

Published in final edited form as:

Suicide Life Threat Behav. 2022 October; 52(5): 876–886. doi:10.1111/sltb.12871.

When the United States says you do not belong: Suicide-related thoughts and behaviors among immigrant young adults varying in immigration legal status

Amanda Venta, PhD¹, Tessa Long, MA², Alfonso Mercado, PhD³, Luz M. Garcini, PhD, MPH⁴, Germán A. Cadenas, PhD⁵

¹Department of Psychology, University of Houston, Houston, Texas, USA

²Department of Psychology and Philosophy, Sam Houston State University, Huntsville, Texas, USA

³Department of Psychological Science, School of Medicine Psychiatry and Neurology Department, University of Texas Rio Grande Valley, Edinburg, Texas, USA

⁴Division of Hospital Medicine, Department of Medicine, Department of Psychiatry & Behavioral Sciences, University of Texas Health Science Center at San Antonio, San Antonio, Texas, USA

⁵Counseling Psychology Program, Lehigh University, Bethlehem, Pennsylvania, USA

Abstract

Background: The number of immigrants in the United States and the risk of suicide among minoritized individuals have increased. Little research has examined the impact of immigration legal status on suicide-related thoughts and behaviors (SRTB), despite theoretical and empirical work suggesting that feelings of burdensomeness and failure to belong (prominent among immigrants) are risk factors.

Methods: We examined a diverse sample of foreign-born young adults (18–25; N= 366). Data collection utilized the Suicide Behaviors Questionnaire Revised and items probing belongingness and immigration status (undocumented/Deferred Action for Childhood Arrivals (DACA), permanent, and citizen).

Results: DACA/undocumented status was associated with increased SRTB compared with permanent and citizen categories. Increased SRTBs were associated with reduced feelings of acceptance in the United States, increased deportation fears, and increased fear of being harassed or hurt. Of these belongingness variables, only the interpersonal—not feeling welcome in the United States—partially mediated the risk relation between DACA/undocumented immigration legal status and SRTBs, whereas physical and legal threat, like deportation, did not.

Correspondence: Amanda Venta, Department of Psychology, University of Houston, 4849 Calhoun Rd., Room 373, Houston, TX 77204-6022, USA. aventa@uh.edu.

Conclusions: Our results highlight the interpersonal nature of SRTB risk in DACA/ undocumented immigrants and the need for targeted culture and context-appropriate interventions, as well as advocacy and policy to reduce risk in this historically marginalized population.

Keywords

DACA; suicidal ideation; undocumented immigrants; young adults

INTRODUCTION

More young adults than ever before identify as immigrants in the United States (Venta et al., 2021)—such that 28% of young adults identify as immigrants and whom 2% have undocumented immigration legal status (Batalova & Feldblum, 2020; Batalova & Fix, 2011). Moreover, many young adults qualify for Deferred Action for Childhood Arrivals (DACA), which provides protection for undocumented immigrants brought to the United States as children via a renewable 2-year period of deferred action from deportation and work permit (Presidents' Alliance, 2020; Redden, 2020). Research on SRTBs in immigrant young adults is limited despite indications of increased suicide risk (Borges et al., 2009; Kene et al., 2016; Kposowa et al., 2008), and the literature base is mixed (Borges et al., 2012; Pena et al., 2008). As the number of immigrant young adults in the United States has increased, they have suicide-related thoughts and behaviors (i.e., SRTBs)—including suicidal ideation (Kene et al., 2016; Khan et al., 2018), as well death by suicide (Center for Disease Control and Prevention, 2017) and suicide plans (Centers for Disease Control and Prevention, 2019)—among young adults of color (i.e., Black, African, Asian, Native, Pacific Islander, multiracial, and Latinx Americans). Presently, there is a dearth of data on SRTBs among immigrants varying in immigration legal status, underscoring the related gap in prevention and treatment efforts for this population (Kene et al., 2016)—a critical public health need given known relations between immigration legal status and mental health (Bailey et al., 2021).

Joiner's interpersonal-psychological theory of suicidal behavior (Joiner, 2005) is a dominant conceptualization of suicide risk and states that people desire death because they experience sustained and co-occurring perceived burdensomeness and failed belongingness. Perceived burdensomeness is an individual's perception that they burden others (e.g., family and friends) by existing. Failed belongingness, while similar, focuses on the individual's perceived isolation from others. Both sentiments together produce a desire for death that, when coupled with habituation to the pain and fear required for self-inflicted violence (e.g., through previous self-harm), results in the capacity and desire to enact lethal self-harm. Kene et al. (2016) apply this theory to the case reports of immigrants engaging in SRTBs, noting that social isolation stemming from immigration and acculturative stress, discrimination, and xenophobia produce perceived burdensomeness and failed belongingness that increase SRTB risk.

