Published in final edited form as:

Int J Cult Ment Health. 2017 ; 10(1): 19–32. doi:10.1080/17542863.2016.1246581.

Prioritizing the healthcare needs of Latinos with mental illness

Patrick W. Corrigan, Alessandra Torres, Juana L. Lara, Lindsay Sheehan, Jonathon E. Larson, and Latino Health Disparities Consumer Research Team

Department of Psychology, Illinois Institute of Technology, Chicago, Illinois

Abstract

Latinos with serious mental illness have higher morbidity and mortality rates than same age peers. In this paper, we review findings of a community based participatory research project meant to identify important health needs of this group, barriers to these needs, solutions to the barriers and the promise of peer navigators as a solution. Findings from a prior qualitative study yielded 84 themes related to needs, barriers and solutions. These findings were transposed into individual items, to which 122 Latino participants with mental illness responded using a 7-point importance scale. Results showed item importance means ranging from 4.34 to 5.47, with counseling/therapy services and mental health treatment topping the list for healthcare needs. Analyses also examined differences between those born in the USA versus those born elsewhere. Latinos who were native to the USA differed significantly from those born abroad in over one quarter of importance ratings. Implications of these findings for integrated care of Latinos with serious mental illness are discussed.

Keywords

Latinos; mental illness; healthcare priorities; integrated healthcare; nativity

Introduction

People with disabling psychiatric disorders show high rates of co-occurring physical illnesses that are often further disabling or may lead to death (Druss, Zhao, von Esenwein, Morrato, & Marcus, 2011; World Health Organization, 2005). Serious mental illness is defined as psychiatric disorders (e.g., schizophrenia, major affective disorders, personality

CONTACT: Juana L. Lara jlara1@iit.edu.

Notes on contributors

Patrick Corrigan is distinguished professor of psychology at the Illinois Institute of Technology and principal investigator of Chicago Health Disparities.

Alessandra Torres is the Project Manager of the Integrated Care & Peer Navigator Program for Latinos with Mental Illness who is also currently studying in a graduate program in Public Health.

Juana L. Lara is the research assistant of Integrated Care & Peer Navigator Program for Latinos with Mental Illness.

Lindsay Sheehan, Ph.D., is Senior Research Associate at Illinois Institute of Technology and the project manager for a PCORI-funded research project on community-based participatory research (CBPR) for African-Americans with serious mental illness. Other research interests of Dr Sheehan include health disparities, self-determination, and stigma.

Jonathon E. Larson is associate professor of psychology at the Illinois Institute of Technology.

Disclaimer

All statements in this report, including its findings and conclusions, are solely those of the authors and do not necessarily represent the views of the Patient-Centered Outcomes Research Institute, its Board of Governors or Methodology Committee.

disorders) that interfere with the ability to work or live independently (Substance Abuse and Mental Health Services Administration, 2016). People with serious mental illness show increased incidence and prevalence in cancer, (Schanzer, Dominguez, Shrout, & Caton, 2007), cardiovascular and respiratory illness (Badiaga et al., 2009; Carliner et al., 2013; Diez-Roux, Northridge, Morabia, Bassett, & Shea, 1999), gastro-intestinal disorders (Weinreb, Goldberg, Bassuk, & Perloff, 1998), neurological disorders, (Hwang et al., 2008; Laporte et al., 2006) and orthopedic illnesses, including those due to accident (Takano, Nakamura, Takeuchi, & Watanabe, 1996). The National Association of State Mental Healthcare Providers (2005, 2006) has identified physical and behavioral health co-morbidities in this population among its key priorities.

The healthcare problems of people with serious mental illness are exacerbated by ethnic health disparities (Ezell, Siantz, & Cabassa, 2013). For example, Latinos with serious mental illness show significant health problems compared both to the non-Latino White population in general (Sundquist, 1993) and the European American population with serious mental illness (Alegría, Carson, Goncalves, & Keefe, 2011; Cabassa et al., 2013; Folsom et al., 2007). Disparities in healthcare services for Latinos are particularly problematic (Alegría et al., 2002; Folsom et al., 2007; Hough et al., 2002; Keyes et al., 2012). Nationally, 37% of Latinos are uninsured, with Latino children among the least likely to be insured, regardless of citizenship (Brown, Ojeda, Wyn, & Levan, 2000; Kaiser Commission on Medicaid and the Uninsured, 2000). A comparable health coverage disparity exists between Latinos with serious mental illness and European Americans with serious mental illness (Alexandre, Martins, & Richard, 2009; Blanco et al., 2007; Sorkin, Pham, & Ngo-Metzger, 2009).

