Latinx Caregivers’ Perceived Need for and Utilization of Youth Telepsychology Services During the Coronavirus Pandemic

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Latinx Caregivers’ Perceived Need for and Utilization of Youth Telepsychology Services during the Coronavirus Pandemic

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Abstract

Telepsychology has the potential to provide a safe method of addressing mental health problems among Latinx youth during the coronavirus pandemic. However, the extent to which Latinx caregivers are accessing telepsychology services for their child and whether this format is perceived to be an appropriate method of addressing youth psychopathology is unknown. The present study examined indicators of youth psychopathology and external stressors in relation to Latinx caregivers’ perceived need for and utilization of youth telepsychology during the coronavirus pandemic. The sample consisted of 598 Latinx caregivers of school age youths ($M_{Age} = 11.9, SD = 3.4$) from across the United States recruited through an online survey panel. Caregivers reported on a wide array of factors associated with their ability to access mental health services and their perceived need for and utilization of youth telepsychology in the last year. Our findings suggest that telepsychology is a less preferred but acceptable intervention format. Despite this, significant unmet need for telepsychology services was found among Latinx youths with clinically elevated problems. Latinx caregivers were especially likely to perceive a need for and utilize telepsychology in response to parenting stress and youth internalizing problems. Clinical externalizing problems were not significantly associated with telepsychology need or utilization after controlling for other variables. Disparities in accessing telepsychology raises concerns regarding the long-term psychological impact of unmet mental health service need among Latinx youths. Efforts are needed to identify and eliminate barriers to accessing youth telepsychology services among Latinxs.

*Keywords*: telepsychology, service need and utilization, youths, Latinx, coronavirus pandemic
Resumen

La telepsicología tiene el potencial de proveer un método seguro para atender problemas de salud mental durante la pandemia del coronavirus. Sin embargo, se desconoce que tanto los padres Latinx acceden a servicios de telepsicología para sus hijos y si perciben que este formato es adecuado. La presente investigación examina marcadores de la psicopatología juvenil y tensiones externas, midiendo su impacto en las percepciones de los padres sobre la necesidad y utilidad de servicios telepsicológicos para jóvenes. La muestra consistió en 598 padres con jóvenes de edad escolar ($M_{\text{Age}} = 11.9$, $SD = 3.4$) en los Estados Unidos. Los padres reportaron factores relacionados con su habilidad de acceder a servicios de salud mental, y sus percepciones sobre la necesidad y el uso de estos servicios en el último año. Nuestros hallazgos sugieren que la telepsicología es un método menos preferido, pero no obstante aceptable de intervención psicológica para jóvenes Latinx. A pesar de esto, una necesidad significativa de servicios para jóvenes con problemas de salud mental clínicamente elevados persiste. Los padres Latinx percibieron una mayor necesidad de servicios telepsicológicos y uso de estos servicios como respuesta al estrés parental y problemas internalizados de sus jóvenes. Los problemas clínicos externalizados no estuvieron asociados con la necesidad percibida o uso de telepsicología. Las disparidades en el acceso a servicios de salud mental son preocupantes debido al impacto psicológico que puede causar a largo plazo, y debido es preciso identificar y eliminar barreras de acceso a los servicios de salud mental y telepsicología.
Public Significance Statement

The coronavirus pandemic has exacerbated mental health problems among Latinx youth and limited their access to preferred sources of support within their communities. Latinx parents perceived telepsychology as a less preferred yet acceptable method of delivery for mental health services. Despite acceptability, access seems to be lower than the demand warrants, a finding that points to the importance of understanding barriers to utilization of telepsychology services for Latinx youths.
Latinx Caregivers’ Perceived Need for and Utilization of Youth Telepsychology Services during the Coronavirus Pandemic

Mental health services (MHS) provision has undergone a massive shift during the coronavirus pandemic. Prior to the pandemic, telepsychology services, psychological counseling or therapy delivered over video conferencing, showed significant promise in addressing health disparities among Latinx families living in rural or underserved communities by reducing barriers associated with travel, stigma, and access to Spanish speaking therapist (Ramos & Chavira, 2019). Because of the pandemic, the U.S. Congress approved measures to improve access to telepsychology services moving this format from serving hard to reach populations to the forefront of psychological intervention (Peden et al., 2020; United States Senate, 2020). The increased access to telepsychology services, paired with the many restrictions on in-person formats have resulted in unprecedented numbers of people accessing health services via video conferencing (Pifer, 2020). While telepsychology services have rapidly scaled to meet demand, the extent to which Latinx caregivers access these services for their child and whether they perceive this format as being an appropriate method of addressing youth psychopathology during this pandemic is unknown. This is particularly relevant given that Latinx caregivers have traditionally experienced significant barriers in accessing in-person youth MHS (Malhotra et al., 2015). The present study conducted an exploratory analysis of factors associated with Latinx caregivers perceived need for and utilization of youth telepsychology during the coronavirus pandemic.

Impact of the Coronavirus Pandemic

The coronavirus pandemic has laid bare the racial disparities in our health care system, as the virus has disproportionately impacted racial/ethnic minorities, especially Latinxs (Garcini et
Latinxs are heavily represented among essential front-line workers in many states and lack access to testing, well-resourced hospitals, or housing that allows for safe social distancing (Marias Gil et al., 2020). The coronavirus pandemic has been especially disruptive to the lives of Latinx children who have been exposed to increased uncertainty, fear, isolation, and economic uncertainty impacting their psychological wellbeing (Golberstein et al., 2020). Latinx families are especially vulnerable to the effects of the pandemic as they have traditionally experienced significant barriers to accessing youth MHS (Malhotra et al., 2015; Merikangas et al., 2011). This is concerning as the pandemic has exacerbated psychopathology while reducing access to preferred sources of support among Latinx families (e.g., faith-based organizations, social networks, school counselors; Kapke & Gerdes, 2016). While clinicians have broadly adopted telepsychology as a method of safely addressing MHS need during the pandemic, the acceptability and utilization of these services among Latinx families is unknown.

