Journal of Immigrant and Minority Health
https://doi.org/10.1007/s10903-024-01613-6

ORIGINAL PAPER

Acculturation and Depression Help-Seeking Intentions in a Majority Mexican American College Student Sample

Linda E. Guzman[1] · **Ana J. Bridges**[2] · **Dulce E. Díaz Benitez**[2] · **Joseph D. Hovey**[3]

Accepted: 11 June 2024

Abstract

Work has not examined if acculturation or enculturation may predict endorsed benefits, barriers, and intentions to seek mental health services for depression, specifically among Latino students enrolled in a rural and majority Latino immigrant institution of higher education. An improved understanding of factors informing mental health help-seeking is needed to identify possible intervention points to address gaps in accessing depression treatment. Participants ($N=406$) read a vignette depicting a person with depressive symptoms. Participants were asked if they would seek help for depression if in the situation described in the vignette. Participants provided text responses about their preferences for managing depression symptoms and their mental health help-seeking history. Additionally, participants completed a self-report depression symptom screener, demographic surveys, acculturation assessment, and questionnaires on perceived benefits and barriers to seeking mental health services. Path analysis was used to test the link between acculturation status and intent to seek services for depression, with benefits and barriers as mediators. The results revealed that higher perceived benefits and lower barriers were directly associated with greater intentions to seek help. Furthermore, an indirect effect of acculturation on help-seeking intentions via higher perceived benefits of seeking care was observed. These findings persisted after controlling for age, gender, depression, and history of seeking care for depression. Future work should test the replicability of this finding with diverse college students living in predominantly immigrant communities. Universities might consider tailoring outreach initiatives to provide information on the range and accessibility of mental health services, the location of mental health service centers, and the procedures for accessing such services.

Keywords Acculturation · College students · Depression · Help-seeking · Latino

Introduction

In 2018, Latinos represented a fifth of students in degree-granting postsecondary institutions in the United States [1], with significant growth in Mexican American enrollment. Depression ranks as the second most prevalent mental health concern among students, following anxiety [2]. It is a chronic condition [3] that, if left untreated, can lead to adverse outcomes [4], with rates of depression steadily rising over recent decades [5]. Awareness of available services may be influenced by college characteristics such as location (rural vs. urban) and student population (residential vs. commuter or remote, traditional vs. non-traditional), among others [6]. National data finds that 3–39% of college students with depression report accessing necessary mental health care, with usage being particularly low among minoritized student groups [7].

Interest in mental health service utilization is similar among college students across different ethnic groups [8, 9]. However, lower service utilization rates among minoritized college students indicate the complexity of factors influencing help-seeking behaviors, suggesting a need for adjustment in current outreach efforts. Holding the prevalence rate for depression constant, research on mental health help-seeking among college students highlights disparities: Latino students, once they access services, receive less evidence-based

✉ Linda E. Guzman
Linda_Guzman@brown.edu

[1] Department of Psychiatry and Human Behavior, The Warren Alpert Medical School of Brown University, Providence, RI, USA

[2] Department of Psychological Science, University of Arkansas at Fayetteville, Fayetteville, AR, USA

[3] Department of Psychological Science, University of Texas at Rio Grande Valley, Edinburg, TX, USA

Published online: 03 July 2024

treatment and encounter more barriers to staying in treatment than white non-Latino students. Additionally, females are more likely to access and utilize mental services than their male counterparts [10]. Information regarding current depressive symptoms, past help-seeking for depression, perceived benefits and barriers to treatment, coupled with specifics of geographical location, gender identity, sub-ethnic identity, and generational status, is needed to inform help-seeking interventions. Knowledge acquired from this study may help college campuses strategize ways to better understand factors impacting campus-related service utilization and widen the reach of services for more students.

Acculturation and Enculturation Constructs

Acculturation and enculturation are complex, dynamic, and multidimensional processes [11] that Latinos and other minoritized populations experience when navigating life in more than one cultural context [12]. Acculturation is a behavioral and psychological process by which a person from a minoritized cultural group might flexibly adopt certain customs and aspects of a dominant (host) cultural group [11]. Its corollary, enculturation, is how individuals are socialized to learn and maintain aspects of their heritage (native) cultural group [13]. Adoption of host and native cultural pieces can be influenced by individual (e.g., gender) and contextual (e.g., geographical location, generational status) factors.

Variations in the literature on how acculturation is measured might explain inconsistent findings regarding acculturation's role in explaining service utilization in the Latino community. Acculturation can be assessed with multi-item self-report bidimensional scales but is also frequently inferred from proxy variables, such as language dominance or generational status [14]. Thus, work explicitly describing how acculturation is measured can provide deeper insight into how the construct might relate to help-seeking.

