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## CHALLENGES AMONG DACA RECIPIENTS AND ANXIETY: A SYSTEMATIC META-ANALYTIC REVIEW

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science at Virginia Commonwealth University.

by

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Suffolk University, May 2019

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## **Dedication**

For my angel baby and rainbow baby. For all the things you have taught me and continue to teach me. I am thankful that you have shown me my humanity *y por enseñarme que es amar*.

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I remain eternally grateful for all those who have had an impact on my graduate trajectory thus far. In one way or another, you all have guided me to the place I am now.

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Finally, I am grateful for my community, ancestors, and future generations. I have been lifted up by my ancestors' spirits, and I aim to walk in those same footsteps to be there for those after me.

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#### **Abstract**

Immigrant-origin Latine young adults (ILYAs) face a challenge that is specific to their developmental period. As ILYAs transition from high school to beyond (e.g., workforce, college, etc.), they begin to grapple with participating in normative experiences for all young adults in the U.S. (e.g., obtaining a driver's license, getting their first job at 16). The lives of ILYA, particularly those who are DACAmented or DACA eligible, are characterized by the legal and social contradiction that arises from growing up in the U.S. yet facing barriers to full participation in U.S. society. The nonexistent synthesis of the exponentially growing literature in this area, therefore, leads to an inaccurate depiction of the anxiety-based outcomes in ILYAs residing in the U.S. The goal of the present study is to summarize, by means of meta-analysis, previous research on anxiety in immigrant-origin Latine young adults within the context of challenges surrounding DACA in order to understand the associations among these variables and sociodemographic moderators to identify the impact of this policy has on well-being. A final sample of six studies that contained a total participant sample of 2,583 (Mage = 22.8) was collected. All studies were published within the last three years and passed an assessment of bias and quality checklist. Findings indicated a small-sized effect of the anxiety-challenges relationship that was not significant. Moderator models were conducted for age, sex, and geographic location, in which geographic location was the only significant moderator for the observed correlation. Findings reinforce that DACAmented ILYAs are resilient in the face of an already precarious, uncertain position in society. Finally, clinical, research, and policy implications are discussed.

# Challenges among Latine DACA Recipients and Anxiety: A Systematic Meta-Analytic Review

The overall anti-immigrant climate in the United States (U.S.). and the threat of immigration enforcement activities in everyday spaces are increasingly evident (Barajas-Gonzalez et al., 2018). Countries across the world view the U.S. as increasing its anti-immigrant climate and policies surrounding asylum, deportation, and citizenship (Gonzalez-Barrera & Connor, 2019; Mayda et al., 2018). Additionally, the national immigration climate is characterized by dehumanization (Hoops & Braitman, 2019; Kteily & Bruneau, 2017; Marks et al., 2018) and criminalization (Menjivar & Abrego, 2012). Whilst many other immigrant groups continue to grow, Latine communities, in particular, are specifically affected by dehumanization and criminalization with more than 90% of individuals forcibly removed from the U.S. being from Mexico, Central America, and the Caribbean (U.S. Immigration and Customs Enforcement [ICE], 2016). Therefore, Latine communities across the country are battling with the threat of continuously changing policies surrounding immigration. Of import, immigrant-origin Latine young adults (ILYAs) face a challenge that is specific to their developmental period. As ILYAs transition from high school to beyond (e.g., workforce, college, etc.), they must begin to grapple with participating in normative experiences for all young adults in the U.S. (e.g., obtaining a driver's license, getting their first job at 16). The lives of ILYA, particularly those who are DACAmented or DACA eligible, are characterized by the legal and social contradiction that arises from growing up in the U.S. yet facing barriers to full participation in U.S. society (Abrego, 2006; Moreno et al., 2021; Négron-Gonzales, 2014).

According to recent estimates, there are more than 2.1 million undocumented young people in the United States who have been here since childhood. Of these, more than a million

are now adults (Batalova & McHugh, 2010; Gonzales et al., 2018). Relatively little is known about this vulnerable population of young people, and their unique circumstances challenge assumptions about the incorporation patterns of the children of immigrants, immigrant-origin Latine young adults (ILYAs) themselves, and their transitions to adolescence and adulthood. The multiple transformations that ILYAs experience have important implications for their identity formation, friendship patterns, aspirations and expectations, and social and economic mobility (Gonzales, 2015).