**Telepsychology Utilization**

We used the term telepsychology to refer to psychological counseling or therapy delivered via video conferencing to distinguish between these services and those that are interchangeably used to refer to medical interventions (i.e., telehealth; Zur, 2012). Prior to the pandemic, telepsychology research among racial/ethnic minorities primarily focused on the examining the efficacy and acceptability of these interventions within hard-to-reach communities (Ramos & Chavira, 2019). As this service format was not widely implemented, research has yet to examine service utilization patterns of telepsychology among non-clinical samples. The rapid scaling of telepsychology in response to the coronavirus pandemic has presented an opportunity to examine acceptability and utilization patterns during a broader implementation of these
services. Understanding telepsychology acceptability and utilization patterns among Latinx families may inform the adaption of these services well beyond the current pandemic.

Latinx caregiver’s engagement in youth telepsychology may be understood through the use of theoretical frameworks of health service utilization. Families’ decisions to seek services for their youth begin with problem recognition (i.e., clinical need, caregiver perceived need), which informs their subsequent selection and engagement in appropriate intervention formats (Srebnik et al., 1996; Cauce et al., 2002). Perceived need is a central component of service utilization models focusing on racial/ethnic minorities as perceptual thresholds determining whether a youth’s problems require formal intervention vary across cultural groups (Cauce et al., 2002). This process is influenced by predisposing characteristics (e.g., age, gender, race/ethnicity), the illness profile (e.g., definition of behavior as mental health disorder, knowledge regarding mental health, parental education, parenting stress), and barriers to services (e.g., income, availability, insurance, stigma, fear of discrimination; Srebnik et al., 1996). Each of these competent is considered within the family’s culture and context (Cauce et al., 2002). These conceptual models highlight the importance of considering the families characteristics and context when exploring factors associated with youth telepsychology need and utilization during the coronavirus pandemic.

**Predisposing Characteristics, Illness Profile, and Barriers**

Predisposing characteristic refers to demographic factors that are associated with a greater propensity for service utilization (i.e., age, gender, race; Srebnik et al., 1996). Age is a predisposing characteristic as families may experience different challenges related to youth behavior and barriers to MHS during the course of the child’s development (Kapke & Gerdes, 2016). Research suggests that increases in age are generally associated with lower rates of youth
MHS utilization (i.e., youth, caregivers; Burnett-Zeigler & Lyons, 2010; Gudiño et al., 2009). Gender is another common predictor of in-person MHS utilization. Latinx caregivers have been found to seek in-person MHS for boys relatives to girls (Cabiya et al., 2006). Gender differences extends to caregivers, with mothers being more likely to utilize in-person MHS for their youth relative to fathers (Srebnik et al., 1996). The health disparities literature has also documented lower rates of utilization of MHS among racial/ethnic minorities youths relative to Whites (Malhotra et al., 2015). Research has yet to examine racial disparities in service utilization within ethnic groups, however evidence suggests that darker skinned Latinxs have poorer mental health outcomes relative to their lighter skinned counter parts (Breland-Noble, 2013). These findings highlight a need to explore the potential relationship between age, gender, skin tone, and youth telepsychology service need and utilization among Latinx caregivers.

The illness profile refers to factors influencing problem recognition and subsequent utilization of MHS (Srebnik et al., 1996). Caregivers may be alerted to the need for services by a professional (e.g., clinical assessment) and/or through subjective recognition that the youths’ problems require formal intervention (e.g., perceived need; Cauce et al., 2002). This process can be impacted by racial/ethnic differences in perceptual thresholds for distress, which may be specific to particular symptom presentations (e.g., internalizing and/or externalizing; Vázquez & Villodas, 2019). For example, Gudiño and colleagues (2012) found differences in disorder-specific utilization of in-person psychological counseling, such that when Black caregivers reported that their child had an externalizing problem, they were more likely to use counseling services as compared to Whites. Latinx caregivers also utilized counseling services at higher rates if their adolescent had externalizing problems but service utilization was not significantly different from White adolescents. Other research has found that Latinx caregivers may be less
likely to utilize in-person psychological counseling in response to youth internalizing problems relative to their White counterparts, but do not significantly differ when accessing services for externalizing problems (Merikangas et al., 2011). These findings suggest that caregivers perceived need for and utilization of youth MHS may vary by problem type across racial/ethnic groups. However, research has yet to examine within group differences among Latinx caregivers to determine whether they may perceive a need for and utilize telepsychology services to address youth psychopathology broadly or for specific problems.

The illness profile also includes family characteristics that may impact MHS utilization (e.g., education; parenting stress; Srebnik et al., 1996). Caregiver education may affect whether child psychopathology is recognized as being problematic. For example, caregivers with low academic achievement may not perceive youth underperformance in school due to behavioral problems to be troublesome if they were also disengaged from school (Srebnik et al., 1996). Caregivers with lower education may also have lower mental health literacy contributing to greater normalization of youth psychopathology (Frauenholtz et al., 2015). Increased time spent confined in the home due to coronavirus shelter in place orders may have also increase caregiver awareness of youth psychopathology. Caregivers who were confined with youth exhibiting clinically elevated psychopathology may have experienced significant increases in parenting stress that alerted them to the need for youth MHS (Mendenhall & Mount, 2011; Perrin et al., 2020). While research has identified parenting stress as a robust predictor of youth MHS utilization, Latinxs may experience greater caregiver strain from managing specific child psychopathology (i.e., internalizing problems) that may be culturally problematic in the home setting (e.g., withdrawn from family, irritability towards caregivers; Galvan & Gudiño, 2020).
These findings suggest that caregiver education and parenting stress are important factors to consider when examining telepsychology utilization patterns among Latinx caregivers.

