Latinx Youth's Mental Health Needs and Socio-Economic Factors Associated with Service Utilization

ABSTRACT

This study examined the mental health (MH) needs and risk factors associated with MH service use among Latinx high school students in two distinct cities in the United States. We explored how socioeconomic characteristics, school location, youth and parental nativity, and self-perceived clinical needs were associated with the odds of youths seeing a mental health provider. Survey data were collected from 306 Latinx youth during the 2018–19 school year. Most youth (78%) presented with high symptoms of stress, anxiety, or depression, and only 23% sought MH services in the past year. Youth experiencing less economic hardship and having a mother from South America were almost five times more likely to utilize MH services. Similarly, males and older respondents were more likely to be underserved. Implications to ensure equitable access to MH services among older, low-income Latinx youth, particularly those in families from Central America, the Caribbean, and Mexico, are discussed.

Keywords mental health service use, Mental health access, Latinx youth and families, immigrants, school settings

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Latinx youth, the fastest and largest growing group in the United States (US), are experiencing striking mental health needs and disparities in access to care [1–3]. By 2050, this group will make up 32% of the youth population in the US [4], which is consistent with high rates of anxiety, depression, and post-traumatic stress disorders [5,6]. In 2019, 40 % of Latinx high schoolers reported feeling sad or hopeless almost every day for two or more weeks[7]. Among Latinx youth who are immigrants, more than half (59%) reported a traumatic event in their country of origin, 30% during their migration experience, and 18% since their arrival in the US[8,9]. Understanding the clinical needs and mental health service utilization is important for tailoring services to the needs of Latinx youth. Similarly, knowledge of the socioeconomic, contextual, and clinical factors associated with service utilization can help improve treatment and prevention, and prepare healthcare organizations for this group's projected growth and needs.

Motivated by the U.S. Surgeon General's (2021) advisory on protecting youths' mental health, we aimed to identify youth and family related socioeconomic factors and need factors that contribute to the likelihood of Latinx youth accessing mental health care [11]. Guided by Gelberg-Andersen's model of health service utilization, this study examined a range of ***predisposing, enabling, and need factors*** found to be associated with individuals seeing a mental health professional in their lifetime. While there is a growing recognition of social determinants of health and service utilization among Latinx adults, less understood are the factors associated with service usage during adolescence, a stage of development where clinical needs emerge and access to services, is imperative. Shedding light on these factors can help improve prevention efforts and early identification of clinical and social needs experienced by this vulnerable youth population in a timely manner.

According to Gelberg-Andersen's framework, ***predisposing factors*** are unmodifiable socio-demographic characteristics of individuals (i.e., age, gender, and nativity) that may be associated with service utilization. Some studies have found that foreign-born Latinx adolescents are less likely to access MH services than adolescents born in the US [12,13]. Similarly, parental race/ethnicity (i.e., being Latinx), also a predisposing factor, has been linked to inequalities in youth access to general medical and mental health services [14,15]. A recent study conducted with a racially diverse sample of disadvantaged mothers and children found that emergency room utilization was lower among children of Latinx and foreign-born mothers when compared to children of White and Black mothers [16]. While several studies have consistently reported that Latinxs underutilize mental health services compared to non-Latinx Whites,[17,18] a more concerning gap is whether Latinx parents' country of origin, also known as parental nativity (i.e., being born in Mexico, South America, or Central America), is related to youths' access to needed services and outcomes.

The Gelberg-Andersen framework proposes that social and contextual factors may facilitate or impede service utilization [19]. The study of ***enabling factors*** consists of socioeconomic characteristics contributing to Latinx youth mental health service utilization [20]. An examination of how socioeconomic characteristics predict access to mental health care is critical, as this group often lives in marginalized communities with limited resources and opportunities [21,22]. Prior literature has found economic hardship and poverty to be significant predictors of access to and engagement in mental health services among Latinx youth[22]. However, little is known about the context and environment associated with Latinx youth's schools. For example, youth living in Houston, Texas and Providence, Rhode Island share similar contexts in that these cities in the United States are highly populated, urban, and

predominantly Latinx. While these cities are recognized for their similarities and the growing presence of Latinx immigrants, the social and political protections for immigrant youth and their parents in these two cities are different.