Legal status may shape an immigrant's risk for SRTBs by influencing their felt burdensomeness and belongingness in the United States. Views of immigrants, particularly those with DACA/undocumented immigration legal status, as a burden and danger to

society have dominated the media for years; animosity has grown over the last 5 years with views that immigrants are a health hazard in the current pandemic and compete for scarce economic resources (Garcini et al., 2012). Moreover, recent anti-immigration policies likely contribute to sentiments of failed belongingness and perceived burdensomeness among immigrants in the United States. Even for individuals who have qualified for DACA status, recent governmental action threatening this status may increase perceptions of burdensomeness and failed belongingness (López & Krogstad, 2017). Immigrants with DACA and undocumented legal status are vulnerable to diminished mental health given the many stressors they face, including harsh living conditions; limited access to health, social, and legal services; threat of family separation; and limited educational and work opportunities (Garcini et al., 2021). DACA recipients and immigrants with undocumented legal status report elevated levels of acculturative stress, feelings of alienation, social exclusion, discrimination, stigmatization, and fear of deportation (Fortuna et al., 2016; Garcini et al., 2021). Previous research has highlighted that trauma exposure and immigration stressors increase mental health problems and suicidal ideation in immigrants in the United States, particularly those with undocumented legal status (Fortuna et al., 2016) and SRTBs have grown in the last decade (Silva & Van Orden, 2018).

Our aim was to examine relations between immigration legal status and SRTBs in a foreign-born sample of young adults varying in immigration legal status. We provide needed data on the prevalence of SRTBs among a subgroup for whom suicide risk has been growing and, further, address the current lack of available data regarding how contemporary documentation statuses like DACA relate to the most critical of mental health outcome variables—SRTBs. We expected that immigrant young adults with undocumented or DACA legal status would be most likely to endorse SRTBs as compared to those who have permanent immigration statuses like Legal Permanent Residency, green card, or citizenship. Furthermore, we expected that those with DACA/undocumented immigration status would endorse higher subjective reports indicating feelings that they do not belong in the United States (i.e., lack of acceptance, fear of deportation, and fear of harassment) and that, for these participants, a reduced sense of belonging would partially explain increased SRTBs through statistical mediation. As in previous research utilizing the interpersonalpsychological theory of suicidal behavior (Joiner, 2005), we hypothesized partial mediation, expecting that reduced belongingness would partially, but not fully, explain the relation between immigration legal status and SRTBs, which is also likely to include effects of stress, financial hardship, and other adversities.

MATERIALS AND METHOD

Procedures

Data were collected as a part of a larger study conducted across seven Texas communities including rural and urban settings near and far from the United States/Mexico border, representing a wide area of Texas with recruitment sites more than 600 miles apart. Participants were recruited from public 4-year universities—some of which are minority-serving institutions and others of which are predominantly Caucasian—to access this difficult to reach population. IRB approval was obtained from each collaborating recruitment

site and maintained by the first author. Each institution's IRB provided a waiver of written informed consent. Thus, no written consent was obtained; participants were asked to read a cover letter describing the study and detailing the risks and benefits of participation. If in agreement with the content of the cover letter, they voluntarily proceed to the study battery. Participation was completely voluntary and anonymous, and subjects were able to decline at any time without penalization. The full study battery was approximately 90 min and was completed in English.

Participants

Foreign-born, immigrant participants were selected for this study from a broader sample of 3158 participants. All participants were college students. Participants who provided incorrect answers to attentional check questions were removed, leaving n = 1973 participants, and foreign-born participants were selected for inclusion in this study (n = 372). Missing data were addressed with listwise deletion for key study variables (i.e., SBQ-R and belongingness variables), leaving n = 366 for analysis.

Participants were between the ages of 18 and 25 years (M=20, SD=2.00), in accordance with the World Health Organization's definition of young adulthood. Regarding gender, 80.9% (n=296) identified as female, 19.1% as male (n=70), and no participants indicated a non-binary gender identity. Regarding ethnicity, 80.1% of participants identified as Latinx (n=293). The racial breakdown was as follows: white (n=142,40%), Black or African American (n=20,5.6%), Asian (n=35,9.9%), American Indian or Alaskan Native (n=12,3.4%), and mixed race or other race (n=146,39.9%); 11 participants declined to select a racial category. All participants were foreign-born. Immigration legal status was operationalized as follows: citizen (n=73,19.9%), permanent immigration legal status (i.e., legal permanent resident or green card holder, n=151,41.3%), and DACA/undocumented immigration legal status (i.e., a combined group made up of DACA status [n=123,33.6%] and undocumented immigration legal status [n=19,5.2%], total n=142,38.8%).

Measures

Demographic form—Questions on demographic variables including age, gender, race, ethnicity, and immigration legal status.

Belongingness variables—Participants were asked to complete questions specific to their experiences in the United States. Questions were drafted for the current study by experts in immigrant mental health including authors AM and AV, in the absence of an existing questionnaire probing immigrant belonging in a host country from both psychological (i.e., acceptance and harassment/harm) and legal (i.e., deportation) standpoints. Item content is reported in Table 1 and included how accepted they felt in the United States, how much they feared being deported, and how much they feared being harassed or hurt due to their immigration legal status. Each question was rated on a 5-point Likert scale from "1 = Not at all" to "5 = A lot."

¹Some individuals born in current-day Mexico identify as American Indian given shared ethnic roots between American Indians and Latinx indigenous peoples and the reality that geographic boundaries between the United States and Mexico have changed across time.

