questions and Responses

What did you learn?	Any other comments?
1) Latinxs are not informed about depression and anxiety: • Don't recognize symptoms • Know when and where to seek services • Okay to seek professional services • Getting help doesn't mean you're crazy 2) Not to feel shame for seeking help: • Not judge others with depression • Okay to talk about mental health problems with others • Stigma is a problem in the Latinx culture	• Shows a solution • The video is accurate • Shows how much worrying can affect people • Helped people seek services

Table 4

Locations to Display Video

Where should the video be shown?	*n*
School/Universities	31
Doctor office/ Hospitals	15
Church	15
Public Events	4
Work	5
Stores	2
Media and Social Media	5
Daycare/nursing homes	1

Chapter 5: E-E Video Randomized Control Trial

Research Method and Results of Study 3

After developing the E-E video (Study 1) and finding that the E-E was highly acceptable (Study 2), the aim was to test whether an E-E video would shift attitudes about mental health services. We developed a 2x2 mixed study design and hypothesized that by presenting the E-E video to Latina women, we will see that the video will cause a shift in attitudes regarding mental health problems, service utilization, and stigma towards mental illness and mental health services (moving from a negative view towards behavioral health service utilization to a positive view towards behavioral health service utilization). The participants who viewed the video would experience increased behavioral health literacy (i.e., an increase in knowledge) and decreased stigma towards mental illness (i.e., an attitude) in comparison to those who were in the control condition.

Methods.

Participants. The study targeted a female audience due to issues of feasibility but certainly we recognize that men would also benefit from such an intervention. Individuals who were 18 years old or older, Spanish speaking Latinas, and who could read at a sixth grade reading level, were eligible to participate in our study. Participants were randomly assigned using a research randomizer (Urbaniak & Plous, 2013) into the E-E video or TAU condition to control for group differences. Data was collected from 115 Latinas from four churches (n = 70) and two community events (n = 45). Data from 23 cases were omitted for having more than 5% missing data, not passing the manipulation check, and for not completing post measures). Participants included in the final analysis were 92 women between the ages of 18 to 72 (M = 39.40 years old; SD = 14.35); the majority of

participants identified as Mexican (n = 71) and had not used behavioral health services in the past (n = 56). See Table 5 for demographic information.

Table 5

Demographic Information

	Total Sample N=92		E-E Condition n=53		Control Condition n=39	
Characteristic	n	%	n	%	n	%
Subethnicity						
Mexican	71	77%	40	75%	31	79%
Central American	14	15%	9	17%	5	13%
South American	4	5%	2	4%	2	5%
Other	3	3%	2	4%	1	3%
Income						
$0-$20,000	43	49%	21	41%	22	59%
$20,001- $50,000	35	40%	21	41%	14	38%
Higher than $50,000	10	11%	9	18%	1	3%
Education						
Less than High School	22	25%	9	17%	13	34%
High School	28	30%	18	34%	10	26%
Higher than High School	41	45%	26	49%	15	40%
Citizenship Status						
Undocumented	11	12%	12	13%	4	10%
Documented	19	21%	22	15%	11	30%
Citizen	55	61%	34	64%	21	55%
Prefer not to answer	6	7%	4	8%	2	5%
Used Behavioral Health Services						
Yes	25	30%	15	30%	10	30%
No	56	68%	34	68%	22	67%
Prefer not to Answer	2	2%	1	2%	1	3%

Measures. The demographic information collected for this study included the participant's age, sub-ethnicity, education, and income. Three measures were administered as pre and posttests as outcome measures: *Depression Literacy Questionnaire (D-lit), Depression Stigma Scale (DSS), Attitudes Towards Seeking Professional Help (ATSPH).* All measures have been validated in English; those

measures that are not available in Spanish were translated using the transadaptation methods by Cohen, Gafni, and Hanani (2007) and Zucker, Miska, Alaniz, and Guzman (2005). A valid and reliable Spanish-language version of the measures was used (Benuto, Gonzalez, Zimmerman, & Yang, 2019).

Depression Literacy Questionnaire (D-Lit). The D-Lit assess mental health literacy specific to depression developed by Griffiths et al, (2004). The questionnaire consists of 22 items, which are true or false. Respondents can answer each item true, false, or don't know. Each correct response receives one point, and higher scores indicate higher mental health literacy of depression. A valid and reliable Spanish-language version of the measures was used (Benuto. Gonzalez Zimmerman, & Yang, 2019).

