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Evaluating culturally and linguistically integrated care for Latinx adults with mental and substance use disorders

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ABSTRACT

Objective: To evaluate changes in health and health care utilization outcomes for Latinx adults with substance use and mental disorders receiving integrated behavioral and primary health care.

Design: Study sample included enrollees who completed baseline, 6-month and 12-month assessments ($n = 107$). Study outcomes were depression symptom severity, anxiety symptom severity, illicit drug use, emergency department utilization and homelessness status. Pre–post analyses were conducted using paired *t*-test and McNemar test to examine changes in study outcomes. Multivariable regression model estimated through generalized estimating equations explored the influence of the intervention on study outcomes. Results were presented in adjusted odds ratios (AOR) and 95% confidence intervals (CI).

Results: Participants were less likely to report depressive symptoms (AOR: 0.496, 95%CI: 0.296–0.832), less likely to report anxiety symptoms (AOR: 0.539, 95%CI: 0.329–0.884), and less likely to experience homelessness (AOR: 0.556, 95%CI: 0.328–0.943) at 6-month assessment compared to baseline. Participants were also less likely to report depressive symptoms (AOR: 0.378, 95%CI: 0.209–0.684), less likely to report anxiety symptoms (AOR: 0.471, 95%CI: 0.270–0.821), less likely to experience homelessness (AOR: 0.333, 95%CI: 0.189–0.587), and less likely to utilize the emergency department in the past 30 days (AOR: 0.397, 95%CI: 0.188–0.837) at 12-month assessment compared to baseline.

Conclusions: Integrating culturally responsive behavioral and primary health care services is critical for addressing the needs of Latinx adults with mental and substance use disorders, and other chronic diseases. This initiative has the potential to reduce disparities in access to and engagement in care for Latinx adults.

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Introduction

Despite the rising rates of substance use and mental illness in the US (Substance Abuse and Mental Health Services Administration 2017), the lack of adequate access to treatment remains an ongoing public health challenge. Substance use disorders are largely untreated with only 10.8% of adults in need reporting access to treatment (Park-Lee et al. 2017). In 2016, approximately 14.4% of adults with mental illness reported receiving mental health services in the past year (Park-Lee et al. 2017). People of color bear a disproportionate burden of substance use and mental health disorders (Substance Abuse and Mental Health Services Administration 2018b) and increasing evidence suggests that Latinxs with substance use and mental health disorders experience a critical need for behavioral health services (Substance Abuse and Mental Health Services Administration 2012; US Department of Health and Human Services Office of Minority Health 2017). In 2018, nationally, Latinx adults were more likely to report binge drinking compared to non-Latinx adults (Substance Abuse and Mental Health Services Administration 2018c). In the same year, 10.6% of all deaths among Latinx were opioid-related deaths compared to 3.1% among White non-Latinx in Massachusetts (Massachusetts Department of Public Health 2019), a state that ranks among the top ten states with the highest rate of opioid-related deaths. Mental health disorders are also prevalent among immigrant and non-immigrant Latinx groups, with a higher ratio of serious psychological distress reported among Latinx adults compared non-Latinx adults (National Center for Health Statistics 2016). In addition, Latinx immigrants experience a multitude of psychological stressors including depression, anxiety and post-traumatic stress disorders related to the immigration experience (American Psychiatric Association 2017).

The disproportionate burden in substance use and mental health disorders can be attributed to multilevel factors (Sprague Martinez et al. 2018), such as poor access to care (Acevedo et al. 2012), inappropriate care (Schmidt, Greenfield, and Mulia 2006), and lower socioeconomic position, employment status and housing instability (Saloner and Cook 2013). For instance, in 2017, approximately 37% of those experiencing homelessness in Massachusetts were Latinx, 11% reported being chronically homeless, 20% reported being severely mentally ill, and 16% reported chronic substance use (US Department of Housing and Urban Development 2017). These disparities in social determinants of health, such as the lack of safe and affordable housing, inadequate health insurance coverage (Granberry and Rustan 2010; Health of Boston 2011), lack of access to health care (Massachusetts Department of Public Health 2007; National Alliance on Mental Illness 2019) and social services, can lead to insufficient preventive care, late detection of disease, and the poor management of substance use disorders, mental illness and comorbid chronic diseases for Latinxs.