Suicide behaviors questionnaire revised (SBQ-R)—The SBQ-R (Osman et al., 2001) is a 4-item self-report measure assessing suicidal risk based on past attempts, frequency of suicidal ideation, disclosure of suicidal ideation to others (threats), and likelihood of attempting suicide. Each item is rated on a separate Likert scale and scored individually. For example, the presence of suicidal ideation is rated on a 6-point scale, with separate responses for intent (e.g., "I have had a plan at least once to kill myself but did not want to try it" and "I have had a plan at least once to kill myself and really wanted to die"). Frequency of ideation is rated on a 5-point scale from "Never" to "Very Often." The items are also summed for a Total SBQ-R score. The SBQ-R has been validated for the target population (Osman et al., 2001) and found to have acceptable reliability, ranging from $\alpha = 0.82$ to 0.87 (Osman et al., 2001; Winer et al., 2016). In the current study, Cronbach's alpha was 0.86.

Data analytic strategy

Descriptive statistics and bivariate relations between all study variables were explored first analyses examined relations between SRTBs and immigration legal status as well as relations between SRTBs and subjective sense of belonging in the United States. Mediational analyses, conducted using the PROCESS computational tool (Hayes, 2022), were used to test whether the relation between immigration legal status and SRBTs (total SBQ-R score) was partially mediated by subjective sense of belonging in the United States. Demographic variables (i.e., age, gender, and race) were included in the model as covariates. Immigration legal status served as a three-way multicategory independent variable with sequential coding (i.e., DACA/undocumented vs. permanent and citizen groups; and citizens vs. DACA/undocumented and permanent groups combined). SBQ-R total score served as a continuous dependent variable. Three belonging variables acted as mediators in a single parallel multiple mediator model, allowing for control of the impact of all the mediators on each other in the analysis while reducing repetition. Bootstrapping for the indirect effect was based on 1000 samples and mediation was established by examining a 95% bias-corrected confidence interval not containing zero.

RESULTS

Descriptive statistics

Demographic variables were explored to determine covariates to include in mediation models. Age demonstrated a significant relation to SRTBs (total SBQ-R), such that younger age was associated with greater SRTBs, r = -0.20, p < 0.001. Female respondents endorsed greater SRTBs (M = 7.09, SD = 3.98) than male respondents (M = 5.81, SD = 2.84; t = -2.54, p = 0.012, Hedges' g = -0.34). Race was significantly associated with SRTBs, F(4, 350) = 2.93, p = 0.021, $\eta^2 = 0.03$, with Black or African American participants endorsing less SRTBs than American Indian or Alaskan Native ($M_{\rm diff} = -1.58$, p = 0.347), Asian ($M_{\rm diff} = -1.81$, p = 0.068), White ($M_{\rm diff} = -2.35$, p < 0.001), and participants who endorsed mixed race or another racial identity ($M_{\rm diff} = -2.87$, p < 0.001). Race was therefore included as a covariate. Thus, age, sex, and race were included as covariates in multivariate analyses. Latinx ethnicity was not significantly associated with SRTBs, t = 1.89, p = 0.06, Hedges' g = 0.24, and was not included as a covariate.

Descriptive statistics regarding endorsement of SRTBs in relation to immigration legal status groups are presented in Table 1. Endorsement rates are provided to characterize the sample though rank-biserial correlations between SBQ-R item endorsement levels (e.g., "never, rarely, sometimes, often, very often") and immigration legal status were non-significant across the SBQ-R's four items. Likewise, mean differences in SBQ-R scores across immigration legal status were non-significant.

Bivariate correlations between variables capturing subjective experiences of belonging and total SBQ-R scores were computed. Correlations indicated that, in the DACA/undocumented immigration status group, increased SRTBs were significantly associated with reduced feelings of acceptance in the United States (r = -0.26, p = 0.002), increased fear of deportation (r = 0.19, p = 0.021), and increased fear of being harassed or hurt because of their immigration legal status (r = 0.24, p = 0.004). In the permanent immigration legal status group, increased SRTBs were significantly associated with reduced feelings of acceptance in the United States (r = -0.25, p = 0.002), and increased fear of being harassed or hurt because of their immigration legal status (r = 0.20, p = 0.016), but not increased fear of deportation (r = 0.09, p = 0.268). In the citizen group, no evidence of significant correlations between the belongingness variables and SRTBs was found. Not surprisingly, the belongingness variables were associated with immigration legal status: citizens endorsed the highest levels of acceptance followed by those with permanent immigration legal status and then those with DACA/undocumented immigration legal status, F(2, 363) = 30.35, p < 0.001; citizens endorsed lowest levels of fear of harassment and fear of deportation, followed by those with permanent immigration legal status and then those with DACA/ undocumented immigration legal status (R_{2} , 338) = 77.35, p < 0.001 and R_{2} , 335) = 43.60, p < 0.001, respectively).

Mediational role of subjective belonging

Three belonging variables acted as mediators in a single parallel multiple mediator model, with immigration legal status served as a three-way multicategory independent variable with sequential coding (i.e., DACA/undocumented vs. permanent and citizen groups; and citizens vs. DACA/undocumented and permanent groups combined), and SBQ-R total score served as a continuous dependent variable. Results are presented in Table 2.

In statistically predicting SBQ-R total score, the overall model was significant, F(8,318) = 6.26, p < 0.001, explaining 13.61% of the variance (i.e., adjusted R^2). A significant direct effect of immigration legal status (DACA/undocumented status v. citizen and permanent status) on SRTBs was observed such that DACA/undocumented immigration legal status was associated with increased SRTBs. Likewise, a main effect of feeling welcome in the United States was observed, with reduced belonging associated with increased SRTBs. Main effects of age and race observed at the bivariate level retained significance, whereas the effect of sex did not.