Logistical and practical barriers such as transportation, income, insurance, work schedule, and language can also contribute to MHS disparities amongst Latinx youth (Kataoka et al., 2002; Scheppers et al., 2006). The coronavirus pandemic has compounded these already substantial barriers faced by Latinx caregivers seeking youth MHS (e.g., lack of knowledge of how to access services, distance from providers, financial insecurity; Cook et al., 2013; Kruzich et al., 2003), while exacerbating mental health symptoms (i.e., depression, anxiety) through fears of the virus (Fitzpatrick et al., 2020). Prior to the pandemic, researchers had already highlighted the ability of telepsychology to reduce barriers to youth MHS among Latinxs (i.e., childcare, work schedule, transportation, language preference; Stewart et al., 2017). However, less is known about the impact of barriers to youth MHS after the rapid scale up of telepsychology in response to coronavirus pandemic shelter in place orders and social distancing measures.

The Current Study

Understanding service utilization patterns of Latinx families who are among the most affected by the coronavirus pandemic is a crucial public health issue. Determining the acceptability of receiving youth MHS over telepsychology among Latinxs is essential given the impact of social distancing policies that have reduced access to preferred sources of support within communities that promote positive psychological health among youth (e.g., faith-based organizations, social networks, school counselors; Kapke & Gerdes, 2016). The current study examined whether caregiver perceived need for and utilization of youth telepsychology services were associated with predictors of in-person service utilization (i.e., age, gender, race [skin tone], parental education, income, parenting stress, youth problem type) and shelter in place orders.
associated with the coronavirus pandemic. Support service preferences for addressing youth psychopathology among Latinx caregivers were also explored. Variables examined within the current study were identified as being theoretically and/or empirically important within the MHS utilization literature. However, specific hypotheses regarding the relationship between these variables and telepsychology outcomes were not elucidated by the existing literature given the unique context that the coronavirus pandemic has created. Thus, information drawn from these analyses should be considered exploratory in nature.

Method

Procedure and Sample Characteristics

The current study utilized a national sample of Latinx caregivers of youth ranging from 6 to 18 years of age recruited through Qualtrics, an online survey panel company. Survey panels are databases that include individuals who have registered to participate in marketing research. These panels are a cost effective (i.e., $12.50 per participant) and efficient method of collection data at a national scale from a target population. Researchers are increasingly using panels for sampling populations of interest and have found them to provide good quality data when attention checks are used (Lowry et al., 2016). Abbey & Meloy (2017) describe attention checks as questions designed to identify individuals who demonstrate inattentive patterns of response on surveys. Inaccurate responses to attention questions suggest that the participant is not fully engaged in the task and are likely providing poor quality data.

Approval was obtained from the Utah State University Institutional Review Board to conduct the present study. Participants were recruited online from May 21, 2020 through June 18, 2020. Respondents who potentially met study criteria were contacted via email by Qualtrics. The email contained a link for the online survey and informed potential participant regarding the
nature of the survey, required time, and compensation. Those who were interested in taking the survey were asked to complete a screener that confirmed their eligibility. Participants then read a letter of information regarding the purpose of the study and provided consent to participate prior to starting the survey. Participants completed a 20 min online survey gathering information on a wide array of factors that might influence their ability to access MHS and their perceived need for and utilization of youth telepsychology services in the last year. Caregivers who had multiple children were asked to report on the child that presented the most challenges to them as a parent. Participants were required to complete all survey items. Following best practices for ensuring data quality from survey panels, we utilized a variety of contrasting validation methods to identify and remove respondents who provided low quality data (i.e., attention checks [logical statements, directed queries, open ended queries, response time and pattern, honesty check]; Abbey & Meloy, 2017).

Participants that met inclusion criteria for the current study were (a) Latinx, (b) a caregiver to at least one youth between the ages 6-18, and (c) were able to complete the survey in English. Of those screened ($n = 3,149$) only a third ($n = 1,128$) met inclusion criteria. A small number of participants who met inclusion criteria did not provide consent to participate ($n = 17$) and thus were not administered the survey. We also did not use data from respondents who provided poor quality information as identified by attention checks ($n = 235$) or those who did not complete the entire survey ($n = 278$). The final sample consisted of 598 Latinx caregivers from across the United States who met inclusion criteria. Caregivers were 35.5 years old on average ($SD = 9.1$), predominately women (70.2%, $n = 420$), biological parents (94.5%, $n = 565$), and preferred speaking English and Spanish equally (45.3%; $n = 271$). Youths were nearly 12 years old on average ($M = 11.9; SD = 3.4$), were relatively balanced on a binary gender
measure (54.8% were boys; \( n = 328 \)), and had health insurance (private 49.8%, \( n = 298 \); public 46.5%, \( n = 278 \)). In the present sample, caregivers reported that 22.4% (\( n = 134 \)) of youths had clinical externalizing and 30.6% (\( n = 183 \)) internalizing problems in the last year (See Child Behavior Checklist in following section; Achenbach & Rescorla, 2001). Of those youths with some level of clinical symptomatology (\( n = 211 \)), there was significant comorbidity with 50.2% (\( n = 106 \)) of caregivers reporting both externalizing and internalizing clinical symptoms for their youths and 13.3% (\( n = 28 \)) and 36.5% (\( n = 77 \)) reporting only externalizing and internalizing clinical levels respectively. Caregivers reported that 35% (\( n = 211 \)) of youth within the current sample needed or would have benefited from receiving psychological counseling over internet-based video conferencing and 19.6% (\( n = 117 \)) of families utilized these services in the last year for their child. Of those that used telepsychology services, 85% (\( n = 100 \)) reported that they moved to online therapy due to interruptions to in-person services associated with the coronavirus pandemic. See Table 1 for additional sample characteristics.