Depression Stigma Scale (DSS). The DSS is used to measure stigma associated with depression developed by Griffiths et al, (2004). It consists of two subscales, which measure two different types of stigma: personal and perceived. Responses to each item are measured on a five-point scale ranging from strongly agree (0) to strongly agree (4). Higher scores indicate higher levels of depression. A valid and reliable Spanish-language version of the measures was used (Benuto, Gonzalez Zimmerman, & Yang, 2019).

Attitudes Towards Seeking Professional Help (ATSPH). The ATSPH is a 20-item item measure that is intended to reflect an individual's attitude toward professional behavioral health treatment. It is a modified version of the Attitudes Towards Seeking Professional Psychological Help Scale (Fisher & Turner, 1970). A valid and reliable Spanish-language version of the measures was used (Benuto, Gonzalez Zimmerman, & Yang, 2019).

Procedure. We used a Randomized Controlled Trial (RCT) in a community setting. Latinas were randomly assigned to the intervention condition where they watched the E-E video or TAU. Individuals in the intervention condition viewed a four-minute E-E video and given a flyer with the number to behavioral health services while the other participants received TAU (they did not view the video) but were given a flyer. The flyer had information about a behavioral health clinic that offered free behavioral health services in the community for individuals who experienced symptoms of depression or anxiety. The flyer included a phone number that individuals could call to ask questions or to request free services. Individuals were assessed at pre-test and post-test for mental health literacy, stigma, and attitudes towards behavioral health services.

Study Sites. Data was collected at two community events and from four churches in the Northern Nevada area.

RCT. An RCT was conducted to determine if the Spanish E-E video (the intervention condition) increases mental health literacy and decreases stigma among a sample of Latinxs (n = 115). Participants were randomized into the intervention or control condition to control for any group differences.

Intervention condition. After discussing informed consent, participants were asked to complete demographic information and measures on attitudes and stigma. After completing the measures, participants watched a four-minute E-E video and were instructed to complete the second set of measures.

Control condition. After discussing informed consent, participants were asked to complete demographic information and measures on attitudes and stigma.

Results.

Data Preparation. All data analyses were completed in SPSS Version 24. Prior to conducting the main analysis, all variables were screened for inconsistent or abnormal values, and continuous measures were measures for skewness and outliers. There were 23 cases that were omitted from the analysis for having more than 5% missing data, not passing the manipulation check, and for not completing post measures (See Table 6 for exclusion reason and Table 7 for demographic information for participants who were omitted from the main analysis).

Table 6

Excluded Cases (N=23)

Reason	*n*
Missing data or refusal to complete measures	*15*
Failed manipulation check	*8*

Table 7

Demographic Information for excluded cases N=23

Characteristic	n	%
Subethnicity		
Mexico	20	88%
Central America	1	4%
South America	1	4%
Puerto Rican	1	4%
Income		
$0-$20,000	13	57%
$20,001- $50,000	4	17%
Higher than $50,000	6	26%
Education		
Less than High School	9	39%
High School	5	22%
Higher than High School	9	39%
Citizenship Status		
Undocumented	1	4%
Documented	3	13%
Citizen	17	75%
Prefer not to answer	2	8%
Used Behavioral Health Services		
Yes	5	22%
No	16	70%
Prefer not to Answer	2	8%

To ensure equality between the intervention and control condition samples, we conducted a series of chi square analyses (see table 8) on education ($X^2(2) = 3.69$, p =.17), income (X^2 (2) = 5.74, p =.06) and immigration status (X^2 (5) = 3.80, p =.58), and study site (X^2 (1) =.58, p =.45), For all chi square analyses p > .05 and as such these variables were not controlled for in subsequent analyses. The data was first reviewed in order to determine if they met assumptions to run independent samples t-tests. There were no outliers, as assessed by visual inspection of boxplots; data was normally distributed for each group, as assessed by Shapiro-Wilk test (p > .05). There was homogeneity of variances, as assessed by Levene's test of homogeneity of variances for D-Lit (p =.18), ATSPH (p = .45), DSS personal stigma (p = .17), and DSS perceived stigma (p = .75).