Regarding indirect effects, used to test whether the three belonging variables acted as mediators in partially explaining the relation between immigration legal status and SRTBs, only the indirect effect of feelings of being welcome in the United States evidenced significant, partial mediation (*Omnibus indirect effect* = -0.08, SE = 0.04, confidence

interval did not include 0 [-0.17 to -0.02]). Significant, partial mediation was evident for DACA/undocumented status v. citizen and permanent status, with the mean of the indirect effect estimated at -0.35, SE = 0.14, and a confidence interval that did not include 0 (-0.66to -0.11). Specifically, participants with DACA/undocumented immigration legal status endorsed feeling less welcome (when compared to citizens and permanent immigration legal status groups combined), which, in turn, explained their increased endorsement of SRTBs. Likewise, significant, partial mediation was evident for DACA/undocumented status and permanent status v. citizen, with the mean of the indirect effect estimated at -0.40, SE =0.21, and a confidence interval that did not include 0 (-0.93 to -0.09). Specifically, the DACA/undocumented and permanent immigration legal status groups combined endorsed feeling less welcome (when compared to citizens), which, in turn, explained their increased endorsement of SRTBs. Neither significant partial nor full mediation by fear of deportation (Omnibus indirect effect = -0.004, SE = 0.06, confidence interval did include 0 [-0.10 to 0.12]) or fear of being harassed or hurt because of immigration legal status was evident (Omnibus indirect effect = 0.05, SE = 0.04, confidence interval did include 0 [-0.02 to 0.13]).

DISCUSSION

The broad aim of this study was to examine relations between immigration legal status and SRTBs in a diverse sample of U.S. young adults varying in immigration legal status. First, we expected that participants who have DACA/undocumented immigration legal status would be more likely to endorse SRTBs as compared to participants who endorsed permanent immigration legal status or citizenship. At the bivariate level, this hypothesis was not supported when examining endorsement of individual SRTB items. However, consistent with previous research noting the cumulative experiences of trauma exposure and immigration stressors increases suicidal ideations in immigrant populations (Fortuna et al., 2016; Pena et al., 2008), we noted that, in multivariate analyses, DACA/undocumented immigration legal status was a significant predictor of total SRTB scores.

Second, we expected that DACA/undocumented immigration legal status participants would endorse higher subjective reports indicating feelings that they do not belong in the United States. or in their community (e.g., lack of acceptance, fear of deportation, and fear of harassment) and that, third, for these participants, reduced sense of belonging would explain increased SRTBs through partial statistical mediation. These hypotheses were partially supported. DACA/undocumented immigration legal status participants endorsed feeling that they are not welcome in the United States, and this sentiment partially explained increased SRTBs in that group. Consistent with Joiner's (2005) theory and our hypothesis, feelings of failed belongingness at the national level explained suiciderelated outcomes among DACA/undocumented participants. To our surprise, while this group of participants also endorsed fears of deportation and fears of being harassed or hurt due to their immigration legal status, neither played a mediational role regarding SRTBs. If interpreted within Joiner's (2005) lens, these findings suggest those interpersonal non-belonging—that is, not feeling accepted—partially explains the statistically significant relation between DACA/undocumented immigration legal status and SRTBs, whereas actual or legal danger in the form of harassment or fear of deportation do not act as mediators.

It is important to note that for the DACA/undocumented group, fear of harassment/harm and deportation did demonstrate a significant bivariate relation with SRTBs, and for the permanent immigrant group, fear of harassment/harm demonstrated a significant bivariate relation with SRTBs, echoing prior research (Cadenas et al., 2020; Santos et al., 2021) linking fear of deportation to mental health problems, although these variables did not demonstrate significant mediation. Whereas these variables likely create stress which relates to mental health problems, including SRTBs, at the bivariate level, our findings suggest that the unique mechanism explaining the link between DACA/undocumented immigration status and SRTBs is interpersonal, in line with Joiner's (2005) theory.

Although in this study DACA/undocumented immigration legal status was significantly associated with increased SRTBs as compared to permanent immigration legal status and citizenship, it is important to note the overall low endorsement of SRTBs in this group (Table 1), consistent with prior research noting that young immigrants exhibit coping strengths in the face of increased anti-immigrant hostility (Cadenas & Nienhusser, 2020; Moreno et al., 2021). Indeed, despite facing constant uncertainy and compounded fears of being marginalized, stigmatized, or discriminated against, most DACA/undocumented immigration legal status individuals are highly resilient (Moreno et al., 2021; Jawetz, 2020). A population-based phenomenon known as the "immigrant paradox" has attempted to explain that despite facing greater social disadvantage, foreign-born immigrants have better physical and mental health outcomes when compared to U.S.-born natives (Alcántara et al., 2017). Among DACA/undocumented individuals, recent scholarship suggests that cultural pride (Moreno et al., 2021) and behavioral strategies—like building strong social networks —foster resilience (Venta et al., 2019), echoing our findings that interpersonal interventions designed to mitigate perceptions of failed belongingness in these immigrant groups are essential.