**Measures**

**Demographic Characteristics**

Caregivers reported on demographic characteristics (i.e., age, binary gender, relation to the child, academic attainment, generational status, employment status, household income) and that of their youth (i.e., age, binary gender, health insurance status). Caregivers were presented a figure with 10 hands with shades of skin color ranging from (1) lightest to (10) darkest and were asked to select the skin tone that most closely matched theirs and that of their child (Massey et al., 2003).

**Service Need and Utilization**
Caregivers were asked to report whether they perceived a need for youth telepsychology services in the past year (i.e., “In the last year, did you think your child needed or would have benefited from receiving psychological counseling over internet-based video conferencing?”) and if these services were utilized (i.e., “In the last year, did your child receive psychological counseling over internet-based video conferencing?”). Responses were (1) yes or (0) no. These items were developed specifically for this study but were designed in a format similar to previously validated service utilization measures, such as the Services for Children and Adolescents Parent Interview (Jensen et al., 2004). The decision was made to create these items due to limitations associated with existing service utilization measures such as interview-based administration, do not assess perceived need, and/or lack questions regarding telepsychology utilization (Ascher et al., 1996; Jensen et al., 2004).

**Barriers to Access**

The Barriers to Treatment Questionnaire (BTQ; Marques et al., 2010) is a 23 item self-report measure that asks individuals to report barriers that would prevent them from seeking MHS in the last year on a 5-point scale: (1) not at all, (2) a little, (3) moderately, (4) very much, or (5) extremely. BTQ items assess factors known to influence MHS utilization such as: Logistic/financial; Stigma, shame, and discrimination; Treatment perception and satisfaction. The BTQ was adapted for the present study to ask caregivers about barriers in accessing support services for their youth. An additional question was also included to account for the impact of fear of deportation on MHS utilization (Bridges et al., 2012). The final scale had 24 items. A mean BTQ score was calculated for each participant, with higher scores representing greater barriers to utilizing youth support services. Within the current sample, internal consistency for the BTQ was excellent ($\alpha = .95$). The decision was made to adapt the BTQ for the current study.
as more established measures require interview-based administration (Ascher et al., 1996), or do not include questions regarding the impact of stigma, shame, and discrimination on MHS utilization (Kazdin et al., 1997).

**Emotional and Behavioral Problems**

The Child Behavior Checklist is a 113-item questionnaire that assesses a broad array of youth behavioral problems between ages 6-18 (CBCL; Achenbach & Rescorla, 2001). The CBCL was considered particularly suitable for this sample as it has established validity and reliability among Latinxs within the U.S. (Haack et al., 2016). Caregivers reported on the frequency of their child’s problem behavior in the 6 months: (0) *not true*, (1) *sometimes true*, or (2) *often true*. CBCL items form two composite scores representing youth internalizing (e.g., depression, anxiety) and externalizing problems (e.g., aggression). Dichotomous variables were calculated to indicate whether youth had (i.e., T-score above 63) or did not have clinically elevated internalizing and externalizing problems. The CBCL had excellent internal consistency for internalizing ($\alpha = .95$) and externalizing ($\alpha = .96$) problems scales within the current sample.

**Parenting Stress**

The Caregiver Strain Questionnaire is a 21-item self-report measure that assesses the impact of parenting a child with emotional or behavioral problems (CGSQ; Brannan et al., 1997). The CGSQ contains an 11-item objective strain scale that asks parents to report on common negative occurrences associated with caring for a child with emotional or behavioral problems (e.g., missing work or neglecting duties, interruptions of personal time, financial strain, social isolation, disruptions of family routine). Caregivers were asked to report how much of a problem each statement was in the last year: (1) *not at all*, (2) *a little*, (3) *somewhat*, (4) *quite a bit*, or (5) *very much*. A mean score was calculated with higher objective strain scores
representing greater parenting stress. Internal consistency for the objective strain subscale was excellent within the current sample (α = .96).

**Impact of the Coronavirus Pandemic**

Caregivers were asked whether a shelter in place order prevented them from seeking support services for their child since the coronavirus pandemic began. Responses were (1) yes or (0) no. Participants also shared subjective perceptions of change associated with their child’s problems ("Since the coronavirus pandemic began, have you noticed a change in your child's behavioral and emotional problems?") and parenting stress ("Since the coronavirus pandemic began, have you noticed a change in your parenting stress associated with raising your child?"). Responses were: (1) problems increased, (2) stayed the same, or (3) problems decreased.

Caregivers who utilized youth telepsychology services in the last year were asked to report whether they moved to this format due to interruptions to in-person services ("Did your child move to videoconferencing due to interruptions of in-person services associated with the coronavirus pandemic?"; [1] yes or [0] no).