Table 8

Chi Square Analysis on Demographic Variables

Variable	X^2	*p*
Education	3.69	.17
Income	5.74	.06
Immigration Status	3.80	.58
Study Site	.58	.45

**Significant at p<.05*

Effects of the Intervention: t-tests. There were 53 Latinas in the E-E condition and 39 participants in the control condition. Independent samples t-test was used to establish that the two groups were equal at baseline for D-Lit, ATSPH, DSS personal stigma, and DSS perceived stigma scores. Participants in both conditions had similar mean scores at base line and were not statistically different at baseline for three of four

dependent measures (see Table 9 and Table 10). D-Lit (t (90) = 1.01., p = .312), ATSPH (t (90) = .78, p = .450), DSS personal stigma (t (90) = .16, p = .874) were not statistically different at baseline, but DSS perceived stigma was (t (90) = 2.00, p = .049). Therefore, independent samples t-test were run for attitudes, literacy, and personal stigma. The results from independent samples t-test for post-intervention scores on the dependent measures (attitudes, literacy, and personal stigma) indicate that there were significant mean differences between the control and intervention on the D-lit measure, t (89) = 2.94, p = .004. The E-E video condition D-Lit scores condition (M = 10.58, SD = 3.79) were 2.48, 95% CI [.80 to 4.16] higher than the control condition D-Lit scores (M = 8.11, SD = 4.20). The Cohen's effect size value (*d* = .22) indicated a small effect size (Cohen, 1988). There were no significant differences in the means for the ATSPH scores between the intervention and condition (95% CI -1.18 to 3.19), t (90) = .73, p > .05. The same results were found for DSS Personal; there was no statistically significant difference between the two conditions on DSS personal stigma (95% CI -3.85 to 1.78), t (90) = -.73, p > .05). (see Table 9 and Table 11).

Paired T-tests were used to assess changes from pre to post for individuals within the intervention and control condition. The data was first reviewed in order to determine if they met assumptions to run independent samples t-tests. There were no outliers, as assessed by visual inspection of boxplots; data was normally distributed within each group, as assessed by Shapiro-Wilk test (p > .05). There was homogeneity of variances, as assessed by Levene's test of homogeneity of variances for D-Lit (p =.18), ATSPH (p = .45), DSS personal stigma (p = .17), and DSS perceived stigma (p = .75). Results from the paired t-tests indicated that there were significant differences from pre to post scores

on the D-Lit for individuals in the control condition (*M*=-*.76,* 95% CI [-1.37, -.16], *t(*37) = -2.56, p < .05, *d* = .42*)* and for the personal stigma measure for individuals in the intervention condition (*M*=-2.23, 95% CI [-4.27, -.18], *t*(52) = -2.18, p < .05, *d* = .30*)*. The results indicate that in the control condition there was a decrease in D-Lit scores from pre to post and for the intervention group there was a decrease in personal stigma scores from pre to post. No significant changes were noted from pre and post scores for individuals in both the control (ASTSPH, DSS perceived and personal, p >.05) and intervention (ATSPH, D-Lit, and DSS perceived, p > .05) conditions for all other measures

Table 9

Mean scores at Pre and Post Intervention

Measure	Total Sample M ± SD (n=92)	EE Condition M ± SD (n=53)	Control Condition M± SD (n=39)
Pre ATSPH	19.37 ± 5.26	19.74 ± 5.62	18.87 ± 4.75
Post ATSPH	20.18 ± 5.56	20.55 ± 5.64	19.69 ± 5.49
Pre D-lit	9.45 ± 4.23	9.83 ± 4.50	8.92 ± 3.82
Post D-lit	9.55 ± 4.13	10.58 ± 3.79	8.10 ± 4.20*
Pre DSS personal	13.21 ± 7.97	13.32 ± 8.69	13.05 ± 6.98
Post DSS personal	11.53 ± 6.69	11.09 ± 7.12*	12.13 ± 6.11
Pre DSS perceived	18.74 ± 8.36	20.21 ± 16.74	18.73 ± 8.36
Post DSS perceived	17.05 ± 9.09	18.60 ± 9.54	14.95 ± 8.10

**Significant at p<.05*

Table 10

Results from Independent t-test at pre-test

Measure	EE Condition M (n=53)	SD	Control Condition M (n=39)	SD	t	*p*
Pre ATSPH	19.74	5.62	18.87	4.75	.78	.44
Pre D-lit	9.83	4.50	8.92	3.82	1.02	.31
Pre DSS personal	13.32	8.69	13.05	6.98	.16	.87
Pre DSS perceived	20.21	16.74	18.73	8.36	2.00	.05