Help-Seeking Intentions

Studies assessing the relationship between acculturation and enculturation in sub-groups of Latino college or community samples reveal mixed findings depending on how acculturation and enculturation were measured. In a Mexican American college sample, no association was found between acculturation or enculturation measured by the Stephenson Multigroup Acculturation Scale [15] and mental health-seeking attitudes [16]. However, in studies using acculturation proxies, such as generation status, Ramos-Sánchez and Atkinson [17] found in their sample of Mexican American community-college students that higher generational status (i.e., second, third, and beyond) was associated with less positive mental health help-seeking attitudes relative to earlier generations (e.g., first generation), suggesting that closer relation to the culture of origin may galvanize help-seeking. In a community sample of Latinos receiving outpatient health care, Hu and Covell [18] found that primarily English-speaking, compared to bilingual or predominantly Spanish-speaking Latinos, had higher rates of accessing healthcare services after controlling for income, age, and gender. Studies of help-seeking preferences with national Latino community samples suggest that highly enculturated low-income Latinos residing in southwestern states from recently immigrant backgrounds, as measured by nativity (foreign-born) and preferred language (Spanish), might seek care from faith leaders rather than mental health care professionals [19].

Studies of acculturation and help-seeking have rarely focused on college students. This is an important population for two reasons. First, attending most universities in the United States requires English language proficiency and the ability to navigate systems (specifically, educational, financial, and healthcare), suggesting Latino college students have some level of familiarity with these aspects of the United States culture. Acculturation in Latino college students may be relatively high; however, enculturation may be more variable. We found no studies examining enculturation and help-seeking in Latino college students despite the well-documented benefits of enculturation to mental health [20]. Second, individuals typically have their first depressive episode in their late teens and early twenties [21], around the time they are entering or attending college. Adjusting to college can itself be quite stressful, which is perhaps why rates of depression are higher in college students than in community samples [22].

Perceived Benefits and Barriers to Care

One way acculturation and enculturation may shape mental health help-seeking in Latino college students is by influencing help-seeking attitudes. Attitudes toward seeking specialty mental health care are intertwined with cultural beliefs and practices. Currently, the United States espouses Westernized values that may be consistent with or contradict some Latino subcultural groups. Thus, acculturation and enculturation might predict perceived benefits and barriers to mental health help-seeking. Acculturation may also impact what someone expects will happen due to seeking mental health care, such as improved well-being or less conflict-ridden relationships [22]. Similarly, acculturation may impact perceived barriers to mental health care, including stigma, cost, and stoicism [22]. Thus, we contend that the relationship between acculturation/enculturation and mental health help-seeking intentions is relatively distal and mediated

by more proximal predictors of help-seeking, such as perceived benefits and barriers to care.

Purpose

The current study examined how acculturation and enculturation relate to behavioral intentions to seek care for depression in a college sample of primarily Mexican American students of immigrant backgrounds. We examined whether mental health help-seeking attitudes (perceived benefits and barriers to seeking care) impacted these relations. We hypothesized higher acculturation would be related to lower perceived barriers (H1a) and higher perceived benefits of help-seeking (H1b). In contrast, higher enculturation would be associated with perceiving more barriers (H2a) and fewer benefits (H2b) to seeking mental health care. We hypothesized lower perceived barriers (H3a) and greater perceived benefits (H3b) would be associated with higher mental health help-seeking intentions, with greater benefits and fewer barriers predicting increased intentions to seek care for depression. Finally, we expected to find statistically significant indirect effects of acculturation (H4a) and enculturation (H4b) on help-seeking intentions through help-seeking attitudes (Fig. 1).

Method

Participants

The current study employed an online survey method to recruit and administer questionnaires. Participants were: (a) undergraduate students from the university psychology pool, (b) self-identified as Latinos, and (c) between 18 and 50 years old ($M = 21.73$; $SD = 5.10$). The survey was only available in English, and respondents received course credit for their participation. A total of 674 people accessed the survey. Participants who did not consent, discontinued, did not meet eligibility criteria, did not complete key survey measures, conducted the study in < 10 or > 60 min, or duplicated entries were excluded. Table 1 provides information about the $N = 406$ sample. Approximately two-thirds of the participants were female. The majority identified as born in the United States with at least one foreign-born parent. Most foreign-born students reported being from Mexico (91%). The sample was mostly split among freshmen, sophomores, juniors, and seniors. The majority of participants were not employed or employed only part-time.

Setting

Data were collected at the University of Texas at Rio Grande Valley, a 4-year public research coed university with 26,000 + student enrollment, most (94%) identifying