People of color are less likely to access treatment (Lê Cook and Alegría 2011), more likely to experience unmet need for specialty treatment (Mulvaney-Day et al. 2012), and delays in accessing treatment (Wells et al. 2001). Latinxs experience barriers to accessing behavioral health treatment, stemming from but not limited to language, legal status, and lack of health insurance (National Alliance on Mental Illness 2019). Each year, only 33% of Latinx adults with mental illness receive treatment compared to the national average of 43% (National Alliance on Mental Illness 2019). In Massachusetts, Latinxs were 22% less likely to receive substance use treatment within 30 days of discharge

from a hospital patient encounter for opioid overdose compared to their White counterparts (Dooley et al. 2019). These disparities in treatment persist even after treatment is initiated with lower satisfaction with treatment among African Americans and Latinxs (Tonigan 2003; Wells et al. 2001).

Therefore, it is imperative to comprehensively address both substance use and mental health disorders for Latinx populations. Despite being identified as a single group, Latinxs are racially and ethnically diverse and as such have varying substance use and mental health treatment needs (Substance Abuse and Mental Health Services Administration 2013). Latinxs are also multicultural and multilingual often speaking native languages different from Spanish and in various dialects (American Psychiatric Association 2016). For this purpose, understanding the need to culturally tailor treatment services is key for achieving positive health outcomes.

Service integration and culturally responsive services are promising strategies to provide accessible care for heterogenous Latinx populations with mental and substance use disorders. Casa Esperanza, Inc., a community-based substance use and mental health treatment agency serving Latinxs in Massachusetts (Amodeo et al. 2008), partnered with the Boston Health Care for the Homeless Program (BHCHP) to implement the Substance Abuse and Mental Health Services Administration (SAMHSA)-funded Primary and Behavioral Health Care Integration (PBHCI) Program, here forth referred to as CasaCare. CasaCare is a Person-Centered Health Home that provides Latinx adults with substance use disorders and serious mental illness access to culturally and linguistically appropriate medical and behavioral health services, with one-to-one coordination to support retention and engagement in health and wellness activities (Substance Abuse and Mental Health Services Administration 2018a). Staff and experts by experience trained to understand the clients' cultural norms and values delivered culturally tailored services in the client's preferred language. Within this context, this study examines changes in substance use and mental health outcomes before participation in CasaCare and after 6- and 12-months of being in the program. The main hypothesis was that CasaCare participation would improve substance use and mental health outcomes for participants at 6-month and 12-month follow-up assessments compared to baseline.

Methods

Study setting and program services

Casa Esperanza, Inc. opened the State's first multilingual and multicultural substance use and mental health residential treatment facility in 1987, and offers a continuum of care spanning residential, outpatient, supportive housing and crisis stabilization services for underserved Latinxs. While standard patient-centered medical homes (PCMH) mainly provide integrated services in primary care settings, the CasaCare program provided integrated and co-located behavioral and primary health care services provided by a multi-disciplinary team knowledgeable of the diverse Latinx culture and language, in a community-based behavioral health setting. Services included: Comprehensive Transitional Care, Health Navigation, Intensive Case Management, and Integrated Dual Diagnostic Treatment (IDDT) to address concurrent mental and substance use disorders through a mix of interventions and models, including the transtheoretical model of behavior change (Stages of Change), Motivational Interviewing (MI), cognitive–behavioral-based Illness

Management & Recovery (IMR), and Relapse Prevention Counseling, treating each disorder as primary. The program also has a qualified service organization agreement with methadone treatment providers to refer clients as needed. Additionally, CasaCare participants were enrolled in the Health and Recovery Program (HARP) facilitated by Peer Recovery Coaches, and various health promotion activities including wellness-related education and programming activities, such as smoking cessation programming, nutrition and fitness. Program interventions addressed other social determinants of health including job readiness training, employment counseling, reentry support, and housing support services. As part of the integrated services offered, BHCHP provided on-site bilingual psychiatry, on-site human immunodeficiency virus and Hepatitis C virus counseling and testing, and on-site Office-Based Opioid Treatment (OBOT) using suboxone and Vivitrol. OBOT included an assessment conducted by an OBOT Registered Nurse, in-office inductions, routine toxicology screenings, and participation in OBOT group and individual counseling.

Participant recruitment

Identification and recruitment of Latinx adults experiencing homelessness into the program occurred through external referrals (criminal justice, detoxification centers, social service agencies), cross-referrals made by BHCHP, community outreach in area hot spots, and word of mouth by current participants and program graduates. Staff engaged potential participants in conversations using motivational interviewing to deliver information about available services, prevention education, risk assessments, and other related services. Recruitment generally occurred during regular office hours on the program campus or during scheduled outreach in areas of the community.