**Support Service Preferences**

Caregivers were asked to rank 12 potential sources of support from (1) most to (12) least preferable for addressing child emotional or behavioral problems on two separate questions. The support preference assessment questions were developed for the present study through the selection of service formats commonly inquired in service utilization measures and referenced in the literature (Ascher et al., 1996; Jensen et al., 2004; Ramos & Chavira, 2019). Services included: Psychological counseling or therapy in-person, psychological counseling or therapy over video conferencing (i.e., telepsychology), crisis hotlines, admission to psychiatric wards or unit of a hospital, mentorship programs, internet support groups, school professionals, family
doctors or any other medical doctors, ministers or faith healers, parenting classes, social supports, and smartphone applications.

**Analytic Plan**

Descriptive statistics were assessed using chi-squared test of independence for categorical variables and t tests for continuous variables to determine whether caregiver perceived need for and utilization of telepsychology differed by sample characteristics and changes associated with the coronavirus pandemic. Problem-specific support service preferences were also examined descriptively based on the frequency in which formats were ranked. Kendall’s Tau was used to examine correlations between key caregiver factors (i.e., parenting stress, MHS barriers) and specific youth problems (i.e., externalizing, internalizing T-scores) to contextualize the sample. Binary logistic regression was then used to determine whether family demographics (i.e., gender, skin tone, education, household income), specific youth problems (i.e., externalizing, internalizing), parenting stress, barriers to MHS, and coronavirus shelter in place order were associated with caregiver reported need for and utilization of telepsychology services. These variables were examined as continuous (i.e., skin tone, household income, parenting stress, barriers) and categorical predictors (i.e., gender, education, shelter in place orders, clinical internalizing/externalizing). Caregiver and youth age were not explored beyond descriptive analysis as they were not significantly associated with study outcomes.

**Results**

Among caregivers who reported receiving telepsychology services in the last year, in-person psychological counseling or therapy was the most preferred source of support for youths (i.e., internalizing 60.7%, n = 71; externalizing 53%, n = 62). Few caregivers endorsed telepsychology as their most preferred format for addressing youth psychopathology (i.e.,
internalizing 4.3%, \( n = 5 \); externalizing 6%, \( n = 7 \). Despite this, over one-third of our sample perceived a need for telepsychology services (35%, \( n = 211 \)) and nearly 20% utilized this format (\( n = 117 \)). Caregivers who reported that their youth had clinically elevated internalizing and/or externalizing problems reported a greater portion of telepsychology need and utilization. These findings suggest that telepsychology may be an acceptable delivery method for youth MHS among Latinx caregivers. However, only 49.8% (\( n = 105 \)) of caregivers that perceived a need for telepsychology reported their youths utilized these services. Furthermore, only 37.4% (\( n = 79 \)) of youth with clinically elevated psychopathology (i.e., internalizing and/or externalizing) received telepsychology services, potentially reflecting significant unmet need for MHS within this population. Of the 117 caregivers that reported receiving telepsychology services, 85% (\( n = 100 \)) moved to telepsychology due to interruptions to in-person services. This suggest that Latinx families who utilized telepsychology services within the current sample were largely continuing services that began in-person prior to the coronavirus pandemic.

**Demographic Characteristics**

Initial exploration of the relationship between demographic characteristics, perceived need and service utilization revealed important information. Caregivers who were men, had darker skin, received a post high school education, and had a family income between $150,000-$199,999 had the highest proportion of perceived need for telepsychology services. Children who were of darker skin tone, male, and had reported clinical levels of externalizing or internalizing problems also had larger proportion of perceived need for telepsychology. A greater proportion of telepsychology utilization was found among caregivers who were male, had post high school education, a household income between $150,000-$199,999, and whose children had reported clinically elevated externalizing or internalizing problems. Telepsychology need and
utilization did not significantly differ by generational status and age (i.e., caregiver, child).

Utilization of these services did not significantly differ based on skin tone (i.e., caregiver, child) and child gender. See Table 1 for sample characteristics by study outcomes.

**Contextual Stressors**

Beyond demographic characteristics, contextual factors were associated with telepsychology need and utilization. See Table 1 for sample characteristics by study outcomes. Barriers to MHS and parenting stress were higher among caregivers who reported telepsychology need and utilization. As the current study utilized a non-clinical sample, scores on the MHS barriers measure were low on average ($M = 1.92; SD = 0.81; \text{Range 1-5}$) and were positive skewed ($\text{Skew} = 0.96; \text{Kurtosis} = 0.51$). Caregivers also reported low parenting stress scores on average ($M = 1.71; SD = 0.93; \text{Range 1-5}$) that were positively skewed ($\text{Skew} = 1.25; \text{Kurtosis} = 0.44$). Increases in subjective child behavioral/emotional problems and parenting stress during the coronavirus pandemic were associated with higher rates of caregiver reported youth telepsychology need and utilization. Caregivers who reported that stay at home orders prevented them from seeking support services for their child, had higher rates of perceived need for and utilization of telepsychology services. See Table 2 for coronavirus factors by study outcomes.

**Caregiver Factors and Youth Psychopathology**

As the current study examined low base rate behaviors within a non-clinical sample, a non-parametric test known as Kendall’s Tau was used to examine the correlation between key caregiver factors and youth psychopathology. Youth internalizing and externalizing problems were examined as continuous T-scores. Youth internalizing T-scores were positively associated with externalizing T-scores ($\tau = 0.59; p < 0.001$), parenting stress ($\tau = 0.55; p < 0.001$), and
MHS barriers ($\tau_b = 0.39; p < 0.001$). Youth externalizing T-scores were significantly associated with parenting stress ($\tau_b = 0.60; p < 0.001$) and MHS barriers ($\tau_b = 0.39; p < 0.001$). There was also a significant positive correlation between parenting stress and MHS barriers ($\tau_b = 0.43; p < 0.001$).