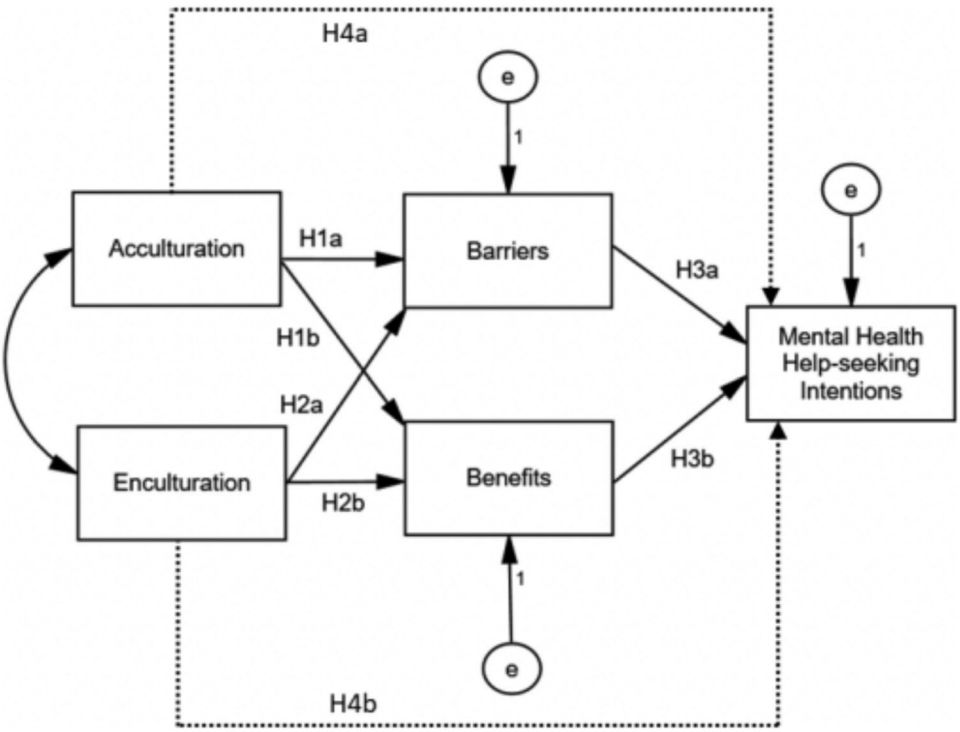

Fig. 1 Hypothesized model examining how mental health help-seeking attitudes mediate the relation between acculturation variables and mental health help-seeking behavioral intentions. Direct effects are denoted with black arrows; indirect effect denoted with dashed arrows

Table 1 Descriptive Statistics for participant demographic characteristics

Variable	*N*	*M*(*SD*) or *n*(%)
Age, in years	406	21.73 (5.11)
Gender	406	
Male		132 (32.5%)
Female		272 (67.0%)
Other		2 (0.5%)
Generation status	405	
First		55 (13.6%)
Second		198 (48.9%)
Third		51 (12.6%)
Fourth		71 (17.5%)
Fifth		30 (7.4%)
Employment status	406	
Not employed		156 (38.4%)
Part time		176 (43.3%)
Full time		74 (18.2%)
Year in college	406	
Freshman		96 (23.6%)
Sophomore		104 (25.6%)
Junior		101 (24.9%)
Senior		87 (21.4%)
Fifth year and beyond		18 (4.4%)
PHQ-9 score	396	7.52 (6.06)
PHQ-9 score ≥ 10	396	124 (31.3%)
History of mental health help-seeking	406	109 (26.8%)

as Latino, located near the Mexican–American border. The majority of students are Mexican Americans from the state (< 1% out-of-state), and the university is the third largest granter of bachelor's degrees for Latino students in the continental United States [18]. All courses are offered in English. Most students commute to campus.

Measures

Acculturation and Enculturation

The Acculturation Rating Scale for Mexican American-II (ARSMA-II) [24] provided an acculturation and an enculturation measure. Acculturation was assessed using the 13-item Anglo Orientation Subscale (AOS), and enculturation was assessed with the 17-item Mexican Orientation Subscale (MOS) of the ARSMA-II [23]. The AOS scales were modified so items asked about Whites rather than Anglos, consistent with other published work [19]. The MOS was modified so that items referred to Latinos rather than Mexicans, mindful that not all students who elected to participate might identify as of Mexican background. AOS items ask about behavioral (e.g., *my thinking is done in English*), affective (e.g., *I enjoy listening to English language music*), affiliative (e.g., *my friends now are American*), and identity (e.g., *I like to identify myself as an American*) components of acculturation. Similarly, the MOS asked about similar domains (e.g., *frequency of cooking Latino foods, identifying as Latino,* etc.) related to enculturation. Each item is answered on a scale from 1 (*not at all*) to 5 (*extremely often or almost always*). Items are averaged to form respective acculturation or enculturation total scores. Higher AOS or MOS scores indicated greater acculturation to mainstream United States' culture or greater retention of Latino heritage culture. The standardized alpha coefficients for this study were 0.74 for AOS and 0.89 for MOS.

Depression and Mental Health Help-Seeking

Participants self-reported their depressive symptoms with the Patient Health Questionnaire, the 9-item version (PHQ-9) [25]. The PHQ-9 assesses depressive symptoms occurring in the past two weeks. Items are rated on a scale from 0 (*not at all*) to 3 (*nearly every day*), then summed. Higher scores indicate more depressive symptoms, with scores ≥ 10 indexing likely major depressive disorder [25]. In the current study, the standardized coefficient alpha was 0.90. Participants were asked whether they had ever sought help from a mental health care provider or from a counselor. Responses were coded as no (*0*) or yes (*1*).

Mental Health Help-Seeking Attitudes: Barriers and Benefits

We used Vidourek and colleagues' [22] respective 14-item barriers and 14-item benefits scales to assess college students' perceptions towards seeking help for a mental health concern. The scales begin by asking participants to rate each item regarding whether they would see it as a likely barrier or benefit of seeking help for a mental health problem. Sample barriers include "embarrassment," "not knowing where to go for help," and "not wanting to be admitted to a hospital." Sample benefit items were "improved mental health" and "improved communication." In the original scale, items were rated dichotomously (*yes/no*). In the current study, we modified item responses. Hence, they fell on a continuous 5-point scale, from 1 (*not at all a barrier/benefit of seeking help*) to 5 (*a definite barrier/benefit of seeking help*). Barrier and benefit items were averaged, with higher scores indicating greater perceived barriers or benefits for seeking mental health care. The standardized alpha coefficients for this study were 0.91 for barriers and 0.94 for benefits.