All study participants who received services through the program completed the Government Performance and Results Act (GPRA) and outcome evaluation assessment at baseline. Program staff completed the GPRA data collection tool during in-person participant interviews in accordance with SAMHSA grantee reporting requirements. Follow up assessments were conducted at 6-, 12-, 18-, 24-, 30-, 36-months. All study assessments were conducted in either English or Spanish by multilingual/multicultural program staff. Staff developed relationships with participants in order to track and locate them for follow-up interviews, even if participants were no longer receiving services. The study was reviewed and approved as exempt by Institutional Review Boards at Boston University and the University of Denver. The analysis presented in this study includes participants ($n = 107$) who completed GPRA and outcome evaluation assessments at baseline, 6- and 12-months to represent program engagement for at least one year.

Study outcomes

The main outcomes in this study were mental health-related; specifically, depression severity and anxiety, and substance use. Depression severity was measured using the Patient Health Questionnaire-9 (PHQ-9) scale (Kroenke, Spitzer, and Williams 2001). We examined the changes in depressive symptoms as measured by PHQ-9 in a continuous variable (0–27). A cut-off of 10, which has been validated (Manea, Gilbody, and McMillan 2012) as a threshold of recommendation of further clinical evaluation, diagnosis and/or

treatment, was used to dichotomize participants' level of depressive symptoms. Anxiety was assessed using the 7-item Generalized Anxiety Disorder (GAD-7) scale (Spitzer et al. 2006). Changes in anxiety were measured by GAD-7 in a continuous variable (0–21). Similar to the PHQ-9, the continuous measure was dichotomized using a cut-off of 10 which has been validated as a threshold for further clinical evaluation (Spitzer et al. 2006; Plummer et al. 2016). Substance use was measured by asking the number of days of illegal drug use in the past 30 days. This variable was dichotomized as having 1 or more days of illegal drug use in the past 30 days, or not having any day of illegal drug use in the past 30 days. The selection of 1 or more days aimed to include a conservative measure of the participants' illegal drug use in the past 30 days.

Secondary outcomes explored were homelessness and healthcare utilization. Homelessness status was measured by asking if the participant identified as someone experiencing homelessness at the time of the assessment. The self-report and subjective identification of one's status as operationalized in the Risk Behavior Assessment (National Institute on Drug Abuse 1991) was used in this study. Healthcare utilization was assessed by asking whether the participant had used the emergency department (ED) in the past 30 days, which was dichotomized as reporting 1 or more ED visits in the past 30 days or not having any ED visit in the past 30 days. The variable was dichotomized to include a conservative measure of the participants' ED visits in the past 30 days.

Covariates

Multivariable modeling was performed adjusting for confounders, such as age, gender, race, Latinx ethnicity (yes/no), education status (below high school/high school graduate or above), and employment status (employed/unemployed).

Statistical analysis

A pre–post comparison was conducted for participants in the CasaCare program who completed baseline, 6- and 12-month assessments. Paired *t*-tests were used for assessing differences over time in the continuous variables and McNemar tests in the dichotomous variables. Multivariable modeling using generalized estimating equations were used to examine changes in the study outcomes over time adjusting for age, gender, race, Latinx ethnicity, education status, and employment status. Logistic regression model was selected, statistical analyses were conducted using SPSS software version 24 (IBM Corp 2016), and the level of statistical significance considered was $p < 0.05$.

Results

Baseline, 6-month and 12-month assessments were completed by 107 participants. Most participants were male (69.2%), Latinx (95.3%) – mostly Puerto Rican (63.6%), did not graduate from high school (51.4%), and had a mean age of 43.57 (SD 9.62) (Table 1).

At baseline, nearly half of the participants (46.7%) had moderate to severe depressive symptoms, and 43.0% had moderate to severe anxiety symptoms. In the past 30 days at baseline, about 22.4% of participants reported illicit drug use, 77.6% reported experiencing homelessness, 87.9% were not employed, and 22.4% had at least one emergency

Table 1. Demographic characteristics of adults ($n = 107$).