In Texas, the state requires local law enforcement to cooperate with Immigration Custom Enforcement (ICE) by exchanging information about immigrants in custody and detaining them locally [23]. In contrast, Rhode Island has explicit local and state policies prohibiting law enforcement agencies from sharing information with the ICE or holding individuals for immigration charges [24]. A recent study conducted with this sample found that students in Houston were more likely than those in Providence, Rhode Island, to fear that someone close to them would be deported (67% versus 52%)[25]. Despite the marked differences in the protections available to immigrants living in sanctuary (i.e., Providence, Rhode Island) versus non-sanctuary cities (Houston, Texas), the literature on whether geographic location matters for service utilization is mixed and scant in this population [26,27].

Lastly, the Gelberg-Andersen Framework suggests that self-perceived or actual clinical needs are factors influencing service utilization[28]. While there is consistent evidence of an association between service utilization and clinical **need factors** [26], this is not clear among disadvantaged youth at the intersection of social and economic vulnerabilities, conditions that often may limit access despite evident clinical needs. To understand service utilization among Latinx youth, we explored whether symptoms consistent with depression, anxiety, and post-traumatic stress disorder (PTSD) were significant predictors of seeing a mental health professional.

Guided by theory and prior literature, this study focused on the needs and service utilization of 306 first- and second-generation Latinx high school students living in two urban

cities, Houston, Texas, and Providence, Rhode Island. The main purpose of this study was to determine the relative contribution of predisposing characteristics (age, gender, mother, and youth nativity), enabling resources (school location and economic hardship), and need factors (symptoms consistent with depression, anxiety, and PTSD). Moreover, this study explored the interaction effect of school location (being in a high-immigration-enforcement versus low-enforcement jurisdiction) and child nativity (US-born versus foreign-born) on lifetime service utilization. Based on the literature, we hypothesized that foreign-born youth in a high enforcement context would have a lower likelihood of MH service utilization. Lastly, mental health service utilization patterns and self-reported clinical needs (symptoms consistent with depression, anxiety, and PTSD) among a sample of Latinx youth located in a sanctuary versus a non-sanctuary city are also presented. The findings of this study aimed to inform preventive and intervention efforts to support this group's projected growth and clinical needs, based on their geographic location and immigration context.

Methods

Participants.

We collected data on the utilization of MH services by Latinx youth in two urban areas with high proportions of Latinx residents: Harris County, Texas and Providence, Rhode Island. Survey data were collected throughout the 2018–2019 school year from 306 Latinx students in 11 high schools located in Harris County, Texas, and Providence, Rhode Island and surrounding cities. Bi-lingual and bi-cultural social work and psychology graduate students collected in-person survey data. Surveys were administered in the respondents' preferred language (Spanish or English). Students were eligible to participate if they identified as Latinx and spoke English and/or Spanish if they or their parents were from a Spanish-speaking country (excluding those

from Puerto Rico or Spain) and if they received parental consent. Youths from Puerto Rico and Spain were excluded from the study because their migration experiences may be uniquely different from Latin American youth's migration experiences who do not attain U.S. citizenship at birth. Youths whose adult parents or guardians were unable to provide consent were unable to participate in the study. The study targeted schools with high percentages of Latinx, emergent bilingual, and immigrant students (i.e., more than 25% of the student population). Researchers worked closely with the school staff, including principals, homeroom teachers, EL teachers, homeschool liaisons, and community organizations, to identify students who met the study criteria. Since Latinx youth from immigrant families are considered a hard-to-reach group due to their social, economic, and legal vulnerabilities, the non-probability sampling method of convenience sampling was used.

Procedures.