Latino heritage may additionally compound problems of serious mental illness and physical illness (Cabassa et al., 2014; Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005). Language differences (Bauer, Chen, & Alegría, 2010; Kim et al., 2011) and lower levels of education (Osinaga, Furegato, & Santos, 2007; Xu, 2011) prevent many from engaging in treatment (Diaz, 2002). Concerns related to US Immigrations and Customs Enforcement for those with uncertain residency status make some Latinos suspicious of institutions (Shattell, Hamilton, Starr, Jenkins, & Hinderliter, 2008; Sullivan & Rehm, 2005). Existing healthcare services often reflect the needs of European Americans and fail to address the extended family networks of Latinos, which are a valuable resource to the community (Cardoso & Thompson, 2010; Guarnaccia & Parra, 1996; Magaña, García, Hernández, & Cortez, 2007; Mulvaney-Day, Alegría, & Sribney, 2007). Related to this are cultural and religious norms that are sometimes at odds with American healthcare models (Jurkowski, Kurlanska, & Ramos, 2010; Murguia, Peterson, & Zea, 2003).

Latino nativity may be a proxy of cultural effects related to healthcare needs and access to services. US-born Latinos show disparate disease incidence patterns compared with foreign-born Latinos (Carlisle, 2012; Stern, Zhang, Lee, Deapen, & Liu, 2016). Latino nativity also impacts social resources (Virell-Fuentes, Morenoff, Williams, & House, 2013) and health spending of Latinos (Vargas Bustamante & Chen, 2012). Foreign-born Latinos, particularly those without health insurance, have less access to care, use of healthcare services and perceived quality care (Alcalá et al., 2016; John, Kawachi, Lathan, & Ayanian, 2014; Rodríguez, Bustamante, & Ang, 2009). Adding to the complexity of Latino healthcare needs

is the immigrant health paradox, the counterintuitive finding that Latino immigrants have better health than those born in the USA and that health worsens with length of time in the USA (Alegría, Sribney, Woo, Torres, & Guarnaccia, 2007; Carlisle, 2012; Markides & Rote, 2015; Viruell-Fuentes et al., 2013). Explanations for this include lifestyle changes (increase in both sedentary behaviors and caloric intake), stress associated with adapting to new culture and protective social resources within recent immigrant communities (Markides & Rote, 2015).

Previous mixed-methods research under the lead of a community-based participatory research (CBPR) team, examined healthcare solutions to enhance integrated care for homeless African Americans with serious mental illness (Corrigan, Pickett, Kraus, Burks, & Schmidt, 2015). An important solution that emerged from this work was peer navigators: African Americans in recovery who are hired to help peers navigate the complex primary care system (Corrigan, Pickett, Batia, & Michaels, 2014). Building on the methodology from that study, we used the combination of CBPR and qualitative interviews to identify similar needs in Latinos with serious mental illness (Corrigan, Torres, Lara, Sheehan, & Larson, 2016). Qualitative themes included healthcare needs (e.g., mental health services, preventive medicine and dentistry), barriers to those needs (e.g., immigration, language difficulties and culturally irrelevant services), solutions to barriers (both system-level as well as patient-to-patient interactions) and the desired competencies of peer navigators.

In this paper, we summarize findings from a quantitative survey meant to identify priorities among the numerous needs, barriers, solutions and desired competencies of peer navigators found in the previous qualitative study (Corrigan et al., 2016). We also sought to determine how Latinos born in the USA prioritize needs, barriers, solutions and peer navigators competencies compared to those born outside the USA, taking into account other potentially influential demographic variables (gender, education and military veteran status). While limited research has explored self-reported healthcare needs specifically for Latinos with mental illness, consistent with literature on Latino health in general, we expect to show that foreign-born Latinos may have fewer resources (e.g., health insurance, language skills) for navigating the Euro-centric healthcare system and will perceive greater level of needs and barriers to healthcare than those born in the USA.