Characteristic	*n* (%) or mean (SD)
Gender	
Male	74 (69.2%)
Female	33 (30.8%)
Race	
Black or African American	16 (15.0%)
Native Hawaiian or other Pacific Islander	1 (0.9%)
White	53 (49.5%)
American Indian	1 (0.9%)
Other	32 (29.9%)
Two or more races	4 (3.7%)
Latinx	
Yes	102 (95.3%)
No	5 (4.7%)
Ethnic Group	
Central American	4 (3.8%)
Cuban	1 (0.9%)
Dominican	15 (14.0%)
Mexican	1 (0.9%)
Puerto Rican	68 (63.6%)
South American	5 (4.7%)
Two or more ethnic groups	8 (7.5%)
Age Years	43.6 (9.6)
High school graduate	
Yes	52 (48.6%)
No	55 (51.4%)

department visits. At 6- and 12-months assessments, fewer participants reported moderate to severe depressive and anxiety symptoms compared to baseline. In addition, at both follow up assessments, fewer participants reported using illicit drugs in the past 30 days, experiencing homelessness, being unemployed and visiting the emergency department in the past 30 days compared to baseline. Depressive symptoms significantly decreased at 6-month (change in mean: 2.62, 95%CI: 1.13–4.11) and at 12-month assessments (change in mean: 3.45, 95%CI: 1.94–4.95) when compared to baseline. Anxiety symptoms significantly decreased at 6-month (change in mean: 2.51, 95%CI: 1.26–3.76) and at 12-month (change in mean: 2.89, 95%CI: 1.56–4.22) when compared to baseline (Table 2).

Participants who reported moderate to severe depressive symptoms at baseline (PHQ-9 score ≥ 10) reported significantly decreased depressive symptoms at 6-month ($p < 0.05$) and 12-month ($p < 0.05$) follow up assessments. A similar significant reduction was identified in participants with moderate to severe anxiety symptoms at 6-month ($p < 0.05$) and 12-month ($p < 0.05$) follow up. Illicit drug use in the past 30 days was non-significantly reduced at 6-month, but there was a significant reduction at 12-month ($p < 0.05$) follow up. Homelessness status significantly decreased at 6-month ($p < 0.05$) and 12-month ($p < 0.001$) follow up. Unemployment was significantly lowered at 6-month ($p < 0.001$) and 12-month ($p < 0.001$) follow up. ED visits in the past 30 days were non-significantly decreased at 6-month follow up, but there was a significant reduction at 12-month ($p < 0.05$) follow up (Table 3).

Participants in the CasaCare program significantly reduced their likelihood of experiencing moderate to severe depressive symptoms (PHQ-9 >= 10) at 6-month (AOR: 0.496, 95%CI: 0.296–0.832) and 12-month (AOR: 0.378, 95%CI: 0.209–0.684) follow up. In addition, participants had a lower likelihood of experiencing moderate to severe anxiety

Table 2. Participant characteristics at baseline and follow-up ($n = 107$).

Characteristic	Baseline *n* (%) or mean (SD)	Follow-up 6-month *n* (%) or mean (SD)	Follow-up 12-month *n* (%) or mean (SD)
Depressive symptoms			
PHQ-9 score	9.96 (7.27)	7.34 (6.23)[a]	6.51 (5.45)[a]
PHQ-9 >= 10	50 (46.7%)	31 (29.0%)	27 (25.2%)
PHQ-9 < 10	54 (50.5%)	76 (71.0%)	77 (72.0%)
Anxiety symptoms			
GAD-7 score	9.03 (6.46)	6.52 (5.48)[a]	6.14 (5.36)[a]
GAD-7>=10	46 (43.0%)	29 (27.1%)	28 (26.2%)
GAD-7 < 10	58 (54.2%)	76 (71.0%)	77 (72.0%)
Substance Use			
Illicit drug use in the past 30 days			
Yes	24 (22.4%)	15 (14.0%)	12 (11.2%)
No	82 (76.6%)	91 (85.0%)	93 (86.9%)
Homelessness			
Yes	83 (77.6%)	66 (61.7%)	53 (49.5%)
No	24 (22.4%)	40 (37.4%)	53 (49.5%)
Employment status			
Unemployed	94 (87.9%)	73 (68.2%)	71 (66.4%)
Employed	13 (12.1%)	33 (30.8%)	34 (31.8%)
Healthcare utilization			
Visited emergency department in the past 30 days			
Yes	24 (22.4%)	16 (15.0%)	11 (10.3%)
No	82 (76.6%)	91 (85.0%)	96 (89.7%)

[a]Paired *t*-test comparison between baseline and the corresponding follow up assessment had a *p*-value of 0.00.

symptoms at 6-month (AOR: 0.539, 95%CI: 0.329–0.884), and 12-month (AOR: 0.471, 95%CI: 0.270–0.821) follow up. We did not find a significant decrease in the use of illicit drugs at 6- and 12-months. Participants in the program were 44.4% less likely at 6-month (AOR: 0.556, 95%CI: 0.328–0.943) and 66.7% less likely at 12-month assessment (AOR: 0.333, 95%CI: 0.189–0.587) to experience homelessness, compared to baseline. Also, participants were 60.3% less likely at 12-month follow up to have ED visits in the past 30 days (AOR: 0.397, 95%CI: 0.188–0.837) compared to baseline (Table 4).