The research staff went to the schools to speak to groups of interested students about the study, discuss its benefits and risks, and address questions and concerns. Students were given parental consent and assent forms and the researcher's phone number to reach out with questions. A sign-up sheet with names and phone numbers was also gathered for follow-up if necessary. Once consent was obtained, data were collected from groups of five to seven students. Youths were given iPads to record their responses, and then trained, graduate-level counseling, psychology, and social work students read each item and instructed the youth on how to use the response format. Participants were positioned within the room so that they could not see each other's answers. Additional research staff were available to assist students with low literacy or who struggled with technology. Data were directly entered into an offline Qualtrics survey to minimize the possibility of errors. On average, the survey was completed in 45 minutes.

Measures.

Dependent variable. Lifetime use of MH services was the primary outcome of interest. Participants were asked, "Have you ever talked to a psychologist, social worker, or counselor about your problems?" This was a dichotomous variable, where 0 was no and 1 was yes. Twelve-month service utilization was not used as an outcome variable because very few students endorsed accessing MH services recently, limiting the statistical power to detect any differences.

Independent variables. We included variables that prior literature has shown to be predictive of MH service use across the Gelberg-Andersen categories of treatment access and utilization. These independent variables consisted of predisposing, enabling, and need factors. Predisposing characteristics included youth and parental nativity [29], age [13], and gender[30]. In this study, gender was dichotomized into female and not female (female=0; not female=1). A small group of transgender, non-binary, and other identifying Latinx youths (n=4) were included in the "not female" category. Nativity was measured by asking youths whether they were foreign-born (0) or born in the US (1). Youths were also asked to write in their mother and father's countries of origin. This information was transformed into a nominal form and measured at a categorical level, which allowed researchers to categorize youth parents' regions of origin with the following categorical options: (1) born in the Caribbean (i.e., Dominican Republic, Cuba), (2) born in Central America (i.e., Guatemala, Honduras, El Salvador), (3) born in South America (i.e., Colombia, Venezuela, Bolivia), and (4) born in Mexico. In this study, when the mother and father's region of origin differed, the mother's country of origin was selected for inclusion in the analysis, and a dummy coded as prior research found associations between maternal citizenship and youth access to insurance and healthcare[31].

Social factors such as economic hardship and school location were included as enabling factors. Economic hardship was assessed using eight single-item questions that probed about difficulties in affording food, rent, utilities, clothing, transportation, and other basic necessities (α = 0.86). Responses ranged from 0 (never) to 3 (almost always). The items were summed up to indicate a range of economic hardships. Higher scores indicated greater economic hardship. This measure was derived from Keepin's REAL substance use prevention intervention, adapted for Latinx youth [32]. School location was gathered by asking youths where they attended school (Harris County, Texas, or Providence and surrounding cities, Rhode Island).

Symptoms consistent with PTSD[33] and clinical levels of depression [34] and anxiety [35] were considered MH need factors based on the Gelberg-Andersen framework [36]. Post-traumatic stress symptoms were measured using the *Child PTSD Symptom Scale (CPSS)*[33]. The CPSS contained 24 self-reported items, 17 of which corresponded to DSM-5 symptoms associated with PTSD (α = .86). The scale explored the frequency youth experience upsetting thoughts or images, bad dreams or nightmares, flashbacks, and other PTSD symptoms. Responses were rated on a Likert-type scale that ranged from not at all (0), once a week or less/once in a while (1), two to four times a week/half the time (2), and five or more times a week/almost always (3). Higher scores indicate more PTSD symptoms [33]. The clinical cut-off scores for the CPSS range from 21 to 25, indicating moderate PTSD impairment, followed by 26 – 30 moderately severe, 31 – 40 severe, and 41 – 51 extremely severe [33].

Anxiety symptoms were assessed using the Screen for Child Anxiety and Related Disorders (SCARED)[35]. The SCARED consists of 41 self-reported questions that form five subscales aligned with the DSM 5 criteria: generalized, separation, school, social, and somatic anxiety. Responses ranged from 0 (almost never) to 2 (almost always). The sum of the total

anxiety scale scores was used in the regression models (α = .94). A score of 25+ indicates a possible anxiety disorder. The SCARED has been tested for validity in several studies on Latinx adolescents [37,38] and has shown good psychometric properties. Depression symptoms were measured using the Center for Epidemiological Studies Depression Scale for Children (CES-D) [34]. This 20-item self-report depression inventory contains scores that range from 0 to 60. Scores higher than 16 indicate a possible depressive disorder. Responses were rated on a four-point Likert scale ranging from 0 ("not at all") to 1 ("a little"), 2 ("some"), and 3 ("a lot") (α = .89).