Mental Health Help-Seeking Behavioral Intentions

To assess behavioral intentions to seek mental health care for depression, we presented participants with a brief story about a working-class college student struggling with depression (Appendix). The story included details about the symptoms the person was experiencing (e.g., sadness, difficulties concentrating, reduced interest in things the person used to enjoy, worsened hygiene, and thoughts of dying). Then, participants were asked, "If you were struggling with the same symptoms of depression, would you want to seek help?" Responses were dichotomized into yes (*1*) and no or not sure/it depends (*0*). Then, participants were asked, "If yes, who would you see?" and allowed to type in their responses, coded to indicate the care participants reported they would seek. The vignette was chosen to standardize the example for one that could be relatable (e.g., a romantic breakup) but not too familiar (e.g., details related to a co-occurring physical health condition).

Procedure

Participants were recruited during the Spring and Fall 2019 academic semesters to complete an online Qualtrics survey. After providing informed consent, participants read a story about a person who suffered from depression, answering questions about their perceptions of the character and whether they would likely seek care if they confronted similar symptoms. Then, participants completed measures assessing their acculturation/enculturation and mental health help-seeking attitudes and provided text responses regarding their experience with mental health and preferences for treatment. Finally, participants were debriefed, provided with mental health service information, and awarded credit as approved by the University of Texas at Rio Grande Valley Institutional Review Board.

Analytic Approach

Descriptive statistics, histograms, bivariate scatterplots, and density plots were examined for all study variables to examine assumptions of normality and linearity. All continuous variables met assumptions of normality (skew values < 1.1, kurtosis values < 2), except age, which showed strong positive skew. Reliability statistics and bivariate correlations were computed for all study measures. Hypotheses were examined using path analysis. All analyses were conducted in R Studio v. 1.2.5033 using the lavaan package [26]. Good model fit was determined by using the following criteria: a non-significant chi-square, a Comparative Fit Index 21 (CFI) > 0.95, a Standardized Root Mean Residual (SRMR) < 0.05, and a Root Mean Square Error of Approximation (RMSEA) < 0.08.

Results

Descriptive Statistics

Participants generally reported relatively high levels of acculturation and enculturation, relatively modest levels of perceived barriers, and somewhat positive perceptions of benefits to mental health help-seeking (Table 2). Approximately one-third of participants had clinically elevated PHQ-9 scores (≥ 10), and one-fourth had sought mental health care from a counselor. Two hundred eighty-two participants said they would seek care if experiencing the symptoms described in the story, with $n = 178$ (63.1%) mentioning they would do so from a mental health professional. Results of independent samples *t*-tests revealed a significant difference in acculturation scores for people who had ($M = 3.95$, $SD = 0.44$) and had not ($M = 3.85$, $SD = 0.46$) sought prior care, $t(404) = -1.98$, $p = 0.048$. There was no difference in enculturation scores between participants who had ($M = 3.73$, $SD = 0.75$) and had not ($M = 3.76$, $SD = 0.80$) sought prior care, $t(404) = 0.27$, $p = 0.785$.

Notably, this sample's top perceived barriers to seeking needed mental health care were cost and lack of insurance (Table 3). Following these, participants expressed high concern about the potential consequences of seeking mental health care, including fear of being admitted to a hospital or placed on medication. Participants also expressed moderate discomfort with therapy, including feeling uncomfortable with sharing feelings with someone, talking to a counselor about personal issues, and preferring to handle problems independently. However, participants were not fearful of counselors, generally denied concerns about embarrassment, and endorsed wanting help for mental health concerns. Participants noted improved mental health, self-awareness, personal growth, and reduced stress as the top benefits of mental health care (Table 4). However, mental health care was generally seen as beneficial across a range of outcomes, with all benefits being endorsed at a mean of 4.20 or higher (on a 5-point scale).

At the bivariate level, higher acculturation scores were associated with greater perceived benefits to seeking mental health care (Table 5). Enculturation and perceived barriers were not significantly associated with any study variables. Higher perceived benefits of mental health help-seeking were positively associated with intentions to seek care for depression.

Table 2 Descriptive statistics for study variables

Variable	*N*	Standardized α	*M*(*SD*) or *n*(%)
Acculturation (AOS)	400	.74	3.87 (0.45)
Enculturation (MOS)	394	.91	3.75 (0.78)
Mental health help-seeking			
Barriers	406	.91	3.46 (1.00)
Benefits	406	.94	4.31 (0.69)
Behavioral intentions[a]	406	–	282 (69.5%)
Treatment preference	406	–	
None/no intention to seek care			124 (30.5%)
Mental health care provider			178 (43.8%)
Physician			21 (5.2%)
Religious leader			7 (1.7%)
Informal resource			44 (10.8%)
Other source (e.g., academic advisor)			69 (17.0%)
Ambiguous			18 (4.4%)

N (%) represents the proportion of participants who indicated yes to that item. Treatment preference percentages sum to > 100% because participants could indicate more than one preferred source of care

[a]Behavioral intention dichotomized: *1* = yes, intends to seek care from any source, *0* = no, not sure, or it depends