Methods

The earlier qualitative study led by a CBPR team of seven Latinos with lived experience of mental illness yielded multiple themes related to healthcare needs ($n = 15$), barriers to healthcare ($n = 31$), solutions to healthcare barriers ($n = 17$) and peer navigators as solutions ($n = 22$). The themes were transposed into an 84-item survey. Research participants were asked to rate the importance of each item in terms of Latino healthcare on a 7-point scale (7 = very important). Potential participants answered a series of screening questions to determine their eligibility for the survey. Those who self-identified as Hispanic/Latino, were 18 years or older and reported mental health challenges such as moderate to severe anxiety or moderate to severe depression, or receipt of mental health services, were routed to the full survey battery. Participants also provided demographic information, including information on nativity. Members of the CBPR team distributed flyers in physical and electronic form

throughout Chicago to recruit Latino participants. Interested parties were referred to an online Qualtrics platform at which they were fully informed of the study and asked to provide electronic consent; 122 Latinos with mental illness completed the survey. The study protocol was approved by the Institutional Review Board at the Illinois Institute of Technology. Research participants were compensated \$25 for completing the survey.

Data analysis

Means and standard deviations of importance ratings were determined for each of the 84 items. Items are presented in descending order of importance within each Table as one way to get a sense of priority of ratings. One-way ANOVAs were conducted to determine whether individual importance ratings differed based on nativity. With a Bonferroni correction, ANOVAs were considered significant if $p < .003$. Items that were significant for nativity were selected for a series of multiple regression analyses to determine whether other demographic variables (gender, education and veteran status) contributed to the importance ratings of healthcare items. Education level was recoded into groups of those with less than associate's degree and those with an associate's degree or higher.

Results

Demographic characteristics are summarized in Table 1. A review of demographics showed that 5.7% of the sample chose to complete the survey in Spanish; 90.9% of the participants reported they were US citizens. Only 4.9% reported being undocumented immigrants. Country of origin for those born outside the USA is summarized by region: 69.8% reported Mexico, 12.7% South American, 7.9% Central American, 4.8% Caribbean island nation and 4.8% other. Over a third of participants in this sample were veterans, with a fairly even split between those born in the USA ($n = 20$) and those born outside the USA ($n = 22$). All participants included in the analyses reported a mental health challenge and 98.4% indicated past receipt of mental health services.

Tables 2–5 provide means and standard deviations of importance scores by item, arranged in descending order of importance. Item importance means ranged from 4.34 to 5.47. Needs for counseling and mental health services (Table 2) were rated as especially important for Latinos with mental illness, closely followed by nutrition services and prevention of domestic violence. Top barriers to healthcare included lack of insurance, unfamiliarity with healthcare environments and negative experiences with healthcare providers (Table 3). Participants endorsed concerns that engaging in healthcare service might risk immigration status or might lead to the identification of other unrelated health conditions. Lack of childcare services during medical appointments was also highly endorsed as a barrier. Of the possible solutions to healthcare barriers, participants rated inclusion of those close to the patient (e.g., family and friends) in healthcare decisions as the most important (Table 4). Other important solutions included provision of individualized help to ensure understanding of health conditions, availability of bilingual and culturally sensitive health services and increased awareness of substance abuse.

We also sought to determine essential aspects of peer navigator services for Latinos with mental illness (Table 5). Participants felt that Latino peer navigators should maintain current

knowledge of medical conditions and available treatment, be flexible in timing of services provision and use effective communication skills. An understanding of where clients come from, ability to communicate with medical providers and understanding referral procedures were also highly rated.

One-way ANOVAs conducted to determine whether individual importance ratings differed based on nativity revealed that over one quarter of items differed significantly. Note that even with the conservative criterion for significance, differences emerged, suggesting that nativity may indeed be a factor in considering healthcare needs and solutions for Latinos with serious mental illness. For items with group differences on nativity, multiple regression analyses were performed and beta values for nativity, gender, education and veteran status are presented in Table 6. Overall, Latinos not born in the USA viewed healthcare priorities as significantly more important.