Discussion

Research shows that individuals experiencing homelessness and housing instability are at higher risk for substance use and mental disorders (Hwang and Henderson 2010; D'Amore et al. 2001; Bharel et al. 2013). Our findings suggest that Latinx adults experiencing homelessness with mental and substance use disorders improved health and health care utilization outcomes over a 12-month period. First, findings from the multivariable modeling analysis suggest that engaging Latinxs experiencing homelessness with substance use and mental disorders in a culturally relevant and integrated PCMH is associated with a reduction in depressive and anxiety symptoms at 6- and 12-month assessments. The PCMH has become increasingly common in traditional primary health care settings (US Department of Health and Human Services 2018), and the findings from this study support the value and impact of embedding a PCMH model within a community-based behavioral health organization. The CasaCare program, a collaboration between Casa Esperanza, Inc. and Boston Health Care for the Homeless Program, provides integrated and coordinated multicultural multilingual behavioral health, medical and specialty care

Table 3. McNemar test between baseline and follow-up assessments.

	Change in participants' outcomes[a]							
	Reduction, No.		Increase, No.		No Change, No.		*P*-value	
Dichotomous Variable	Follow-up 6-month	Follow-up 12-month	Follow-up 6-month	Follow-up 12-month	Follow-up 6-month	Follow-up 12-month	Follow-up 6-month	Follow-up 12-month
PHQ-9 score $\geq$ 10	27	32	10	11	64	58	0.01	0.00
GAD-7 score $\geq$ 10	23	27	7	9	70	64	0.02	0.01
Illicit drug use in the past 30 days	19	20	10	8	74	75	0.14	0.04
Being homeless	22	36	6	7	77	62	0.01	0.00
Being unemployed	23	26	3	4	78	74	0.00	0.00
Emergency department visit in the past 30 days	20	19	11	6	75	81	0.15	0.02

[a]Reduction: Number of participants with prevalence of the outcome at baseline but none at follow-up; increase: number of participants with no prevalence of the outcome at baseline and new prevalence at follow-up; and no change: number of participants with either prevalence or non-prevalence of the outcome at both baseline and follow up assessments.

Table 4. Multivariable modeling using generalized estimating equations.

	Adjusted OR[a] (95%CI)		*P*-value	
Variable	Follow-up 6-month	Follow-up 12-month	Follow-up 6-month	Follow-up 12-month
PHQ-9 score $\geq$ 10	0.50 (0.30–0.83)	0.38 (0.21–0.68)	0.01	0.00
GAD-7 score $\geq$ 10	0.54 (0.33–0.89)	0.47 (0.27–0.82)	0.01	0.01
Illicit drug use in the past 30 days	0.62 (0.30–1.30)	0.48 (0.21–1.08)	0.21	0.08
Being homeless	0.56 (0.33–0.94)	0.33 (0.19–0.59)	0.03	0.00
Emergency department visit in the past 30 days	0.62 (0.30–1.27)	0.40 (0.19–0.84)	0.19	0.02

[a]Adjusted model accounted for age, gender, ethnicity, race, education status, and employment status.

services. This program consists of personalized care planning, client education with behavioral support, self- awareness, goal setting and self-reflection skill-building, and staff support to address social determinants of health including assistance with housing, employment and social services supports (Amodeo et al. 2008). These culturally responsive and comprehensive services are critical and uniquely tailored to address the unique needs of a Latinx population with multiple and concurrent health co-morbidities.