**Perceived Need Predictors**

Results from a logistic regression suggest that Latinx caregivers were more likely to report needing telepsychology services for boys relative to girls (Odds ratio [OR] = 1.76; confidence interval [CI] = 1.16-2.69). As parenting stress increased, there was an associated increase in the odd of reporting a need for telepsychology services (OR = 2.10; CI = 1.49-3.00). Caregivers who reported that coronavirus shelter in place orders prevented them from seeking services were three times (OR = 3.29; CI = 2.04-5.32) more likely to perceive a need for telepsychology relative to those that endorsed that shelter in place order did not prevent them from seeking services. Latinx caregivers were also nearly three times (OR = 2.90; CI = 1.70-4.99) more likely to perceive a need for telepsychology for youth with clinical internalizing problems relative to those with subclinical problems. Youth clinical externalizing problems were not significantly related to caregiver perceived need for telepsychology services after accounting for other variables in the model. Perceived need for telepsychology services did not significantly differ by caregiver demographics (i.e., gender, skin tone, education, household income), child skin tone, or barriers to MHS utilization after accounting for other variables. See Table 3 for logistic regression results.

**Service Utilization Predictors**

Results from a logistic regression model suggest that telepsychology utilization did not significantly vary by caregiver demographics with the exception of household income. A one
unit increase in household income was associated with a 20% escalation in the odds that caregivers would report telepsychology utilization within the last year (OR = 1.20; CI = 1.03-1.41). As parenting stress increased, the likelihood of reporting telepsychology utilization increased by 96% (OR = 1.96; CI = 1.35-2.86). While barriers to MHS were low within the current sample, unit increases in MHS barriers were associated with reductions in the odds (OR = 0.66; CI = 0.45-0.96) that families would utilize telepsychology. Caregivers who reported that coronavirus shelter in place orders prevented them from seeking services were nearly three times (OR = 2.97; CI = 1.78-4.96) more likely to utilize telepsychology services. Consistent with perceived need, youth with clinically elevated internalizing problems were more likely (OR = 2.02; CI = 1.07-3.80) to receive telepsychology relative to their non-clinical peers. The odds of reporting telepsychology utilization did not significantly differ between youth with clinically elevated externalizing and sub-clinical problems after accounting for other variables in the model. Youth gender and skin tone were also not significantly related to telepsychology utilization.

**Discussion**

The current study expands our understanding of factors associated with Latinx caregivers perceived need for and utilization of youth telepsychology services during the coronavirus pandemic. Our findings suggest that telepsychology is a less preferred but acceptable format for addressing specific youth mental health problems among Latinxs. Latinx caregivers may be especially likely to perceive a need for and utilize telepsychology services in response to parenting stress and youth internalizing problems. Despite this, significant unmet need for telepsychology services was found among Latinx youths. Many youths with clinically elevated psychopathology did not access telepsychology services. Those who did utilize telepsychology
largely transitioned to this format from in-person services started prior to the pandemic. This may signal potential issues for Latinx caregivers in locating and accessing youth telepsychology services or potentially delaying treatment until preferred in-person psychological services are available. This is problematic as the ongoing coronavirus pandemic will likely continue our reliance on telepsychology raising concerns regarding the long-term psychological impact of unmet MHS need among Latinx youths.

Prior research suggests that Latinx caregivers are less likely to access in-person psychological counseling in response to youth internalizing problems relative to Whites but do not significantly differ based on service utilization for externalizing problems (Merikangas et al., 2011). Our within group analysis of videoconferencing-based services suggest that caregiver perceived need for and utilization of youth telepsychology was associated with child clinical internalizing but not externalizing problems. These findings suggest that Latinx caregivers may underutilize telepsychology services for youth clinical externalizing problems. Furthermore, consistent with prior research on in-person MHS utilization, parenting stress was a robust predictor of youth telepsychology utilization (Mendenhall & Mount, 2011). Our findings also suggest that youth problem types (i.e., internalizing and externalizing t-scores) and parenting stress were positively correlated. It is possible that Latinx caregivers may experience elevated parenting stress in responses youth psychopathology in general but may attribute internalizing problems to more culturally problematic symptoms within the home that directed them towards seeking telepsychology services (e.g., withdrawn from family, irritability towards caregivers; Galvan & Gudiño, 2020). Latinx caregivers may underutilize telepsychology services for youth externalizing problems due to these behaviors being attributed to innate characteristics of the child rather than psychopathology that requires formal intervention (i.e., spoiled/rude,
stubborn/willful; Aricia et al., 2005). Further research is needed to understand mechanism underlying problem specific telepsychology utilization among Latinx families.

Caregivers who reported that their ability to seek services for their child was impeded by shelter in place orders were more likely to report telepsychology need and utilization. However, the majority of caregivers who utilized youth telepsychology moved to this format due to interruptions to in-person services that were forced online due to shelter in place orders. While telepsychology has been associated with fewer barriers to MHS access among Latinxs (Stewart et al., 2017), caregivers within the current sample reported barriers in accessing telepsychology services. It is possible that these findings may reflect caregivers facing barriers in accessing in-person services that were later transferred to telepsychology due to the coronavirus pandemic. Data for the present study were collected during a period in which telepsychology services were rapidly scaling in response to states imposing restriction on in-person gatherings. It is possible that the pattern of telepsychology utilization within the current sample may represent an early period of this broader implementation in which the continuity of care was prioritized. Further research is needed to understand telepsychology utilization patterns in later stages of the coronavirus pandemic.