Table 11

Results from Independent t-test at post-test

Measure	EE Condition M (n=52)	SD	Control Condition M (n=39)	SD	t	*p*
Post ATSPH	20.55	5.64	19.69	5.49	.73	.47
Post D-lit	10.58	3.79	8.10	4.20	2.94	.004*
Post DSS personal	11.09	7.12	12.13	6.11	-.73	.47
Post DSS perceived	18.60	9.54	14.95	8.10	1.93	.06

**Significant at p<.05*

Effects of the Intervention: ANCOVA. Because there was a statistically significant difference between the control and intervention condition at pre-test on the DSS perceived, we needed to control for pre-test scores. Therefore, an Analysis of Covariance (ANCOVA) was conducted. Specifically, an ANCOVA was run to determine if there was a difference on post-intervention DSS Perceived scores between the conditions once their means had been adjusted for pre-intervention DSS Perceived scores. With regard to assumptions, there was a linear relationship between pre- and post- DSS scores between the intervention and control, as assessed by visual inspection of a scatterplot. There was homogeneity of regression slopes as the interaction term was not statistically significant, F (1, 88) = .15, p = .70. Using the Shapiro-Wilk's test Standardized residuals for the interventions and for the overall model were assessed. The standardized residuals were normally distributed for the control condition (p > .05) but not the intervention (p = .03). We decided to continue interpretation without transformations as this assumption is robust to normality. There was homoscedasticity

and homogeneity of variances, as assessed by visual inspection of a scatterplot and Levene's test of homogeneity of variance ($p > .05$). There were no outliers in the data, as assessed by no cases with standardized residuals greater than ±3 standard deviations. After adjustment for pre-intervention DSS Perceived scores, there was no statistically significant difference in post-intervention DSS Perceived scores between the conditions, $F (1, 88) = .53$, $p = .57$, partial $\eta 2 = .006$.

Chapter 6: Discussion

The aims of the current study were as follows:

Aim 1: Develop an E-E video that is culturally sensitive, has high social validity, and is easily disseminable in a variety of settings.

Aim 2: Conduct a Randomized Control Trial [RCT] to determine if the E-E video increases mental health literacy and decreases stigma among Spanish-speaking Latinas.

Results from the three studies that constitute this dissertation indicate that the video that was rated as acceptable, per the focus group results the video appears to have high social validity, could be disseminated at churches, schools, doctors' offices, and is effective at improving mental health literacy.

E-E Video: ¡*Yo no estoy loca*!

¡*Yo no estoy loca*! is an educational tool that was designed to increase mental health literacy, decrease stigma, and help Latinas who are experiencing depression to shift from the pre-contemplation to the contemplation stage and ultimately increase treatment-seeking rates. To our knowledge, this is the first video that was developed for Latinas for behavioral health and we had the advantage of following Borrayo's (2004) protocol for educational tool development that is rooted on a solid theoretical and empirical base. Research in the medical field has demonstrated the E-E has helped various individuals create behavior change (Wakefield, Loken, & Hornik, 2010). E-E videos educate individuals about different health problems in an entertaining method. They add characters similar to the target audience, and show the characters being educated, go thorough decision processing and finally change a behavior. Given that many Latinxs experience behavioral health problems yet are not likely to seek services

due to internal barriers, a video intervention was developed. Using the transtheoretical model of behavior change, social cognitive theory, elaboration likelihood theory, basic and formative research, a Spanish language telenovela E-E video on behavioral health problems and services was developed. Education via video can reduce barriers to care by reducing stigma and mental health literacy. Additionally, this video can be used with those who have low literacy rates and may not be able to read educational materials. Such a video can also be added as a public service announcement on different Spanish channels and social media outlets, in order to enhance the ease of dissemination into the community. Public service announcements have been an effective way to decrease stigma to a mass of individuals (Corrigan, Powell, & Al-Khouja, 2015).

The most important contribution of ¡Yo no estoy loca! is the creation of a behavioral health education tool (specific to depression) in Spanish that can be easily disseminated to Latinas who are likely to be underserved, under-resourced, and unlikely to know much about depression and/or behavioral health services (Study 1). The video is culturally sensitive, and the extant literature has indicated a need for culturally sensitive interventions (Singhal & Rogers, 2009; Borrayo, 2004; Ritterfield & Jin, 2006; Hernandez, Ruggiero, Prohaska, Chavez, Boughton, Peacook, Zhao, & Nouwen, 2016; Cabassa et al., 2016). Furthermore, recent research (Benuto, Gonzalez, & Segovia-Reinosa, Duckworth 2019) demonstrated that stigma mediates the relationship between ethnicity and behavioral health service utilization supporting that stigma is an important target for intervention. While the overarching aim of the video is to move Latinas, who have behavioral health service needs from pre-contemplation to contemplation, mental health literacy and stigma may be related to intentions to use behavioral health services

(i.e., pre/contemplation) and targeting these may increase treatment-seeking behavior. Preliminary findings (Study 2) indicate that the video is well received in the community and has the potential to increase mental literacy and decrease stigma.