Many Latine families are in more socially vulnerable positions as a result of antiimmigrant rhetoric and policies. Structural factors have harmful effects on Latine's mental health and wellbeing. Anti-immigrant policies, poverty, discriminatory practices, and inequities relating to healthcare access have been named as only a few of the contexts Latines face in the U.S. that influence experiences of depression, trauma, anxiety, and substance use (Araújo & Borrell, 2006; Magaña & Hovey, 2003; Ramos et al., 2003). Additionally, the immigration climate strains youth and young adults' physical and mental health (Dawson-Hahn & Cházaro, 2019; Eskenazi et al., 2019). Research has suggested that U.S.-born Latine young adults face similar stressors to ILYAs related to the influence of immigration policy on depression, anxiety, and somatization of mental health outcomes (Cardoso et al., 2020; Eskenazi et al., 2019; Moreno et al., 2021). While there are multiple types of immigration policies related to immigration status (e.g., see National Academies of Sciences, Engineering, and Medicine et al., 2016), youth and young adults have fewer options due to what applies to them by age and experience. These limited options for paths to residing legally in the U.S. further impact ILYAs well-being in the U.S. (Ko & Perreira, 2010; Perreira & Smith, 2007; Torres et al., 2018).

Research on mixed-status families indicates that, for some youth and young adults, the stigma associated with being from an immigrant family is marked by fear, hyperawareness, and hypervigilance (Satinsky et al., 2013). Experiences with discrimination and increased consciousness of legal status have been found to further exacerbate the stigma experienced by emerging adults (Satinsky et al., 2013). As youth transition into young adulthood, ILYAs are faced with the limit their status may provide them. Emerging evidence documents how these threats to well-being and chronic uncertainty shapes the daily activities and routines of youth and young adults in Latine immigrant families, (Cardoso et al., 2018; Salas et al., 2013) and even more so in ILYAs (Mendoza et al., 2017; Wray-Lake et al., 2018). The 2016 presidential election, as well as rapid and far-reaching transformations in immigration policy in the U.S., are fueling a sense of fear and uncertainty in many households across the nation (Roche et al., 2018; Wray-Lake et al., 2018). It is therefore important to examine immigration policies at multiple levels, though, for the purposes of this study, Deferred Action for Childhood Arrivals (DACA) will be the policy examined. DACA has continuously been in question over the last nine years since its inception in 2012 under the Obama Administration and the chronic uncertainty and anxiety for ILYAs must be explored.

#### **U.S. Immigration Policies**

Immigration to the U.S. has changed significantly since it was first documented, starting with inspiring stories of Ellis Island in the 1900s to the scrutiny of the inception of migrant caravans in 2017. Immigration has never been consistent in the U.S and the system faces significant changes every year (Jawetz, 2019). The rhetoric that immigrants must "get in line" is not reflective of the actual processes of the Department of Homeland Security (DHS) - there is not one line to get into (Reason Foundation, 2008). Rather, immigrants have separate lines based

on the type of sponsorship available to them, which all move at different speeds. It is therefore important to understand the DACA policy due to its overrepresentation as a documentation status for ILYAs residing in the U.S.

Although DACA has aided many communities, it has had a profound effect on the large group of undocumented Latine immigrants in the U.S., estimated by Pew Research Center to be 19 million or 44% of the immigrant population in the U.S. in 2018 (Budiman, Tamir, Mora, & Noe-Bustamante, 2020). According to the U.S. Census Bureau, as of July 2015, Latine individuals were the largest ethnic or racial minority group in the United States, constituting 17.6% of the U.S.'s total population (Bureau, 2015). In addition, the projected Latine population in the U.S. in 2060 is 119 million (as compared to the current 56.6 million).

Prior to 2012, ILYAs had few options to alter their documentation status from undocumented (i.e., residing in any given country with no legal documentation; Portes, 1978) to documented (e.g., green card, visa, naturalization). Specific policies have been aimed toward undocumented immigrants that came to the U.S. as infants or young children, and therefore consider the U.S. their home. Undocumented youth and young adults, often referred to as "DACAmented" individuals, are a group of immigrants that have a very particular situation: They go through most of their entire lives, from childhood to their adult years, in a country they legally do not belong in. While movements such as the DREAM (Development, Relief, and Education for Alien Minors) Act and DACA (Deferred Action for Childhood Arrivals) have attempted to provide a pathway for childhood immigrants to citizenship, these efforts have failed multiple times and there continues to be explicit and aggressive pushback.

**DACA.** The DREAM Act was a bill in Congress that would have granted legal status to certain undocumented immigrants who were brought to the U.S. as children and went to school

here. The DREAM Act and several versions of it have been introduced in Congress since 2001, but never passed. The term "dreamer" has been used in the last decade to describe young undocumented immigrants who would have been covered by the DREAM Act. However, the DREAM Act has never been successful. Instead, in an effort to move the needle on immigration policy, the Deferred Action for Childhood Arrivals (DACA) program was established through Executive Order following bipartisan requests from Congress in 2012 under the Obama administration (Capps et al., 2017). DACA provides temporary protection from deportation and employment authorization on an individualized basis to immigrants who arrived in the U.S. before their sixteenth (16) birthday, lived in the U.S. continuously, and are registered with the government, once they have passed criminal, academic, and national security background checks. Individuals who demonstrate they meet the guidelines may request consideration for DACA for two years, which is then subject to renewal (USCIS, 2021a). There are currently more than 600,00 Dreamers residing in the U.S. (Krogstad & Gonzalez-Barrera, 2018; Migration Policy Institute, 2021).