Previous studies have found that Latinx boys receive MHS at higher rate than Latinx girls, with degree of impairment widening this gap (Cabiya et al., 2006). Our findings suggest that Latinx caregivers may be more likely to perceive a need for telepsychology services for boys relative to girls. However, utilization of telepsychology did not significantly differ between boys and girls. Caregiver reported telepsychology need and utilization also did not significant differ based on skin tone after accounting for other factors, despite darker skin tone being associated with poorer mental health outcomes among Latinx (Breland-Noble, 2013). This may be due to
over representation of light skinned Latinxs within the current sample. Thus, future research should examine the experiences of darker skinned Latinxs whom may be overrepresented among essential workers that are highly affected by the coronavirus pandemic.

Consistent with prior research on in-person MHS, increases in income were associated with greater odds of telepsychology utilization (Vázquez & Villodas, 2019). This may represent differences in financial resources when accessing in-person and telepsychology services (e.g., affording deductibles and/or co-pays for insurance). Insurance companies may pay lower rates or do not cover telepsychology services, which could pass the financial burden to caregivers (Taylor et al., 2020; Woo Baidal et al., 2020). Contrary to prior findings with in-person psychological counseling, caregiver education did not significantly differ by perceive need or utilization of telepsychology after controlling for other factors (Vázquez & Villodas, 2019). This suggests that Latinx caregivers, regardless of their level of education, may perceive a need for and utilize youth telepsychology services.

**Implications**

Our findings suggest a need to improve access to youth telepsychology service among Latinx families during the coronavirus pandemic. Prior research has documented limited knowledge on where and how to access MHS as a contributing factor to health disparities among Latinxs (Salloum et al., 2016). It is possible that disparities in telepsychology access within the current sample may be in part explained by a lack of knowledge on how to initiate in these services. Public health media campaigns targeting Latinx communities may alert Latinx caregivers to the availability of these services and could provide information on the efficacy of telepsychology in treating youth externalizing problems. There is also a need to identify barriers that may impede Latinx caregivers from accessing youth telepsychology services (e.g., consistent
access to technology and high-speed internet in the home, concerns about confidentiality online and privacy in the home). Conducting direct-to-consumer research could assist in the identification of specific barriers that Latinx families face in accessing youth telepsychology services (e.g., survey panels, virtual focus groups; Becker et al., 2018). This research may yield important information needed to reduce barriers to engagement and increase the cultural relevance of telepsychology as a method of addressing psychopathology among Latinx youths.

**Limitations**

Our findings should be interpreted in light of several limitations. The current study utilized a cross-sectional design. Thus, temporal precedence cannot be established between study variables and outcomes. Future research should examine factors impacting caregiver perceived need for and utilization of youth telepsychology services longitudinally. Although this sample was 100% Latinx, demographic data showed the vast majority of participants (i.e., 81.7%) earned $30,000 per year or more which is above the poverty line for families with 4 or fewer members (USDHHS, 2020). Further research is needed to examine telepsychology utilization patterns among more vulnerable Latinx communities (e.g., undocumented populations, non-English speaking, darker skin). Additionally, the current study collected data online using a survey panel company, which implies that study participants had access to a device (e.g., computer, smart phone) with connection to the internet. Research is needed to understand youth telepsychology utilization patterns among low resource Latinx families who may or may not have devices with access to the internet. Measures used in the current study have not been validated within Latinx samples, with the exception of the CBCL. Research is needed to confirm our findings utilizing established measures of youth service need/utilization, barriers to MHS, and parenting stress among Latinx caregivers. Diagnostics were conducted to examine whether
problem specific utilization of telepsychology was attributed to an overlap in clinical internalizing and externalizing problems (e.g., multicollinearity checks, interactions between internalizing and externalizing problems for each outcome). Results from these diagnostics suggest that while these problem types overlapped and are correlated as t-scores, they moved independently in relation to telepsychology need and utilization as dichotomous clinical indicators. Nonetheless, future research should confirm our findings in samples with more distinct patterns of clinical internalizing and externalizing problems. Despite these limitations, the current study provided unique information regarding telepsychology utilization among Latinx youths during the coronavirus pandemic. Insights drawn from these data provide critical knowledge needed to adapt telepsychology services to better meet the needs of traditionally underserved Latinx youths.

**Conclusions**

Telepsychology has the potential to provide a safe method of addressing youth MHS need during the coronavirus pandemic. Latinx caregivers may be especially likely to perceive a need for and utilize telepsychology services in response to parenting stress and youth internalizing problems. However, coronavirus pandemic related shutdowns and forced migration to telepsychology may have made accessing this format difficult for caregivers who were not already engaged with in-person youth MHS. This disparity raises concerns regarding the long-term psychological impact of unmet MHS need among Latinx youths. Efforts are needed to identify and eliminate barriers to accessing youth telepsychology services among Latinxs.
References


Table 1. Sample characteristics by perceived need for and utilization of psychological counseling over internet-based video conferencing.

<table>
<thead>
<tr>
<th>Mean/Count (SD/%)</th>
<th>Total</th>
<th>Perceived need</th>
<th>Utilization</th>
<th>P-value</th>
<th>Total</th>
<th>Perceived need</th>
<th>Utilization</th>
<th>P-value</th>
</tr>
</thead>
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<td></td>
<td>n = 598</td>
<td>n = 211</td>
<td>(35%)</td>
<td>n = 387</td>
<td>(65%)</td>
<td>n = 117</td>
<td>(19.6%)</td>
<td>n = 481</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Skin tone</td>
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</tr>
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<td>102 (57.3%)</td>
<td>51 (28.7%)</td>
<td>127 (71.3%)</td>
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<td>24 (16.6%)</td>
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<td>19 (14.8%)</td>
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<td>31 (34.4%)</td>
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<td>17 (18.9%)</td>
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<td>9 (36.0%)</td>
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<td>13 (52.0%)</td>
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<td>&lt; .001</td>
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<td>133 (40.5%)</td>
<td>195 (59.5%)</td>
<td>68 (20.7%)</td>
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<td>Female</td>
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<td>192 (71.1%)</td>
<td>49 (18.1%)</td>
<td>221 (81.9%)</td>
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<td>Clinical externalizing</td>
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<td>&lt; .001</td>
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<tr>
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<td>46 (34.3%)</td>
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<tr>
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<tr>
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<td>60 (32.8%)</td>
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</table>

Note: Variable frequency is displayed by column for the total and row for outcomes. Appropriate test for continues (i.e., t-test) and categorical (i.e., chi-square) variables were used. P-values for significant test are displayed in the “P-value” column.
Table 2

Impact of the Coronavirus Pandemic.