Implications for mental health equity

The current study adds to the growing literature on mental health inequity among young adults with DACA/undocumented immigration legal status (Cadenas & Nienhusser, 2020). Our findings highlight that interpersonal variables partially explain the risk relation between DACA/undocumented immigration legal status and SRTBs. Interpersonal vulnerability is connected to larger systemic factors that exacerbate distress, such as discrimination (Cadenas et al., 2020) and anti-immigrant rhetoric and federal policy (Moreno et al., 2021). Indeed, political and cultural leaders who engage in public discourse related to immigration should be mindful that anti-immigrant vitriol may have a real-world impact on the mental health of immigrants in the United States. Given that systemic factors are major contributors to the way that young immigrants think about themselves, it is important to consider systemic factors as risk factors in interpersonal conceptualizations of suicide (e.g., Joiner, 2005) and other disorders. Recent reports that leverage collaborations with undocumented community organizations and activist leaders have outlined advocacy recommendations to decrease harm to immigrants (Cadenas et al., 2021; Latinx Immigrant Health Alliance, 2021), including advocacy to support more humane federal immigration policies and to reverse past policies that cause psychological harm and inequities (e.g., rescission of DACA)

and factual public education that addresses myths and racist narratives about immigrants—both of which may curb immigrant feelings of burdensomeness and belonging.

Interventions and best practices for addressing SRTBs among immigrants with DACA and undocumented immigration legal status are limited and barriers that prevent access to and use of mental health services must be overcome through psychoeducation, community collaboration, and building a competent workforce (Garcini et al., 2017). Clinically, culturally sensitive and contextually appropriate mental health services should acknowledge the failed belongingness and perceived burdensomeness that immigrants may feel. Alongside safety planning, therapeutic techniques that integrate context into therapy (e.g., life narrative, strength-based, and value-based interventions) and building of therapeutic alliances that are based on values important to the immigrant are needed to facilitate the healing process and enhance protective feelings of belonging (Arredondo et al., 2014). Facilitating the development of coping strategies that align with the immigrant's values and access to resources and mitigate feelings of burdensomeness and failed belonging is important. Strategies to build pride in the immigrant's cultural background and immigrant experience may enhance a sense of communal belonging, as does establishment of social support systems.

Limitations and future directions

This study highlights an important area in need of prompt intervention, albeit with limitations. Recruitment occurred in Texas, limiting generalizability, though variety in ethnic/racial background of participants is a strength, even with a small subsample of undocumented participants. Texas reflects a unique state where anti-immigrant sentiments and actions are prevalent. Most participants were women, consistent with other research in undocumented immigrants (e.g., Perez, 2015). Future research would be improved by increased recruitment of men and gender non-binary participants. Additionally, the recruitment of college students, while facilitating a large sample, limits generalizability to immigrants attending colleges and universities. Future research should examine immigrant young adults more generally, by engaging in community-based recruitment, to examine risk factors for SRTBs in the population as a whole. Moreover, in any retrospective report, there are limitations and threat of bias and under-reporting may have affected estimates of SRTBs. Still, data were collected during threats of terminating DACA, providing a noteworthy and impactful event to ground participants' reports. Future research would benefit from longitudinal data collection capable of detecting how length of time spent with uncertain immigrant status affects mental health and probing how policy and rhetoric changes in the United States affect immigrant wellbeing. Additionally, the measurement of belongingness in this study was constrained to just three items that were developed for this study to capture both interpersonal (i.e., feeling accepted and fear of harassment/ harm) and legal (i.e., fear of deportation) senses of belonging in the host country. Items had not been previously published or psychometrically vetted. Given that the current study identified interpersonal belonging as a critical variable, future research should endeavor to examine this construct in immigrants more fully, using the newly published Challenged Sense of Belonging Scale (Fuchs et al., 2021), the Multidimensional Measure of Immigrant Integration (Harder et al., 2018), or adapting the Interpersonal Needs Questionnaire (Van

Orden et al., 2012)—which measures constructs from Joiner's (2005) theory examined in this study—for immigrants. Finally, this study was cross-sectional; thus, causation cannot be inferred. Despite these limitations, our results provide valuable data to inform future studies, facilitate comparisons, motivate the development of targeted interventions and mental health resources, best practices among mental health providers, and advocacy and policy efforts with this immigrant population.

CONCLUSION

We add to the growing literature investigating mental health inequality among young adults with DACA/undocumented immigration legal statuses, who demonstrate heightened vulnerability compared with young adults with other immigration legal statuses. This vulnerability is connected to larger systemic factors that exacerbate SRTBs, such as limited access to care, anti-immigrant rhetoric/actions, and growing experiences of discrimination, stigmatization, and marginalization. Our results highlight the interpersonal nature of SRTB risk in DACA/undocumented immigrants and the need for targeted culture and context-appropriate interventions and services, as well as advocacy and policy to reduce mental health risk among an immigration population that has been historically marginalized.

ACKNOWLEDGMENTS

We thank our collaborators Stephanie Arellano, Frances Morales, Andy Torres, (University of Texas-Rio Grande Valley), Dr. Adam Schmidt, Leroi Hill (Texas Tech University), Dr. Carla Sharp, Kiana Wall (University of Houston), Dr. Sarah Elkins, Shivani Bathla (University of Houston-Clear Lake), Dr. Jennifer Schroeder, Jordan Brummett (Texas A&M-Commerce), Dr. Chiachich Wang, and Ivan Carbajal (University of North Texas) for their help with data collection. We would also like to thank research assistant Rukshaar Bawa for her assistance with data cleaning.