One difference specific to healthcare needs is shown in Table 6. Latinos not born in the USA identified child healthcare needs as a greater priority than those native to the USA. Almost one third of perceived barriers to healthcare needs were rated significantly different by Latinos not born in the USA. These included being perceived as crazy and not having sufficient time to receive services. Latinos not born in the USA were concerned that engaging in healthcare services might lead to identifying a condition of which they were unaware. They believed Latinos would be unfamiliar with expectations of the healthcare setting and be more likely to stop services because of poor relationships with the healthcare provider. Latinos not born in the USA also had more concerns with literacy access to resources, insurance and childcare. They were more likely to believe Latinos would avoid the healthcare system by pursuing home remedies.

Four solutions to healthcare barriers were identified as more important for Latinos not born in the USA. They believed that the healthcare systems needs to market its interventions in environments other than healthcare clinics, especially within religious organizations. Foreign-born Latinos thought that transportation to and from appointments and greater awareness of substance abuse should be considered as solutions. About one third of views about peer navigators were rated as more important by Latinos not born in the USA. They believed that peer navigators are especially beneficial if they can communicate effectively with medical professionals, express empathy for participants and be flexible in time demands. Foreign-born Latinos emphasized peer navigator competencies with maintaining knowledge about health conditions, referral procedures and community support systems.

In the regression analyses, only nativity and veteran status were associated with survey items, after adjusting for demographic variables. For veteran status, four items in the regressions were significant. In all cases, US veterans attributed lesser importance to items than non-veterans. Veterans were less likely to agree that home remedies, negative experiences with healthcare providers, and unfamiliarity with health environments were barriers to care. Veterans were also less apt to see the importance of healthcare agency outreach to religious organizations as compared with non-veterans.

Discussion

In this paper, we report on findings from a quantitative survey meant to prioritize the needs, barriers and solutions of healthcare issues for Latinos with serious mental illness. While we recognize that all health needs, barriers and solutions included in this study may meaningfully contribute to comprehensive integrated health systems for Latinos, here we discuss some of the most highly rated items in more depth. First, mental health and counseling services were identified as especially important needs, perhaps because the sample was limited to Latinos *with* serious mental illness. Other research also highlights Latino needs for access and quality of mental healthcare (Cabassa, Zayas, & Hansen, 2006). Another high priority need for Latinos in this study was dietary services. These results, along with growing concerns about obesity and obesity-related illnesses such as diabetes in the Latino community (Holub et al., 2013; Mainous, Diaz, & Geesey, 2008; Satia-Abouta, Patterson, Neuhouser, & Elder, 2002), underline the value of offering nutritional/dietary services within the context of integrated care. Given that individuals with serious mental illness suffer disproportionately from weight-related illness and experience distinct barriers to healthy lifestyle (Dickerson et al., 2006), nutritional services should be tailored to meet unique needs of Latinos with serious mental illness.

The fact that domestic violence services were noted as high priority for healthcare in this study suggests a possible gap within the healthcare system of addressing what might be considered a social problem over a medical concern. Up to one third of Latinas have experienced domestic violence (Breiding, Chen, & Black, 2014), with research suggesting the impact of domestic violence on Latinas is more pronounced than in non-Latina women, manifesting in depression, loss of self-esteem and symptoms of trauma, in addition to the physical wounds (Bonomi, Anderson, Cannon, Slesnick, & Rodriguez, 2009; Edelson, Hokoda, & Ramos-Lira, 2007; Sabina, Cuevas, & Schally, 2013). A recognition of Latino-specific factors in screening and interventions for victims of domestic violence will serve to increase options for care.