Data Analysis.

All statistical analyses were conducted using SAS version 9.4[39]. This study ran and examined two logistic regression models. The purpose of data analysis was to compare two specified models: one with an interaction term and one without an interaction term. The first model specified an interaction effect between location (Harris County, Texas or Rhode Island) and youth nativity. However, this model was not presented, as it did not achieve significance (p = .27) (data not shown). Thus, the final model, which excluded the interaction effect and only included predictors of lifetime use of mental health services, was preferred for the final analysis (See Table 2).

The stepwise likelihood ratio logistic regression analysis was conducted to estimate the probability of lifetime use of MH services by Latinx high school students. Data screening was conducted to test the model assumptions, including nonlinearity and excessive collinearity (Menard, 2002). In addition, several model diagnostics were checked for the multiple imputed datasets, including an analysis of residuals. Nine factors were entered into the analysis based on predisposing factors (age, gender, youth nativity, parental region of origin), enabling factors

(school location, economic hardship), and need factors (post-traumatic stress disorder, depression, and anxiety).

Missing data handling. Missingness on some independent variables was high; therefore, multiple imputation was conducted for the regression analysis that yielded a valid sample size of 306 (See Table 2). Missing data analysis revealed that missingness of variables with extensive missing data (i.e., SCARED measure) was related to the mean levels of other variables. This increases the tenability of the missing at random assumption underlying multiple imputations[40]. Fifty iterations were specified, and convergence was assessed using diagnostic graphs.

Results

Sample description.

Table 1 shows socio-demographic differences, including the extent of economic hardship, MH service utilization, and clinical needs as a whole and by school location. The sample consisted of 306 Latinx high school students located in Harris County, Texas (n=152), and Rhode Island (n=154). The sample had an average age of 16.61 years, ranging from 13 to 25 years, with almost one-third being over the age of 17 years. Older students were mostly recent immigrants, and many were from Guatemala. Almost half of the sample (47%) was born to immigrant parents in the United States, while a little over half (53%) were foreign-born.

The overall sample included males (n=124), females (n=177), a small group of transgender, non-binary, and other identifying Latinx youths (n=4), and one missing response. Experiences of economic hardship were elevated among the Latinx youth in this study, with 90.8% expressing that their families struggle with basic necessities sometimes or more frequently, such as paying rent, utilities, purchasing food, or clothing. Most youths (78%) met

the criteria for elevated symptoms in at least one MH (PTSD, anxiety, or depression). The mean scores of PTSD symptoms were significantly higher among youth in Harris County (21.26) than in Rhode Island (18.34) (t (235) =2.00, p=.05), while no significant differences in economic hardship, depressive or anxiety symptoms, and lifetime MH service utilization by location were found.

Mental Health Needs.

Most participants reported high levels of mental health needs. For instance, 56.9% of the total sample self-reported symptoms that met the clinical cut-off for anxiety, 45.8% for PTSD, and 31.7% for depression (See Table 1).

Lifetime and 12-month service utilization. Despite the great MH needs among this sample, only 57% sought services in their lifetime (See Table 1). No significant differences were found in lifetime MH service use among youth in Harris County (n = 94, 62%) compared to those in Rhode Island (n = 78, 52%; p = .08). In addition to lifetime mental service utilization, participants were asked to report whether they had seen a therapist, counselor, or social worker in the past year. Only 23 % of the participants sought mental health services the year prior to the survey. There were significant differences in the past year's mental health service utilization by school district, with those in Harris County endorsing greater access to seeing a psychologist, counselor, or social worker (n= 47, 31%) than those in Rhode Island (n=24, 16%, p = .002).

Predictors of Lifetime Mental Health Service Use.