Funding information

Time commitment for this study was partially supported by a grant from the National Institutes of Health, National Heart, Lung, and Blood Institute (NHLBI) (K01HL150247; PI: Garcini).

DATA AVAILABILITY STATEMENT

Data are available via email from the corresponding author.

REFERENCES

- Alcántara C, Estevez CD, & Alegría M (2017). Latino and Asian immigrant adult health: Paradoxes and explanations. In Schwartz SJ & Unger JB (Eds.), The Oxford handbook of acculturation and health (pp. 197–220). Oxford University Press.
- Arredondo P, Gallardo-Cooper M, Delgado-Romero EA, et al. (2014). Culturally responsive counseling with Latinas/os (1st ed.). John Wiley & Sons.
- Bailey CA, Venta A, Varela J, Salami T, Ratcliff C, & Gardner J (2021). Risk and protective markers for well-being in Latinx immigrants in removal proceedings. Law and Human Behavior, 45(3), 179. [PubMed: 34351202]
- Batalova J, & Feldblum M (2020). Immigrant-origin students in U.S. higher education: A data profile. Migration Policy Institute. https://www.presidentsalliance.org/wp-content/uploads/2020/10/immigrant-origin-students-postsecondary-ed_final-1.pdf

Batalova J, & Fix M (2011). Up for grabs: The gains and prospects of First- and Second-generation young adults. Migration Policy Institute. https://www.migrationpolicy.org/sites/default/files/publications/youngadults-upforgrabs.pdf

- Borges G, Breslau J, Su M, Miller M, Medina-Mora M, & Aguilar-Gaxiola S (2009). Immigration and suicidal behavior among Mexicans and Mexican Americans. American Journal of Public Health, 99(4), 728–733. [PubMed: 19150909]
- Borges G, Orozco R, Rafful C, Miller E, & Breslau J (2012). Suicidality, ethnicity and immigration in the USA. Psychological Medicine, 42(6), 1175–1184. [PubMed: 22030006]
- Cadenas GA, Cárdenas Bautista E, Psychological Association, Morrisey MB, Miodus S, Hernández M, Galleta A, Raimi F, Steinberg L, Marotta S, McNeill B, Hernandez E, Garcia EA, Hurtado G, Daruwalla S, Treptow RL, & Ginez D (2021). Protecting immigrants from harm: Collaborative advocacy strategies for mental health professionals and community activists. Interdivisional Immigration Project Commissioned by the Committee of Divisions/APA Relations. https://www.div17.org/home-slideshow/immigration-collaborative-advocacy-report/
- Cadenas GA, & Nienhusser K (2020). Immigration status and immigrant college students' psychosocial wellbeing. Educational Researcher, 50, 197–200.
- Cadenas GA, Peña D, Minero-Meza L, Rojas-Arauz B, & Lynn N (2020). Critical agency and vocational outcome expectations as coping mechanisms among undocumented immigrant students. Journal of Latinx Psychology, 9(2), 92–108.
- Center for Disease Control and Prevention. (2017). Youth Risk Behavior Survey: Data summary & Trends Report, 2007–2017. https://www.cdc.gov/healthyyouth/data/yrbs/pdf/trendsreport.pdf
- Centers for Disease Control and Prevention. (2019). U.S. Department of Health and Human Services. http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html.
- Fortuna LR, Alvarez K, Ortiz R, Wang Y, Mozo Alegria X, Cook BL, & Alegria M (2016). Mental health, migration stressors, and suicide ideation among Latino immigrations in Spain and the United States. European Psychiatry, 36, 15–22. [PubMed: 27311103]
- Fuchs LM, Jacobsen J, Walther L, Hahn E, Ta TMT, Bajbouj M, & von Scheve C (2021). The challenged sense of belonging scale (CSBS)—A validation study in English, Arabic, and Farsi/Dari among refugees and asylum seekers in Germany. Measurement Instruments for the Social Sciences, 3(1), 1–16.
- Garcini L, Daly R, Chen N, Mehl J, Pham T, Phan T, Hansen B, & Kothare A (2021). Undocumented immigrants and mental health: A systematic review of recent methodology and findings in the United States. Journal of Migration and Health, 4, 100058. [PubMed: 34405198]
- Garcini L, Domenech Rodríguez M, Mercado A, & Paris M (2012). A tale of two crises: The compounded effect of COVID-19 and anti-immigration policy in the United States. Psychological Trauma: Theory, Research, Practice, and Policy, 12(S1), S230.
- Garcini L, Peña J, Galvan T, Fagundes C, & Klonoff EA (2017). DREAMers and their double standard of living in the United States: A contextual perspective and clinical implications. American Journal of Psychiatry, 174(7), 623–625. [PubMed: 28669208]
- Harder N, Figueroa L, Gillum RM, Hangartner D, Laitin DD, & Hainmueller J (2018).
 Multidimensional measure of immigrant integration. Proceedings of the National Academy of Sciences of the United States of America, 115(45), 11483–11488. [PubMed: 30348786]
- Hayes AF (2022). Introduction to Mediation, Moderation, and Conditional Process Analysis (3rd ed.). Guilford Publications.
- Jawetz T (2020). Immigrants as essential workers during COVID-19: Testimony before the U.S. house judiciary subcommittee on immigration and citizenship. Center for American Progress https://cdn.americanprogress.org/content/uploads/2020/09/28102223/JawetzImmigrantsCOVID-testimony1.pdf?_ga=2.83197397.2130974704.1607468539-1268505844.1605720923
- Joiner T (2005). Why people die by suicide. Harvard University Press.
- Kene P, Brabeck K, Kelly C, & DiCicco B (2016). Suicidality among immigrants: Application of the interpersonal-psychological theory. Death Studies, 40(6), 373–382. [PubMed: 26890379]
- Khan SQ, de Gonzalez AB, Best AF, Chen Y, Haozous EA, Rodriquez EJ, Spillane S, Thomas DA, Withrow D, Freedman ND, & Shiels MS (2018). Infant and youth mortality trends by race/