Lack of insurance to cover healthcare costs was rated as the most important barrier, indicating that despite rollout of Affordable Care Act, access to insurance for Latinos, particularly those with mental health challenges, remains a concern. Unfamiliarity with healthcare settings was another high priority barrier. Latinos, especially those who are undocumented, may be less likely than other groups to visit a doctor (Bustamante et al., 2012; O'Hara & Caswell, 2012) and Latinos with mental illness might have additional challenges to developing familiarity with healthcare, such as language barriers or limited cultural competence of providers (Hernandez, Nesman, Mowery, Acevedo-Polakovich, & Callejas, 2015).

Participants in this study were also concerned that Latinos with mental illness will end treatment because of negative experience with providers or avoid care from fear of identifying immigrant status or from the fear of finding additional health problems. Hurdles related to insurance coverage and immigration fears are well-documented in the healthcare literature and may disproportionately affect vulnerable Latinos with co-occurring mental and physical health challenges (Brown et al., 2000; Shattell et al., 2008; Sullivan & Rehm,

2005). Healthcare policies, procedures and outreach messages that explicitly address these fears can encourage greater engagement of Latinos in accessing care. Increasing the cultural competence of current health providers and recruiting Latinos for positions as healthcare decision-makers are means of making health environments more welcoming.

One solution that emerged as especially notable in the study was ‘including people important to me in discussions about my health’. This highlights a potential Latino preference for family involvement in personal healthcare, reflecting the Latino value of *familismo*, or importance of family (Davila, Reifsnider, & Pecina, 2011). Some Latinos may favor family-centered decision making, in which family members help make important medical decisions for the affect individual (Kwak & Haley, 2005). Participants also endorsed the provision of individualized care that was sensitive to language and cultural background of the patients. Patient and family advisory councils are a growing trend in healthcare that may help improve Latino care (Halm, Sabo, & Rudiger, 2006). In this model, patients and families work with health providers to enhance patient care and develop culturally-sensitive practices. In addition, greater availability of Latino health providers, including paraprofessional peer navigators can help engage Latinos in treatment.

Important assets of peer navigators included current knowledge about health conditions and corresponding services. Participants agreed that peer navigators tasked with advising and coaching clients in traversing the complicated health system will require both medical knowledge and an understanding of available resources. Also important was being flexible in time with clients, having effective communication both with clients and providers and being understanding of the client’s perspective. This reflects the Latino value of *personalismo*, or focus on the worth of personal interactions (Evans, Coon, & Crogan, 2007). Because of their personal experiences with mental and physical challenges, Latino peer navigators may be uniquely positioned to connect with their Latino clients on a personal level and understand their struggles.

Also interesting was the frequency with which healthcare priorities varied by nativity. These analyses validate what might seem to be an obvious assumption. Nativity is a key variable in understanding healthcare needs and developing corresponding programs for Latinos with mental illness. In all cases where significant differences emerged, Latinos not born in the USA rated items as more important. Only one healthcare need was rated more important by Latinos not born in the USA: child healthcare services. This finding suggests that foreign-born Latino parents with mental illness may need additional support to access health services for their children.

Almost one-in-three of the barriers to healthcare were rated more important by Latinos not born in the USA, and included lack resources such as insurance, insufficient time for medical appointments, access to childcare and feeling alienated from services. A preference for home remedies, the reading and writing required for healthcare and being unfamiliar with healthcare environment were also healthcare barriers that varied by nativity. For immigrant Latinos with mental illness, a more holistic approach to healthcare that considers these sociocultural barriers seems crucial, even after these individuals have mastered the English language. Especially important solutions for Latinos not born in the USA included

marketing services in nontraditional settings such as churches, having better access to transportation and increasing awareness of substance abuse. Non-Latino health providers require training in cultural competency to understand these barriers and solutions and become more accommodating for Latinos, especially those born abroad.

Several peer navigator skills were rated as especially important for foreign-born Latinos, including the ability to effectively communicate in an empathic manner so the patient-provider relationship was optimal for participants. Other peer navigator competences that varied by nativity were knowledge of medical treatment, flexibility, understanding referrals, perception of where clients come from and support services. Latinos born abroad may prefer style of service provision that more closely matches Latino values such as *familismo* and *personalismo*.