Examining ¡*Yo no estoy loca*! as a means of increasing mental health literacy and decreasing stigma

Entertainment-Education media campaigns have been beneficial in increasing awareness, knowledge, and causing a shift in attitudes among various health campaigns (Jibaja-Weiss et al., 2011; Volk et al., 2008; Booker, Miller, & Ngure, 2016; Khalil & Rintamaki, 2014). For Latinxs entertainment-education video have been effective in shifting attitudes in various health domains (Baezconde-Garbanati et al., 2014; Borrayo, Rosales, and Gonzalez, 2016) however they have only been explored as a fotonovela (Hernandez & Oraganista, 2013; Cabassa, Oh, Humensky, Molina, Unger, & Baron, 2016) in the behavioral health field. Thus, the purpose of Study 3 was to empirically test whether an E-E video would shift attitudes about behavioral health services. The findings from Study 3 indicate that there was a significant difference in means between the E-E video condition and control condition on the D-Lit. However, both stigma (as measured by the DSS) and attitudes towards seeking professional help (as measured by the ATSPH) were unimpacted by the E-E video.

Mental health literacy

The findings from our study regarding mental health literacy, are similar to those of other entertainment education campaigns for Latinxs. In Borrayo, Rosales, and Gonzalez (2016), participants who viewed the “Where’s Maria?” E-E video reported an increase in knowledge regarding breast cancer. The reported effect size for “Where’s

Maria" was 0.47, which is medium effect size. In the current study there was a statistically significant difference in means between the intervention and control group for knowledge regarding depression. Although the effect size from our study was smaller (*d* =.22) than the "Where's Maria" RCT, our video did provide participants with important new content that helped increase their knowledge about depression. It is noteworthy that our intervention was a mere 4 minutes (4 minutes shorter than the "Where's Maria" Video), this introduces issues of dosage. The "Where's Maria video" was longer (i.e., a larger dose) and therefore greater effects may be achieved with a higher dose. When we compare the current studies E-E video on depression to the fotonovela on depression (Cabassa et al. 2016) we see a similar trend as to "Where's Maria". In the fotonovela RCT there were higher effect sizes reported (Cohen's D at posttest .91; .43 at one month follow up) in comparison to the current study. However, we once again circle back to dosage, participants were given 30 minutes to review the information from the fotonovela before they completed the posttest; therefore, they were given more time to absorb the information before completing the posttest measures. Amount of dosage to E-E campaigns may be an important factor consider in the future. Since E-E campaigns tend to introduce or cover complex content, the campaigns may to increase the amount of dosage or exposure to the E-E campaigns in order to see an increase in knowledge.

Various health campaigns have noted that increasing knowledge about health issues is drastically important as it can play a role shifting attitudes that can lead to behavior changes (Wakefield, Loken, & Hornik, 2010). Increasing knowledge and awareness has also been linked to reducing stigma (although we did not find that to be the

case in this study) which has been previously been linked to a decrease in health service utilization, especially among Latinxs (Hirai et al., 2015; Interian et al., 2010; Jimenez et al., 2012; Borrayo et al., 2016; Jibaja-Weiss et al., 2011; Griffths et al., 2011).

Stigma and Attitudes

In the field of behavioral health, Benuto and colleagues (2019) had found that stigma, but not mental health literacy, partially mediated the relationship between ethnicity and behavioral health service utilization (Benuto, Gonzalez, Reinosa, & Duckworth, 2019) among Latinxs. The findings from the current study combined with the results from the Benuto et al. study suggest that the E-E video may not have a direct impact on behavioral health service utilization rates as stigma was not reduced by the E-E video. These findings are consistent with Cabassa and colleagues (2016) who also found that stigma was unimpacted by a media campaigns (administered as a fotonovela). It is possible that stigma is deeply embedded and resistant to change and the small touches that comprise media campaigns are not sufficient to shift attitudes. Interestingly results from the qualitative data that we collected did suggest that participants at least perceived that the video could reduce negative attitudes. It is also possible that changes in attitudes take longer to manifest and might be better captured in a long-term follow-up. Various large-scale campaigns aimed at reducing stigma towards substance abuse (outside of the United States) have been longitudinal multilevel campaigns and have been running for about seven years (and are ongoing; National Academics of Science et al., 2016). In addition to running the campaigns for various years they use different platforms to access different communities in different areas. Such multilevel platforms have demonstrated not only a decrease in stigma but also less discrimination has been reported. As noted