- ethnicity and cause of death in the United States. JAMA Pediatrics, 172(12), e183317. [PubMed: 30285034]
- Kposowa AJ, McElvain JP, & Breault KD (2008). Immigration and suicide: The role of marital status, duration of residence, and social integration. Archives of Suicide Research, 12(1), 82–92. [PubMed: 18240038]
- Latinx Immigrant Health Alliance. (2021). Two pandemic snapshots: Immigrant health in the time of COVID. https://osf.io/w2zmx/
- López G and Krogstad JM (2017). Key facts about 'Dreamers' enrolled in DACA. Pew Research Center. Key facts about unauthorized immigrants enrolled in DACA.
- Moreno O, Fuentes L, Garcia-Rodriguez I, Corona R, & Cadenas GA (2021). Psychological impact, strengths, and handling the uncertainty among Latinx DACA recipients. The Counseling Psychologist, 49(5), 728–753.
- Osman A, Bagge CL, Gutierrez PM, Konick LC, Kopper BA, & Barrios FX (2001). The suicidal behaviors questionnaire-revised (SBQ-R): Validation with clinical and nonclinical samples. Assessment, 8(4), 443–454. [PubMed: 11785588]
- Pena JB, Wyman PA, Hendricks Bronw C, Matthieu MM, Olivarez TE, Hartel D, & Zayas LH (2008). Immigration generation status and its association with suicide attempts, substance use, and depressive symptoms among Latino adolescents in the USA. Prevention Science, 9, 299–310. [PubMed: 18855139]
- Perez W (2015). Americans by heart: Undocumented Latino students and the promise of higher education. Teachers College Press.
- Presidents' Alliance (2020). Report: Undocumented students in higher education:

 How many students in are U.S. Colleges and Universities, and Who Are

 They? https://www.presidentsalliance.org/report-undocumented-students-in-higher-education-how-many-students-are-in-u-s-colleges-and-universities-and-who-are-they/.
- Redden E (2020). Report finds growth in undocumented student population. https://www.insidehighered.com/news/2020/04/17/report-estimates-more-450000-undocumented-immigrants-are-enrolled-higher-ed
- Santos C, Cadenas G, Menjívar C, & Cisneros J (2021). The development and evaluation of the stigma of illegality and marginalization of latinxs (siml) scale: Links to psychological distress. Du Bois Review: Social Science Research on Race, 18(2), 321–345.
- Silva CS, & Van Orden KA (2018). Suicide among Hispanics in the United States. Current Opinion in Psychology, 22, 44–49. [PubMed: 30122277]
- Van Orden KA, Cukrowicz KC, Witte TK, & Joiner TE Jr. (2012). Thwarted belongingness and perceived burdensomeness: Construct validity and psychometric properties of the interpersonal needs questionnaire. Psychological Assessment, 24(1), 197–215. [PubMed: 21928908]
- Venta A, Bailey C, Muñoz C, Godinez E, Colin Y, Arreola A, Abate A, Camins J, Rivas M, & Lawlace S (2019). Contribution of schools to mental health and resilience in recently immigrated youth. School Psychology, 34(2), 138. [PubMed: 30058826]
- Venta A, Long T, Bailey C, Galicia B, Abate A, Walker J, & Salinas K (2021). Measurement invariance of the inventory of peer and parent attachment among Latinx and non-Latinx college students. Journal of Latinx Psychology, 9, 179–188.
- Winer ES, Drapeau CW, Veilleux JC, & Nadorff MR (2016). The association between anhedonia, suicidal ideation, and suicide attempts in a large student sample. Archives of Suicide Research, 20, 265–272. [PubMed: 26214573]

TABLE 1

Author Manuscript

Author Manuscript

Percent endorsement of key study variables in relation to immigration legal status