Table 3 Perceived barriers to mental health help-seeking

Variable	*M*(*SD*)
Cost	4.11 (1.23)
Lack of insurance	3.93 (1.38)
Not wanting to be admitted to a hospital	3.77 (1.42)
Wanting to handle problems on one's own	3.70 (1.32)
Not wanting to be placed on medication	3.64 (1.45)
Not feeling comfortable sharing feelings with another person	3.54 (1.45)
Not wanting to talk to a counselor about personal issues	3.45 (1.49)
Not knowing where to go for help	3.36 (1.46)
Denial that there is a problem	3.35 (1.53)
Not wanting to be labeled as "crazy"	3.31 (1.61)
Lack of social support	3.30 (1.49)
Not wanting help	3.18 (1.58)
Embarrassment	3.12 (1.51)
Fear of counselors	2.71 (1.47)

Table 4 Perceived benefits to mental health help-seeking

Variable	*M*(*SD*)
Improved mental health	4.56 (0.80)
Self-awareness/personal growth	4.44 (0.86)
Reduced stress	4.41 (0.87)
Improved communication	4.39 (0.86)
More optimistic attitude	4.36 (0.91)
Increased comfort sharing feelings with others	4.34 (0.91)
Improved life satisfaction	4.33 (0.86)
Happiness	4.27 (0.95)
Improved social support	4.25 (0.93)
Increased relationship satisfaction	4.22 (1.00)
Increased self-confidence	4.21 (0.98)
Improved sleep	4.20 (1.04)
Improved energy	4.20 (0.97)
Resolving one's problems	4.20 (1.00)

Hypothesis Tests

To evaluate the study hypotheses, we conducted a path analysis (Fig. 1). The overall model fit the data well, $\chi 2\ (3) = 1.72$, $p = 0.632$, CFI = 1.00, SRMR = 0.01, RMSEA = 0.00 (90% confidence interval: 0.00, 0.07). Acculturation was not significantly related to barriers ($\beta = 0.07$, $p = 9.131$) but was significantly related to benefits ($\beta = 0.146$, $p = 0.003$), partially supporting our first hypothesis. We failed to support our second set of hypotheses that enculturation would be associated with barriers ($\beta = 0.08$, $p = 0.118$) or benefits ($\beta = 0.05$, $p = 0.292$) to mental health help seeking. We found support for our third set of hypotheses. Mental health help-seeking attitudes significantly predicted intentions to seek care for depression ($\beta = -0.11$, $p = 0.027$ for barriers; $\beta = 0.17$, $p < 0.001$ for benefits; Fig. 2). Finally, we found a significant indirect effect of acculturation on mental health help-seeking intentions through perceived benefits (indirect $\beta = 0.03$, $p = 0.023$).

Table 5 Bivariate correlations for study variables

Variable	1	2	3	4	5
Acculturation variables					
1. Acculturation (AOS)	1.00				
2. Enculturation (MOS)	.012	1.00			
Mental health health-seeking					
3. Barriers	.075	.078	1.00		
4. Benefits	.147***	.053	.073	1.00	
5. Behavioral intentions	− .009	− .003	− .095	.162**	1.00

**$p < .01$

[a]Behavioral intention dichotomized: *1* = yes, intends to seek care from any source, *0* = no, not sure, or it depends

Sensitivity Analyses

We re-ran our path model but controlled for female gender, age, PHQ-9 scores, and prior mental health help-seeking. The full model with these covariates fit the data well, $\chi 2$ (3) = 3.81, $p = 0.282$, CFI = 0.99, SRMR = 0.01, RMSEA = 0.03 (90% confidence interval: 0.00, 0.09). In this full model, acculturation was significantly related to both benefits (β = 0.16, $p = 0.001$) and barriers (β = 0.07, $p = 0.038$), while enculturation was not related to either (benefits β = 0.03, $p = 0.538$; barriers β = 0.07, $p = 0.173$). In the full model, benefits (β = 0.15, $p = 0.001$) but not barriers (β = -0.08, $p = 0.095$) significantly predicted mental health help-seeking intentions, net the other variables. Furthermore, there remained a significant indirect effect of acculturation on help-seeking intentions through perceived benefits (indirect β = 0.03, $p = 0.024$).

In terms of the covariates, gender, age, and prior mental health help-seeking did not significantly predict barriers or benefits, net the other variables. Higher PHQ-9 scores were associated with greater perceived barriers (β = 0.15, $p = 0.004$) and lower intentions to seek care (β = − 0.23, $p < 0.001$) but not with perceived benefits (β = − 0.04, $p = 0.397$). Prior mental health help-seeking was not significantly associated with perceived benefits or barriers (benefits β = − 0.05, $p = 0.341$; barriers β = − 0.06, $p = 0.258$), but was significantly associated with mental health help-seeking intentions (β = 0.16, $p = 0.002$).