above with mental health literacy, it is possible that larger doses are needed in order to reduce stigma. Since stigma is such a complex concept, individuals may need to have repeated exposure to media campaigns in order for attitudes to shift. Finally, an alternative explanation other than dosage is that other health campaigns may be more successful because they aim at reducing stigma in the medical field where individuals may already hold fewer stigmas versus behavioral health issues.

Clinical Implications

While we did not find that the E-E video successfully changed attitudes or reduced stigma, we did find that it increased depression knowledge. It is possible that shifts in attitudes or stigma were not captured as we did not conduct a longer-term follow-up investigating the longer-term impact of the E-E video. The potential benefits of distributing education (that can shift attitudes) via a telenovela style video that can increase knowledge and literacy about mental health among a population that has been noted to have low mental health literacy should not be underscored particularly given that the video can be easily disseminated and has been given high acceptability ratings. Indeed, the E-E video can be distributed as a public service announcement on different Spanish television channels, made available via social media outlets where individuals can share the videos with others they know, and shown in integrated health centers while participants wait to see their medical health provider, possibly initiating a discussion of depression or other behavioral health needs. Lastly it is also more eco-friendly method to educate individuals, rather than distributing handouts.

Limitations & Future Directions

Since our study was testing a novel method to reduce stigma towards behavioral services among Latinxs, we did not assess whether the E-E video impacted behavioral service use. Our E-E video was developed to target individuals in the first stage of behavioral change: precontemplation stage (Prochaska & DiClemente, 1984, Prochaska & Velicer, 1997). This stage is focused on creating awareness regarding depression among the target audience however we did not consider if the video could help individuals more to other stages of behavioral change (like seeking services without reporting changes in knowledge and stigma). In order to assess that, questions regarding intent and contacting mental health services would have been needed. Future directions would be to include measures to assess individual's intent to seek services and if they contact mental health services.

A second limitation was that we did not conduct a long-term follow-up to see if the results sustained after some time or if maybe with more time attitudes did shifted, as noticed in larger media campaigns. It is possible that participants needed more time to process the information received from the video, especially for stigma, since it can be complex content (National Academics of Science et al., 2016). Additionally, long term follow-up data would allow us to explore if participants retained depression knowledge obtained from the E-E video. Future directions would include adding long-term follow up measures to assess if depression knowledge is sustained long after the video has been viewed.

A final limitation is that we did not assess acculturation in our study and its impact on literacy and stigma. It is possible the acculturation may account for individuals' level of stigma. What level of stigma do Latinas who were born in the U.S.

or have lived in the U.S. for a long amount of time have in comparison to Latinas who recently immigrated to the U.S.? Adding measures of acculturation in future studies could assist in providing more information about the limitation. Finally, although there was no evidence to support differences between subethnicities, our video was focused and modeled to address individuals that share a Mexican culture. The majority of the Latinas in our sample who identified as Mexican, therefore, further evidence is needed to assess if the content in the video can be generalized to all Latinas, or if it would be better suited for Latinas who identify with a Mexican culture.

Conclusion

¡*Yo no estoy loca*! is an educational tool that was designed to increase mental health literacy, decrease stigma, and help Latinas who are experiencing depression to shift from the pre-contemplation to the contemplation stage and ultimately increase treatment-seeking rates. While we did not find that the E-E video successfully changed attitudes or reduced stigma, we did find that it increased depression knowledge. E-E methods have been so successful in other health domains in increasing knowledge and shifting attitudes therefore research efforts should continue on assessing the impact E-E has in the field of behavioral health. Future directions would be to include measures to assess individual's intent to seek services and if they contact mental health services and should also assess if depression knowledge is sustained long after the video has been viewed. Finally, more qualitative research should be done to assess if there should be more videos created that can cover different behavioral topics such as schizophrenia, bipolar disorders, and substance abuse or if a single video on mental health care would be more beneficial to individuals in the community in the precontemplation stage.

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