SBQ-R variable		DACA or undocumented	Permanent	Citizen	Total
Have you ever thought about or attempted to kill yourself?	Never	45.80%	43.70%	50.70%	45.90%
	It was just a brief passing thought	29.60%	32.50%	28.80%	30.60%
	I have had a plan at least once to kill myself but did not try to do it	13.40%	7.90%	8.20%	10.10%
	I have had a plan at least once to kill myself and really wanted to die	6.30%	7.90%	%08.9	7.10%
	I have attempted to kill myself, but did not want to die	2.10%	2.00%	ı	1.60%
	I have attempted to kill myself, and really hoped to die	2.80%	%00.9	5.50%	4.60%
	Mean (SD)	1.98 (1.22)	2.08 (1.40)	1.93(1.33)	2.01 (1.32)
How often have you thought about killing yourself in the past year?	Never	66.20%	60.30%	67.10%	63.90%
	Rarely (1 time)	15.50%	20.50%	12.30%	16.90%
	Sometimes (2 times)	10.60%	7.30%	12.30%	%09.6
	Often (3–4 times)	5.60%	%00.9	8.20%	6.30%
	Very Often (5 or more)	2.1%	%00.9	ı	3.30%
	Mean (SD)	1.62 (1.02)	1.76 (1.18)	1.62 (1.00)	1.68 (1.09)
Have you ever told someone that you were going to commit suicide or that you might	No	74.60%	74.20%	72.60%	74.00%
do 1f?	Yes, at one time, but did not really want to die	12.00%	13.20%	%09.6	12.00%
	Yes, at one time, and really wanted to die	8.50%	8.60%	5.50%	7.90%
	Yes, more than once, but did not want to do it	2.10%	1.30%	5.50%	2.50%
	Yes, more than once, and really wanted to do it	2.80%	2.60%	%08.9	3.60%
	Mean (SD)	1.46 (0.94)	1.44 (0.90)	1.64(1.23)	1.49 (0.99)
How likely is it that you will attempt suicide someday?	Never	%00.69	66.20%	%06.69	%00.89
	No chance at all	11.30%	11.90%	8.20%	10.90%
	Rather unlikely	13.40%	11.90%	12.30%	12.60%
	Unlikely	4.20%	%09.9	%08.9	5.70%
	Likely	2.10%	2.60%	I	1.90%

SBQ-R variable		DACA or undocumented	Permanent	Citizen	Total
	Rather likely	I	I	2.70%	0.50%
	Very likely	I	0.70%	ı	0.30%
	Mean (SD)	1.59 (1.01)	1.70 (1.17)	1.67 (1.20)	1.65 (1.12)
SBQ-R total score: Mean (SD)		6.65 (3.44)	7.02 (4.07)	6.86 (4.01)	6.85 (3.82)
Belongingness variables					
How welcome/accepted do you feel in the United States?	1—Not Accepted	6.30%	3.40%	8.40%	5.40%
	2	25.00%,	%00.6	1.20%	13.10%
	3	42.40%	33.90%	20.50%	34.20%
	4	18.80%	35.60%	21.70%	26.70%
	5—Very Accepted	7.60%	18.10%	48.20%	20.50%
Please rate how much you fear being deported	1—Not at all	4.90%	39.00%	63.60%	29.60%
	2	10.50%	20.30%	9.10%	14.90%
	33	16.10%	19.80%	14.50%	17.60%
	4	18.90%	10.20%	9.10%	13.30%
	5—A lot	49.70%	10.70%	3.60%	24.50%
Please rate how much you fear being harassed or hurt because of your legal status	1—Not at all	11.10%	32.80%	64.00%	28.60%
	2	11.10%	21.50%	8.00%	15.60%
	3	23.60%	25.40%	16.00%	23.50%
	4	21.50%	12.40%	12.00%	15.90%
	5—A lot	32.60%	7.90%	1	16.40%

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Venta et al. Page 15

TABLE 2

Mediational role of subjective belonging in the relation to immigration legal status and SRTBs

Main effects, outcome: SRTBs

Predictor	Coefficient	SE	t	d
DACA/undocumented vs. permanent and citizen	1.32	0.50	2.62	0.009
DACA/undocumented and permanent vs. citizen	69.0	0.64	1.09	0.28
Covariate: Age	-0.44	0.10	-4.36	<0.001
Covariate: Sex	0.88	0.53	1.68	0.095
Covariate: Race	0.43	0.14	3.06	0.002
Relative indirect effect of mediator: Feeling accented in the United States	epted in the U	nited State	×	

			12 % CI	
Mediator	Effect	SE	Lower limit Upper limit	Upper limit
DACA/undocumented vs. permanent and citizen	-0.35	0.14	99.0-	-0.11
DACA/undocumented and permanent vs. citizen	-0.40	0.21	-0.93	-0.09
Omnibus	-0.07	0.03	-0.17	-0.02
Relative indirect effect of mediator: Fear of deportation	rtation			

Mediator	Effect	SE	95% CI	
			Lower limit Upper limit	Upper limit
DACA/undocumented vs. permanent and citizen	0.02	0.29	-0.59	0.55
DACA/undocumented and permanent vs. citizen	0.007	0.10	-0.21	0.22
Omnibus	-0.004	90.0	-0.10	0.12
Relative indirect effect of mediator: Fear of harm/harassment	/harassmen	+		
Mediator	Effect	SE	12 %56	

Mediator	Effect	SE	95% CI	
			Lower limit	Upper limit
DACA/undocumented vs. permanent and citizen	-0.27	0.21	89.0-	0.13
DACA/undocumented and permanent vs. citizen	-0.18	0.14	-0.53	90.0
Omnibus	0.05	0.04	0.04 -0.02	0.13