Discussion

Barriers to depression treatment among college students have traditionally not surveyed students from majority immigrant Latino-American backgrounds who might encounter specific cultural processes, such as acculturation or enculturation, in addition to usually studied predictors (i.e., perceived benefits and barriers) for intentions to seek care for mental health concerns. Using vignette methodology, the results of the present study indicate that in our sample of Latino college students attending a Hispanic-serving institution situated in a Mexican–American border town, acculturation was an indirect predictor, and enculturation did not play a statistically significant role in predicting help-seeking intentions for depression. We found a significant indirect effect of acculturation relating to greater perceived benefits

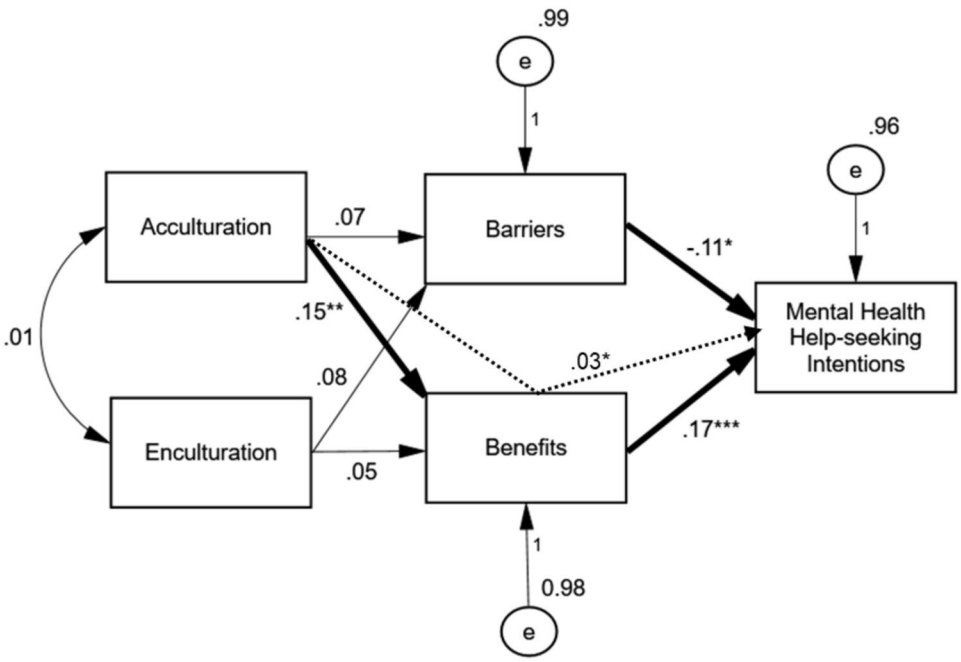

Fig. 2 Path model examining how mental health help-seeking attitudes mediate the relation between acculturation, enculturation, and mental health help-seeking behavioral intentions. Model χ^2 (3) = 1.72, $p = .632$, CFI = 1.00, RMSEA = .00, SRMR = .01. Standardized path coefficients are shown. Stars indicate level of significance (*$p < .05$; **$p < .01$; ***$p < .001$). Significant indirect effect denoted with dashed line

to mental health care and greater intentions to seek care, even when controlling for participant gender, age, and prior help-seeking. Neither acculturation nor enculturation predicted perceived barriers directly. These findings have suggested that cultural process impacting help-seeking warrants further investigation.

Findings from this study support the contentions found in the literature regarding acculturation and help-seeking intentions: findings are usually mixed as a product of how variables of interest are measured. The possibly low predictive strength of acculturation and enculturation in this study may be due to the fact that the measured perceived benefits and barriers lists were not culturally adapted. Additionally, the acculturation and enculturation ARSMA-II [24] measure is limited as it does not include cultural values (e.g., religiosity, familism, respect, etc.) that can influence help-seeking. We suspect that should a culturally adapted list of perceived benefits and barriers have been included instead of the standard one we used, perhaps the relationship between our variables of interest would have been stronger in our sample. Further research might address these issues by adding items such as "provider not knowing about my culture" as a perceived barrier and "increasing a sense of ethnic pride" as a perceived benefit, which might lead to different results. Thus, dismissing acculturation and enculturation as direct predators is not yet advised. Instead, a more tailored, focused study of unassessed acculturation factors (e.g., specific cultural values of native cultural heritage) might be needed. The same is true for the benefits and barriers list. The written responses offered by participants provided insights into help-seeking attitudes not captured by the standard measures. In their responses, participants expressed concerns about the immediate consequences of seeking mental health care, including being hospitalized or placed on unwanted medication, consistent with the literature with non-college community samples that many Latinos prefer non-pharmacological interventions [27].

Additionally, despite college campuses being known to provide mental health counseling services on their campuses, we found that many participants were not aware of where these services were located, their cost, and who could access them. These findings might signal health literacy barriers that were not formally assessed by this study. We recommend that, along with more direct outreach efforts, clear consent policies about treatment, including when and how a counselor might recommend hospitalization, be incorporated into a first session [28].

Among the strengths of this study were contributing to the literature by using established measures to corroborate findings and expanding our knowledge of cultural considerations potentially informing help-seeking. Similar to the work by Vidourek et al. [22], cost-related factors, such as price and insurance coverage, were the most commonly endorsed perceived barriers to help-seeking. In our sample, most students travel to campus for classes but live and work off campus. Many also take courses online and are associated with the campus but only through distance learning. This may have meant that mental health services on campus, while free, remained difficult for students to access as that cost might be compounded not just by the cost of the service but also by transportation or internet costs associated with visits.