Gender and education level of participants contributed little to difference in item prioritization; however, particularly for healthcare barriers, veteran status was connected to differential importance ratings. Veterans viewed desire to use home remedies, decisions to end treatment because of negative experience, and being less familiar with health environments as less significant barriers to healthcare than non-veterans. Veterans were also less likely to see the importance of using religious organizations to fulfill health needs. Presumably, veteran Latinos have greater exposure to healthcare during and following their service career than non-veterans and hence perceive barriers differently. Veterans may be more comfortable with traditional US health services and prefer to rely less on home remedies or religious organizations as a source of care.

These findings provide an excellent start for understanding the healthcare needs, barriers and solutions of Latinos with serious mental illness, especially in terms of integrated care. Despite these strengths, however, there are concerns that need to be examined in future research. The sample for this study was a moderately sized opportunity sample recruited via the Internet, with only three demographic variables included in the multivariate analysis. Furthermore, the range of mean scores in this sample was limited, with mean item responses ranging from 4.34 to 5.47 on 7-point scale. The fact that all items in the survey were viewed very similarly in terms of importance serves to validate the issues emerging from the qualitative data collection, but also suggests that survey methods may not have captured meaningful differences between items. For survey items with significant differences on nativity, a pattern of foreign-born Latinos endorsing greater importance than US born participants emerged. This pattern may reflect response set bias, potentially confounding study results (Johnson, Kulesa, Cho, & Shavitt, 2005). That is, foreign-born participants may, given their unique experiences, select higher numbered choices overall. A large proportion of the participants (94%) opted to take the survey in English rather than Spanish, and only 3% had less than a high school education, indicating higher levels of acculturation and education than might be present in a representative sample.

We constructed this research to examine the healthcare priorities for Latinos with a goal of cross-validating previous qualitative research. However, we are unsure whether, in an attempt to recruit an underserved and disenfranchised sample of Latinos, including those who were undocumented, we met the standard for *serious* mental illness. While the vast

majority of participants reported receipt of mental health services and both moderate to severe anxiety and depression, high rates of employment for survey participants suggest that participants may not have been fully disabled by mental illness symptoms. More specific information on diagnosis and severity of mental illness would have allowed greater insight into the mental health experiences of this sample.

Community-based participatory research not only represents the interests and perceptions of ethnic groups, but of groups in specific locales. While these findings reflect the perspective of a sample of Chicago Latinos and are not representative of a particular community, they provide a basis for developing programs that strongly represent local issues. ‘Latino’ in this study was presented as somewhat of a homogeneous construct, contrary to the fact that Latinos vary significantly and meaningfully by country of origin and race. Future research needs to account for these kinds of heterogeneity. Additional data on subethnicity (Mexican, Puerto Rican, etc.) of participants born in the USA might reveal specific health priorities by ethnicity. As we did not collect data on foreign-born Latinos duration in the USA, we were unable to test hypotheses related to the immigrant paradox in this study. Future research could examine this and other indices of acculturation, such as primary language spoken at home and place of formal education.

Information from this study was used by the CBPR team to develop a peer navigator practice and procedure manual. The manual includes skills to address the barriers identified in this paper. Beta drafts of the manual can be obtained by contacting Alessandra Torres (atorre15@iit.edu). A fidelity instrument has also been developed. Our research team is currently in the field with a randomized controlled trial to determine the impact of peer navigators on the healthcare needs of Latinos with serious mental illness.

Acknowledgments

The Latino Health Disparities Consumer Research Team included Jaime Esquivel, MavisLinda Lehmann, Patricia Munoz, Judith Ortiz, Marilyn Perez-Aviles, Timoteo Rodriguez, Nelson Santiago and Reverend Rudy Suarez.

Funding

This work was supported by the Patient Centered Outcomes Research Institute [grant number AD-1306-01419].

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Table 1Demographics ($n = 122$).