<table>
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<tr>
<th></th>
<th>Total</th>
<th>Perceived need</th>
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<th>P-value</th>
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<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n = 598</td>
<td>n = 211</td>
<td>n = 117</td>
<td>n = 481</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(35%)</td>
<td>(65%)</td>
<td>(19.6%)</td>
<td>(80.4%)</td>
</tr>
<tr>
<td>Shelter in place order prevented help seeking</td>
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<td>Yes</td>
<td>150 (25.1%)</td>
<td>102 (68.0%)</td>
<td>48 (32.0%)</td>
<td>65 (43.3%)</td>
<td>85 (56.7%)</td>
</tr>
<tr>
<td>No</td>
<td>448 (74.9%)</td>
<td>109 (24.3%)</td>
<td>339 (75.7%)</td>
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<td>Subjective change in child behavioral/emotional problems</td>
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<td>&lt; .001</td>
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<tr>
<td>Increased</td>
<td>115 (19.2%)</td>
<td>72 (62.6%)</td>
<td>43 (37.4%)</td>
<td>41 (35.7%)</td>
<td>74 (64.3%)</td>
</tr>
<tr>
<td>Stayed the same</td>
<td>381 (63.7%)</td>
<td>99 (26.0%)</td>
<td>282 (74.0%)</td>
<td>58 (15.2%)</td>
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</tr>
<tr>
<td>Decreased</td>
<td>102 (17.1%)</td>
<td>40 (39.2%)</td>
<td>62 (60.8%)</td>
<td>18 (17.6%)</td>
<td>84 (82.4%)</td>
</tr>
<tr>
<td>Subjective change in parenting stress</td>
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<td>&lt; .001</td>
<td>&lt; .001</td>
<td></td>
<td></td>
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<tr>
<td>Increased</td>
<td>139 (23.2%)</td>
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<td>61 (43.9%)</td>
<td>42 (30.2%)</td>
<td>97 (69.8%)</td>
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<td>57 (15.1%)</td>
<td>320 (84.9%)</td>
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<td>32 (39.0%)</td>
<td>50 (61.0%)</td>
<td>18 (22.0%)</td>
<td>64 (78.0%)</td>
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</table>

Note: Variable frequency is displayed by column for the total and row for outcomes. Data were examined using the appropriate test for continues (i.e., t-test) and categorical (i.e., chi-square) variables.
Table 3

Logistic regression analysis of perceived need for and utilization of telepsychology services (n = 588).

<table>
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<tr>
<th></th>
<th>Perceived need (n = 211; 35%)</th>
<th>P-value</th>
<th>Utilization (n = 117; 19.6%)</th>
<th>P-value</th>
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<td>OR (95% CI)</td>
<td></td>
<td>OR (95% CI)</td>
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<td>1.07 (0.66-1.72)</td>
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<td>1.44 (0.84-2.44)</td>
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<td>Skin tone</td>
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<td>1.20 (0.95-1.52)</td>
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<td>Post high school education b</td>
<td>1.45 (0.90-2.35)</td>
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<td>1.34 (0.74-2.43)</td>
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<td>1.20 (1.03-1.41)</td>
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<td>Parenting stress</td>
<td>2.10 (1.49-3.00)</td>
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<td>Barriers to MHS utilization</td>
<td>0.96 (0.70-1.31)</td>
<td></td>
<td>0.66 (0.45-0.96)</td>
<td>.040</td>
</tr>
<tr>
<td>Shelter in place order impeded help seeking c</td>
<td>3.29 (2.04-5.32)</td>
<td>&lt; .001</td>
<td>2.97 (1.78-4.96)</td>
<td>.001</td>
</tr>
<tr>
<td>Child</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male a</td>
<td>1.76 (1.16-2.69)</td>
<td>.008</td>
<td>0.98 (0.61-1.59)</td>
<td></td>
</tr>
<tr>
<td>Skin tone</td>
<td>1.03 (0.84-1.26)</td>
<td></td>
<td>0.87 (0.68-1.10)</td>
<td></td>
</tr>
<tr>
<td>Clinical externalizing d</td>
<td>0.73 (0.37-1.41)</td>
<td></td>
<td>1.40 (0.69-2.80)</td>
<td></td>
</tr>
<tr>
<td>Clinical internalizing d</td>
<td>2.90 (1.70-4.99)</td>
<td>&lt; .001</td>
<td>2.02 (1.07-3.80)</td>
<td>.028</td>
</tr>
</tbody>
</table>

Note: OR = odds ratio; 95% CI = 95% confidence interval. Skin tone, household income, parenting stress, and barriers to MHS utilization were examined as continuous variables. Gender, education, shelter in place orders, and clinical internalizing/externalizing were examined as categorical variables.

a relative to females
b relative to high school
c relative to not being impeded by shelter in place order services
d relative to youth with Child Behavior Checklist T-scores below 63