Despite these strengths, this study had methodological (e.g., the ordering of how our measures were presented to participants and the vignette used) and sample (e.g., mostly psychology students) limitations. Procedurally, participants endorsed a list of benefits and barriers after reading the vignette; responses might have varied more if the order of measures presented was different (e.g., barriers and benefits presented before the vignette). The vignette depicted a person with a co-occurring chronic health and mental health condition. Any health-related stigma might have impacted help-seeking intentions. Our sample was limited to psychology students. Future research should recruit non-psychology samples as students enrolled in psychology may have a bias for or against mental health help-seeking due to exposure to course material.

Additionally, researchers have indicated a weak link between behavioral intentions and actual behavior [29]. A longitudinal study examining future help-seeking behavior, not just behavioral intentions, would be necessary. Rates of clinically elevated depression were relatively high in this sample; it would be essential to examine this in other Latino and non-Latino college samples and explore further why students are struggling with their mental health so colleges and universities can better address students' needs. It is unclear if results would generalize to college students from other Latino-American countries, from other regions in the United States, from other economic backgrounds, from students at predominantly white institutions, speaking Latinos, or to community samples. Perhaps the most important lesson learned from this study is that help-seeking is a complex endeavor, and current measures may not fully capture the benefits and barriers to accessing depression treatment as experienced by Latinos and other minoritized college groups. The field needs more culturally informed measures when assessing perceived benefits and barriers to help-seeking to further tease out the relationship between cultural factors impacting perceptions and intentions to seek care for depression.

Appendix

Sara is a 22-year-old woman in her last year of college hoping to become a veterinarian who works part-time as a paramedic for her local hospital as a way to pay for school. One

evening, Sara was on a call that required for the patient to have intravenous (IV) fluids. Sara administered the IV to the patient, but the patient moved, and Sara accidently stuck herself with the patient's IV needle. The patient was a person affected by HIV and later Sara found out that she had contracted the virus. Once she found out about her health condition, she broke the news to her boyfriend, whom she had been dating for the past two years. This news was too much for him, and he decided to end the relationship. The breakup devastated Sara.

Following the breakup, she was unable to concentrate. To cope with her health diagnosis, her recent break-up with her boyfriend, and her accumulating coursework, Sara started drinking a bottle of wine every couple of days. Sara stopped attending classes, lost her desire to hang out with friends and to go to work. Because of her struggles, Sara asked for and was granted a leave from school. She moved back in with her parents' spare room and has been at home for the last month. Since then, she has not showered, and constantly thinks about dying and how it would not be bad if she were to not wake up one day. Her parents have been away visiting family and are not aware of Sara's struggles. Sara is finding it harder to find a reason to live and has thought about taking all of her medications to "end it all." To avoid leaving her parent's home, she has resorted to having pizza delivered to her house every day. One evening, while browsing the internet, she came upon an online questionnaire that assessed for depression. She decided to take the questionnaire.

Sara scored in the 80th percentile for depression symptoms. The online feedback form told her she likely suffered from clinical depression and recommended she seek professional help immediately. It also provided a list of local therapists and mental health centers Sara could call to seek an appointment.

Author Contributions Conceptualization: L.E. Guzman and A.J. Bridges; Data curation: L.E. Guzman, and J.D. Hovey; Formal analysis: A.J. Bridges and L.E. Guzman; Investigation: L.E. Guzman, D.E Díaz Benitez; Project administration: L.E. Guzman; Resources, A.J. Bridges; Writing original draft: L.E. Guzman, A.J. Bridges, D.E. Díaz Benitez, and J.D. Hovey.

Funding Dr. Guzman was supported by the Interdisciplinary Minority Fellowship Program from the Substance Abuse and Mental Health Service Administration (SAMHSA) Award (#SM083355). The funding source was not involved in this report's study design, data collection, analysis, or writing.

Declarations

Conflict of interest None.

Ethical Approval This study was approved by the University of Arkansas at Fayetteville and the University of Texas at Rio Grande Valley IRBs.