Second, our study findings demonstrate that program participants were less likely to utilize the emergency department at a 12-month follow-up. Emergency department utilization is one of the most important factors associated with hospital utilization because of its high medical care costs (National Academies of Sciences Engineering and Medicine 2018; Bamezai, Melnick, and Nawathe 2005). Research shows that adults experiencing homelessness are more likely to utilize costly emergency department treatment or be hospitalized for medical care services (Kushel et al. 2002; Kushel, Vittinghoff, and Haas 2001; Gallagher et al. 1997; Bharel et al. 2013). Results from the National Survey of Homeless Assistance Providers and Clients (NSHAPC) identified that almost a quarter of individuals experiencing homelessness reported not being able to receive needed medical care, and 32% of those who reported receiving a prescription did not fill it (Kushel, Vittinghoff, and Haas 2001). A key component of the CasaCare program was to engage Latinx adults experiencing homelessness in primary care. Our study demonstrates that emergency department utilization can be reduced for Latinx adults experiencing homelessness by providing culturally linguistically comprehensive integrated care services. The CasaCare program shows the promising nature of providing co-located behavioral and primary health care services provided by a multilingual multi-disciplinary team in a culturally responsive community-based behavioral health setting. The program has an extensive network of primary care providers, detoxification programs, and addiction treatment and social service enhancements to help participants with mental and substance use disorders access primary care services. While the reduction of emergency department utilization among the participants was not significant at 6-month assessment, this could be attributed to either the severity or the multimorbidity of health care needs presented by individuals when they first initiate care. Integrating primary and specialty services for this population may help link participants to timely care resulting in the reduction of emergency department utilization and the high costs associated with emergency services utilization (Bamezai, Melnick, and Nawathe 2005).

Third, study findings show that program participants were less likely to report being homeless at 6- and 12-months assessments. The relationship between health and homelessness has been well documented. Individuals experiencing homelessness bear a disproportionate burden of disease, including substance use, mental health, and infectious diseases (Bharel et al. 2013; D'Amore et al. 2001; Hwang and Henderson 2010). Housing is a critical social determinant of health that, beyond providing the individual with a foundation upon which other determinants such as employment and income are contingent, it is also associated with a reduced risk of illness including substance use and mental health disorders (Greenwood et al. 2005). Findings from this study demonstrate that the CasaCare program can successfully link individuals with safe, affordable and stable housing within a year of enrollment. This study highlights the need for linking adults with mental and substance use disorders with comprehensive culturally

responsive treatment and support systems to not only improve health but also to increase wellbeing and the likelihood of long-term recovery. Specifically, given that people of color experience disproportionately low access to treatment, programs such as CasaCare that provide culturally sustaining services can succeed in engaging and maintaining good health outcomes for Latinx adults with mental and substance use disorders.

Lastly, in multivariable analysis, our study did not find significant results in the reduction (or increase) of illicit drug use in the past 30 days at 6- and 12-months assessments. This does not mean that it is not important to link participants with substance use disorders to comprehensive addiction treatment. A reduction in depression and anxiety, a reduction in ED visits, and a sustained increase in employment and housing, suggests that participants gained stability, an important step in recovery. In fact, our findings imply that there is a need for a stronger comprehensive continuum of care addressing layered social determinants of health in order to sustain recovery and sobriety for individuals with substance use disorders. Future studies could explore factors associated with sustaining recovery and sobriety in this population.

Limitations

In addition to the strengths and unique contributions of this study, a few limitations should be noted. The fidelity of the program implementation and intervention dosage were not incorporated in the analysis. Outcomes assessed in the study were self-reported, and researchers were not able to ascertain health records from participants. This analysis includes only those participants with baseline, 6- and 12-months follow-up assessments. Sensitivity analyses were conducted to determine whether there were differences at baseline between those who were included in the analysis and those were not eligible because did not complete 6- or 12-months assessments. At baseline, chi-square analysis did not find an association between the inclusion criteria and Latinx ethnicity ($p > 0.05$), race ($p > 0.05$), education status ($p > 0.05$), employment status ($p > 0.05$), homelessness ($p > 0.05$), or illicit drug use in the past 30 days ($p > 0.05$). While this study highlights differences observed among clients who completed baseline, 6- and 12-months assessments, there may be external factors beyond program participation that contributed to the observed changes.

Conclusions

Results of this study have implications that may be useful for policy and program design and planning of integrated behavioral and primary care health services. There is a significant need to provide multicultural and multilingual services to Latinx populations with mental and substance use disorders living in unstable housing or experiencing housing insecurity. These results suggest that the CasaCare program which uses the Patient-Centered Medical Home (PCMH) model (US Department of Health and Human Services 2018) to provide culturally linguistically responsive coordination and integration of behavioral, primary and specialty medical services has a significant impact on the mental health status – specifically, through a reduction in depressive symptoms – for a Latinx population experiencing homelessness. The comprehensive, culturally and linguistically integrated CasaCare program represents a promising

intervention for addressing disproportionate access to services that address the needs of Latinxs with mental and substance use disorders.

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Disclosure statement

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