Table 2 presents the final logistic regression model and the significant predictors. Respondents' gender, age, economic hardship, and maternal nativity achieved statistical significance. Lifetime MH service use was associated with predisposing factors of age ($p <$ .001), followed by gender (p = .05), and having a parent originating from South America (p

=.01) as opposed to Central America, Mexico, and the Caribbean. Older respondents were less likely to report MH service utilization (OR = .78 per one year of age difference (1.77 years). Females were 1.78 times more likely to have used MH services, and youth with a mother originating from South America were more than five times more likely to utilize MH services (OR = 4.83). Economic hardship (p = .01) showed a significant association with lifetime mental health service use, but school location did not (p = .07). Lifetime service use was not associated with need as measured by meeting the criteria for depressive (p = .44) or anxiety symptoms (p= .79), and endorsing symptoms consistent with PSTD did not significantly predict lifetime MH service use (p =.08). Depression and anxiety scores were not associated with MH service utilization. Meanwhile, respondents experiencing economic hardship were less likely to report MH service utilization. For each unit increase in economic hardship, participants had a 92% decrease in the odds of using MH services. On average, respondents whose parents were from South America had the highest proportion of MH service utilization. The proportion of MH service utilization responses was approximately 30% higher for respondents with South American parents than for all other parental nativity categories (all ps < .02). The following predictors did not achieve significance: school district, nativity, depressive, anxiety, and trauma scores.

Discussion

This study examined the clinical needs and factors associated with lifetime use of MH services among 306 first- and second-generation Latinx high school students located in Harris County, Texas, and Providence, Rhode Island. Approximately 56.9%, 45.8%, and 31.7% of the youth self-reported significant symptoms of anxiety, post-traumatic stress disorder (PTSD), and depression, respectively. The high rates of clinical needs are consistent with studies conducted

with community samples of Latinx immigrant youth, suggesting that Latinx youths' mental health needs often go unaddressed and untreated.[3] Similarly, the elevated mental health prevalence and unmet clinical needs in this sample could be explained by the fact that only 23 % of youth had access to mental health services the year prior to taking the survey.

Guided by the Andersen model of service utilization, we explored the relative contribution of predisposing characteristics (age, gender, youth, and maternal nativity), enabling resources (school location and economic hardship), and need factors (symptoms consistent with depression, anxiety, and PTSD) on lifetime MH service utilization. Moreover, an interaction effect between school location and child nativity on lifetime service utilization was explored but was not significant. In this study, only predisposing factors (i.e., gender, age, and mother's nativity) and enabling factors (i.e., economic hardship) emerged as significant predictors.

Female participants were almost twice as likely to be seen by social workers, psychologists, and counselors in their lifetime. Meanwhile, Latino male youth and those in their late adolescence (older participants) were at a greater risk of accessing mental health services [41,42]. The underutilization of mental health services among Latino male youth warrants attention, as their rates of mental health and externalizing behaviors (e.g., aggressive behaviors, delinquency, and substance use) are rapidly increasing[2]. The influence of cultural and family values, such as Machismo and stigma, could contribute to limited access to mental health services.

Youths with parents from South America were approximately five times more likely to receive mental health care, highlighting the existing disparities and the direct impact of mothers' experiences on their youth's access to care [14,18]. These findings add to the growing literature on how youth with parents from Mexico, Central America, and the Caribbean are at a disadvantage–

a group that tends to be more likely to be undocumented when compared to migrants from South America [44]. Youths with parents from Central America, Mexico, and the Caribbean more commonly live in mixed-status families or households where there is uncertainty about immigration status, a factor that may compromise access to needed care.

Latinxs are a rapidly growing and diverse group with unique social and economic needs. This study confirmed that economic hardship is a significant factor in access to mental health services [45]. Moreover, Latinx youths' economic needs superseded their clinical needs in that depression, anxiety, or symptoms consistent with PTSD did not predict seeing a mental health professional in their lifetime. According to Gelberg-Andersen's model, healthcare utilization should correlate with self-perceived clinical needs [46]. Reasons for the underutilization of MH services despite great clinical needs include a lack of literacy in the early identification and intervention of mental health symptomatology, the presence of community and personal stigma [43], and economic hardship. The limited availability of culturally adapted and linguistically responsive services may explain the limited access to and adherence to appropriate services among this population.