Variable	Percentage or mean (SD)
Age	31.1 (5.4)
Gender	
Female	58.2
Male	41.8
Survey language	
English	94.3
Spanish	5.7
US born	
Yes	47.5
No	52.5
Citizenship	
US born	51.6
Naturalized citizen	39.3
Legal resident	4.1
Undocumented immigrant	4.9
Race	
Asian	1.6
African American	23.0
Native American	1.6
European American	68.9
Pacific Islander	4.1
Marital status	
Single	6.6
Married	91.8
Divorced	.8
Education	
Some high school	3.3
High school diploma	10.7
Some college/Associate's degree	62.3
Bachelor's degree	13.9
More than Bachelor's degree	9.0
Employment	
Full-time	92.6
Part-time	4.9
Other	2.4
US military veteran?	
Yes	34.4
No	65.6

Table 2

Means and standard deviations of healthcare needs for Latinos with mental illness.

Item	Mean	SD
Counseling/therapy services	5.47	1.13
Mental health treatment	5.12	1.25
Nutrition/dietary services	4.98	1.22
Prevention of domestic violence	4.97	1.40
Primary healthcare services (family care)	4.88	1.26
Maternal healthcare services	4.84	1.37
Housing services	4.73	1.32
Optical/vision services	4.72	1.26
Respiratory and asthma services	4.67	1.32
Child healthcare services	4.65	1.46
Allergy and sinus services	4.64	1.36
Family planning, reproductive and sexual healthcare services	4.53	1.39
Yearly physical health screening services	4.48	1.39
Dental services	4.47	1.45
Rehabilitation & treatment services for the recovery and prevention of substance abuse	4.46	1.35

Table 3

Means and standard deviations of healthcare barriers for Latinos with mental illness.

Item	Mean	SD
Lack of insurance to cover healthcare costs	5.24	1.30
Unfamiliar with healthcare environments	5.20	1.28
Ending treatment because of negative experiences with healthcare providers	5.17	1.30
Fear of identifying one's immigration status	5.16	1.22
Fear of finding additional health problems while receiving health services	5.12	1.28
Lack of child care services to use when attending appointments	5.12	1.26
Uncomfortable with the amount of reading and writing required to receive health services	5.09	1.53
Preferring to use home remedies to treat my health conditions	5.07	1.31
Need to pay out of pocket for healthcare costs	4.94	1.22
Machismo principles get in the way of healthcare	4.91	1.28
Experiencing mental illness stigma when receiving healthcare services	4.90	1.05
Not able to share healthcare needs with family	4.89	1.11
Disclosing criminal history when receiving treatment	4.81	1.13
Being perceived as 'weak'	4.77	1.31
Lack of quality bilingual staff	4.75	1.30
Gender roles get in the way of healthcare	4.75	1.30
Embarrassed of one's poor English	4.71	1.39
Lack of knowledge about locations of healthcare services	4.70	1.09
Frustration from miscommunication during healthcare services	4.66	1.15
Unaware of what is expected during healthcare services	4.65	1.13
Not having access to resources in the community	4.64	1.18
Being perceived as 'crazy'	4.62	1.16
Uncomfortable continuing treatment	4.57	1.23
Not having enough time to receive health services	4.52	1.35
Religious beliefs interfering with healthcare treatments	4.51	1.19
Lack of transportation to attend appointments	4.50	1.37
Embarrassment when family members translate private health information	4.45	1.27
People around me believing I'm exaggerating my symptoms	4.43	1.23
Lack of healthcare staff that are aware of Latino culture	4.41	1.30
Depending on family and friends to access healthcare services	4.36	1.23
Not having enough money to receive health services	4.34	1.32

Table 4

Means and standard deviations of solutions to healthcare barriers for Latinos with mental illness.

Item	Mean	SD
Include people important to me when meeting with providers to discuss my health conditions	5.15	1.25
Provide one-on-one help to ensure understanding of health conditions	5.04	1.31
Provide bilingual healthcare services	4.98	1.39
Provide providers that understand my ethnic background	4.97	1.04
Increase awareness of substance abuse	4.97	1.29
Connect community centers with healthcare resources	4.87	1.32
Provide more information on mental health conditions	4.84	1.36
Increase healthcare insurance information	4.82	1.33
Increase awareness of mental illness stigma	4.82	1.11
Provide health information in other environments that are not hospitals or clinics	4.78	1.41
Provide community members to assist others with accessing healthcare services	4.76	1.26
Provide transportation to and from appointments	4.75	1.31
Include people important to me for healthcare decisions	4.70	1.32
Increase health community outreach	4.68	1.32
Ensure confidentiality between providers and clients	4.68	1.27
Increase healthcare outreach to religious organizations	4.62	1.17
Simplify medical language to improve clarity of health conditions	4.57	1.36

Table 5

Means and standard deviations of desired peer navigator competencies.