References

1. National Center for Education Statistics. College enrollment rates. 2020. https://nces.ed.gov/programs/coe/pdf/coe_cpb.pdf
2. Ibrahim AK, Kelly SJ, Adams CE, Glazebrook C. A systematic review of studies of depression prevalence in university students. J Psychiatr Res. 2012;47(3):391–400. https://doi.org/10.1016/j.jpsychires.2012.11.015.
3. McBride DR, Van Orman S, Wera C, Leino V. American College Health Association's 2010 Survey on the utilization of student health services. 2010. https://www.acha.org/documents/resources/survey_data/benchmarking/ACHA_Benchmarking_Report_2010_Utilization_Survey.pdf
4. Dixon SK, Kurpius SER. Depression and college stress among university undergraduates: Do mattering and self-esteem make a difference? J Coll Stud Dev. 2008;49(5):412–24. https://doi.org/10.1353/csd.0.0024.
5. Oswalt SB, Lederer AM, Chestnut-Steich K, Day C, Halbritter A, Ortiz D. Trends in college students' mental health diagnoses and utilization of services, 2009–2015. J Am Coll Health. 2020;68(1):41–51. https://doi.org/10.1080/07448481.2018.1515748.
6. Bourdon JL, Moore AA, Long EC, Kendler KS, Dick DM. The relationship between on-campus service utilization and common mental health concerns in undergraduate college students. Psychol Serv. 2020;17(1):118–26. https://doi.org/10.1037/ser0000296.
7. Lipson SK, Zhou S, Wagner B III, Beck K, Eisenberg D. Major differences: Variations in undergraduate and graduate student mental health and treatment utilization across academic disciplines. J Coll Stud Psychother. 2016;30(1):23–41. https://doi.org/10.1080/87568225.2016.1105657.
8. Eisenberg D, Hunt J, Speer N. Mental health in American colleges and universities: variation across student subgroups and across campuses. J Nerv Ment Dis. 2013;201(1):60–7. https://doi.org/10.1097/NMD.0b013e31827ab077.
9. Kearney LK, Draper M, Barón A. Counseling utilization by ethnic minority college students. Cultur Divers Ethnic Minor Psychol. 2005;11(3):272. https://doi.org/10.1037/1099-9809.11.3.272.
10. Lipson SK, Kern A, Eisenberg D, Breland-Noble AM. Mental health disparities among college students of color. J Adolesc Health. 2018;63(3):348–56. https://doi.org/10.1016/j.jadohealth.2018.04.014.
11. Schwartz SJ, Unger JB, Zamboanga BL, Szapocznik J. Rethinking the concept of acculturation: implications for theory and research. Am Psychol. 2010;65(4):237–51. https://doi.org/10.1037/a0019330.
12. Yoon E, Chang CT, Kim S, Clawson A, Cleary SE, Hansen M, et al. A meta-analysis of acculturation/enculturation and mental health. J Couns Psychol. 2013;60(1):15–30. https://doi.org/10.1037/a0030652.
13. Berry JW. Acculturation and psychological adaptation: An overview. In: Bouvy A-M, van de Vijver FJR, Boski P, Schmitz PG, editors. Journeys into cross-cultural psychology. Amsterdam: Swets & Zeitlinger Publishers; 1994. p. 129–41.
14. Trickett E, Persky I, Espino S. Acculturation research: Proxies as sources of concept obfuscation. In: Quod Erat Demostrandum: from Herodotus' ethnographic journeys to cross-cultural research. Athens, Greece: International Association for Cross-Cultural Psychology; 2009. pp. 267–77. https://www.iaccp.org/wp-content/uploads/2019/06/28_Trickett.pdf
15. Stephenson M. Development and validation of the Stephenson multigroup acculturation scale (SMAS). Psychol Assess. 2000;12(1):77.
16. Miville ML, Constantine MG. Sociocultural predictors of psychological help-seeking attitudes and behavior among Mexican

American college students. Cultur Divers Ethnic Minor Psychol. 2006;12(3):420–32.
17. Ramos-Sánchez L, Atkinson DR. The relationships between Mexican American acculturation, cultural values, gender, and help-seeking intentions. J Couns Dev. 2009;87(1):62–71.
18. Hu DJ, Covell RM. Health care usage by hispanic outpatients as function of primary language. West J Med. 1986;144(4):490–3.
19. Bridges AJ, Andrews AR III, Deen TL. Mental health needs and service utilization by Hispanic immigrants residing in mid-southern United States. J Transcult Nurs. 2012;23(4):359–68. https://doi.org/10.1177/1043659612451259.
20. Dey AN, Lucas JW. Physical and mental health characteristics of US and foreign-born adults: United States, 1998–2003. Adv Data. 2006;369:1–19.
21. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry. 2005;62(6):593–602. https://doi.org/10.1001/archpsyc.62.6.593.
22. Vidourek RA, King KA, Nabors LA, Merianos AL. Students' benefits and barriers to mental health help-seeking. Health Psychol Behav Med. 2014;2(1):1009–26. https://doi.org/10.1080/21642850.2014.963586.
23. College Board 2023 Search for the University of Texas at Rio Grande Valley: College Board. BigFuture college search: University of Texas at Rio Grande Valley. 2023. https://bigfuture.collegeboard.org/colleges/university-of-texas-rio-grande-valley
24. Cuellar I, Arnold B, Maldonado R. Acculturation rating-scale for Mexican Americans II—a revision of the original ARSMA scale. Hisp J Behav Sci. 1995;17(3):275–304. https://doi.org/10.1177/07399863950173001.
25. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med. 2001;16(9):606–13.
26. Rosseel Y. lavaan: an R package for structural equation modeling. J Stat Softw. 2012;48(2):1–36. https://doi.org/10.18637/jss.v048.i02.
27. Dwight-Johnson M, Lagomasino IT. Addressing depression treatment preferences of ethnic minority patients [Editorial]. Gen Hosp Psychiatry. 2007;29(3):179–81. https://doi.org/10.1016/j.genhosppsych.2007.02.001.
28. Fisher CB, Oransky M. Informed consent to psychotherapy: protecting the dignity and respecting the autonomy of patients. J Clin Psychol. 2008;64(5):576–88. https://doi.org/10.1002/jclp.20472.
29. McEachan R, Taylor N, Harrison R, Lawton R, Gardner P, Conner M. Meta-analysis of the reasoned action approach (RAA) to understanding health behaviors. Ann Behav Med. 2016;50(4):592–612. https://doi.org/10.1007/s12160-016-9798-4.