Moreover, an interaction effect between school location and child nativity on lifetime service utilization was explored, as a prior study utilizing this data found that differences in knowing someone who had been deported from the US were significant for students by school location and nativity (Capps et al., 2020). We hypothesized that youth in a high enforcement context would have less access to MH services. However, no significant differences were found in lifetime MH service utilization by school location in the final model. Interestingly, youth in Houston, a city with higher immigration enforcement, had greater service utilization rates during 2018–2019 than those in Providence, a low immigration enforcement city. It is possible that

Houston, a city with a greater number of immigrants and a much larger metropolitan city than Providence, had more MH resources. Another possibility is that the academic year in which we collected data (2018-2019) overlapped with Trump's administration, which heavily focused on immigration enforcement, a factor that may have increased mental health needs and service utilization.

School location and youth nativity (i.e., foreign vs. US-born) did not matter as much as economic hardship and maternal nativity did. It is possible that youth living in sanctuary and non-sanctuary cities experience the same underutilization of clinical services, and that service utilization is often determined by parents rather than their children. Given the vulnerability of some Latinx youth (i.e., older, male, and from Central America), school settings are important for identifying their clinical needs and promoting access to care. Since Latinx youth transitioning to adulthood are less likely to seek care, the allocation of resources (e.g., hiring Spanish-speaking staff) may mitigate the possible impact of predisposing, enabling, and need factors on mental health service utilization [47]. Training teachers and school leaders to identify and address risk and promotive factors for MH utilization, such as parental nativity, age, gender, economic hardship, and further exploration of facilitators of service utilization, are needed.

Efforts to increase help-seeking behaviors and access among Latinx youth at an early age and among those experiencing economic hardships are needed. Schools in low-income communities are promising locations to prevent, identify, and intervene with Latinx youths' growing mental health needs and limited access to services. Currently, school districts with the highest concentrations of poverty are 2.6 times more likely to have a funding gap [48], which could later be linked to a lack of early prevention and intervention efforts. Similarly, only 42% of K-12 public schools have been found to offer mental health treatment [49], suggesting disparities in

access to mental health care, which are more common in schools with high percentages of Latinx, English language learners (ELL), and immigrant youth. Some have suggested tailoring resources for immigrant youth and children within schools and after-school programs, as this population is at an increased risk of compromised health, elevated rates of poverty, substance abuse, community violence, and lack of supportive resources such as MH care options [45]. The planning and development of school-based MH services will require inter- and multi-disciplinary research, clinical and educational efforts, and more funding resources. There is strong evidence that racial disparities in service access generally appear to be reduced by the availability of mental health services in the educational sector [50,51].

The analyses conducted in this study have some limitations that should be considered in future research. The findings should be interpreted carefully, as this was a convenience sample of Latinx youth and was not representative of the general population. Moreover, the data were limited to youth self-reports to examine MH service utilization. Another limitation of this study was the inability to capture the needs and experiences of transgender and non-binary Latinx youth utilizing mental health services, a highly marginalized and unrecognized group in society. The theoretical model utilized for this study may also present some limitations. Thus, some have proposed adaptations to the model to consider macrostructural/contextual conditions at both the general and immigrant-specific levels, as well as the mediating relationships among some of these factors that could better explain service utilization [52].

The findings of this study highlight the need to improve the accessibility of specialty services to protect youth from the negative effects of mental health issues and social needs. Mental health programs and services within schools and culturally tailored interventions for youth who are immigrants themselves and the children of immigrant parents are greatly needed

[53]. Services should be mindful of the economic hardships and challenges in the access to care among Latino youth, those with a parent from Central America, Mexico, and the Caribbean. Even though our analyses showed that access to care is high among this sample of children of immigrants from South America, it is crucial to understand more about potential barriers and differences in access across all immigrant families who have historically been medically underserved in the US.

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