Item	Mean	SD
Maintaining current knowledge of medical conditions and treatment	5.25	1.42
Maintaining flexibility in time with clients	5.22	1.33
Using effective communication skills with clients	5.20	1.31
Understanding perception of where clients come from	5.20	1.38
Ability to effectively communicate with medical providers	5.03	1.30
Understanding referral procedures for receiving services	4.92	1.25
Understanding the influence of age on healthcare needs and barriers	4.84	1.24
Understanding the influence of gender roles on healthcare needs and barriers	4.82	1.21
Using care coordination skills when helping clients	4.80	1.32
Expressing recovery process to clients	4.80	1.28
Maintaining environments that reflect the understanding of client's ethnic background(s)	4.79	1.31
Peer-navigators managing their own mental health wellness	4.79	1.34
Using support systems to help clients receive healthcare services	4.79	1.27
Maintaining skills to address substance abuse issues	4.78	1.18
Ability to share lived experiences with mental illness	4.71	1.36
Ability to help clients with their immigration issues	4.69	1.20
Using coaching skills to inform clients how to access and use services	4.68	1.24
Providing outreach to community centers	4.66	1.36
Expressing empathy when interacting with clients	4.65	1.25
Understanding clients differ in adopting new cultures	4.63	1.17
Establishing professional boundaries with clients	4.52	1.37
Ability to effectively communicate in Spanish and English	4.52	1.25

Table 6

Multiple regression beta coefficients for nativity-related items by category.

	Nativity	Gender	Education	Military veteran status
Healthcare needs				
Child healthcare services	-.34 *	.20	.10	.08
Healthcare barriers				
Being perceived as 'crazy'	-.30 *	.18	.03	-.09
Not having enough time to receive health services	-.31 *	.10	-.04	.13
Fear of finding additional health problems while receiving services	-.39 *	-.12	.09	-.04
Uncomfortable with the amount of reading and writing required to receive health services	-.30 *	-.05	.07	-.22
Not having access to resources in the community	-.31 *	.03	-.04	-.15
Lack of insurance to cover healthcare costs	-.42 *	-.01	.05	-.17
Preferring to use home remedies to treat my health conditions	-.37 *	-.12	.03	-.28 *
Lack of child care services to use	-.49 *	-.05	.03	-.21
Ending treatment because of negative experiences with healthcare providers	-.36 *	-.05	.21	-.47 *
Unfamiliar with healthcare environments	-.46 *	.01	.02	-.32 *
Solutions to healthcare barriers				
Increase healthcare outreach to religious organizations	-.23 *	-.15	.04	-.28 *
Provide health information in other environments that are not hospitals or clinics	-.26 *	-.04	.15	-.10
Provide transportation to and from appointments	-.23 *	-.09	.05	-.22
Increase awareness of substance abuse	-.33 *	-.03	-.05	-.14
Desired peer navigator competencies				
Ability to effectively communicate with medical providers	-.29 *	-.05	.21 *	.01
Expressing empathy when interacting with clients	-.32 *	-.01	.09	-.08
Maintaining current knowledge of medical conditions and treatments	-.34 *	-.02	.16	-.24
Maintaining flexibility in time with clients	-.48 *	-.03	.09	-.10
Understanding referral procedures for receiving services	-.28 *	.02	-.13	-.09
Understanding perception of where clients come from	-.33 *	-.01	.14	-.12
Using support systems to help clients receive healthcare services	-.30 *	.05	.10	-.05

Note: For nativity, 0 = born outside the USA, 1 = born in the USA. For gender, 0 = female and 1 = male. For education, 0 = less than associate's degree, 1 = associate's degree or better. For veteran status, 0 = not a veteran and 1 = veteran.

* Indicates that coefficient is significant at $p < .05$.