In September 2017, under the Trump administration, the Department of Homeland Security attempted to rescind the DACA program, ending the potential for renewals, new applications, and protection from deportation (DHS, 2017). However, on June 18, 2020, the U.S. Supreme Court blocked the Trump administration's plan to dismantle the Obama-era program, 5-4 (Barnes, 2020). While this was a landmark decision by the Supreme Court, there has been no extension of the DACA program, including no path to citizenship for Dreamers. Although there has been advocacy for the undocumented population at the state level, the federal government has not done much to protect and support the undocumented community. The DACA policy-protected DREAMers from deportation; however, President Trump terminating DACA is further

evidence that the federal government has provided limited protection for undocumented individuals.

The DACA policy brought a sense of hope to DREAMERs. However, it is not a permanent solution to the issue as it did not grant a pathway to citizenship (Ellis et al., 2019). The National UnDACAmented Research Project (NURP; Gonzales et al., 2019) is a study that interviewed 408 DACA recipients, ages 18-34 to gather information on how DACA impacted DREAMers and how they perceived it impacted their lives. The study explained how DACA recipients are still considered undocumented regardless of this policy. The study reported that DACA was a beneficial first step to resolving the injustice and negative experiences that DACA recipients and undocumented individuals face (Ellis et al., 2019; Gonzales et al., 2019). Deferred Action for Childhood Arrivals provided some privileges, but due to the DACA recipients' continuous unlawful status in the U.S., they do not receive full inclusion into U.S. society (Ellis et al., 2019).

The DACA policy has provided many opportunities for DREAMers: buying homes, attending college, post-graduate education, and obtaining access to higher-paying jobs (Ellis et al., 2019). DREAMers were presented with higher optimism and increased connections to peers. Removing DACA would eliminate the privileges that the policy provided, such as employment authorization, access to mortgage finance, obtaining a driver's license, and the confidence to pursue higher education. Removing DACA would decrease DREAMers' independence, reduce their optimism, lessen friendships, and have a negative impact on ILYA's well-being (Ellis et al., 2019).

Studies show that DACA improved the overall well-being of DACA recipients during the first three years right after its introduction (Hainmueller et al., 2017; Patler et al., 2019). The

policy also improved the overall health of the children of DACA recipients (Patler et al., 2019), which is a lesser understood group as the recipients of the policy are growing older. Therefore, threats to terminate or upend DACA have negatively impacted DACA recipients and their children's health (Patler et al., 2019). Hence, undocumented immigrants and their children have poorer health than their documented immigrant and U.S.-born counterparts. DREAMers' poorer health is associated with their constant state of worry and anxiety regarding deportation (Patler et al., 2019). Whilst DACA provides protection from deportation, this protection is only granted on a two-year basis, with no promise of renewal. Research has also indicated that the mental health of undocumented individuals is worse in communities with an anti-immigration environment (Patler et al., 2019).

The immigration system in the U.S. is consistently said to be broken. There is no clear-cut path for any one type of individual, and changes occur so frequently that it is difficult to keep up. Having limited options for paths to residing legally in the U.S. further impact ILYA's well-being in the U.S. (Ko & Perreira, 2010; Perreira & Smith, 2007; Torres et al., 2018). Navigating said system is marked by fear and confusion for many ILYAs, which is exacerbated by many risk factors.

#### **Risk Factors**

Despite this positive move forward as a country for undocumented individuals, many states took action against the policy and placed restrictions on the benefits of DACA. For example, in Arizona, the first state to oppose DACA, Governor Jan Brewer issued an order that restricted DACAmented individuals from receiving any state benefits promised through DACA. Although the 2014 court case held that this action was unconstitutional, the original actions by Governor Brewer clearly depicted the state's sentiments towards this population (Kurtz, 2012).

In a slightly different approach to opposing DACA, Texas Governor Rick Perry distributed a letter to all state agencies to notify them that DACA did not change their state policies in regards to "alien" legal status (Aguilar, 2012). It is obvious that the success of DACA and other legislation that supports undocumented youth depends enormously on legislators and policymakers. Despite the fact that proponents of DACA created this policy in order to aid undocumented youth, there are many potential costs, including psychological and emotional impacts, of being DACAmented.

Undocumented Status. The focus of undocumented status has largely been on adults with little emphasis on youth and young adults (Suárez-Orozco & Yoshikawa, 2013). As of 2019, individuals aged 16-35 make up approximately 41% of all undocumented individuals residing in the U.S. (Migration Policy Institute, 2019). Additionally, the Migration Policy Institute (MPI) estimated in 2021 that there are approximately 1,159,000 youth and young adults who could have become eligible for DACA under the policy's original rules from 2012 (Migration Policy Institute, 2021).

Social forces contribute to families experiencing pressure to move to countries with better opportunities than their origin country. In the literature, these social forces are considered "push factors" (Lee, 1996; Marks et al., 2020). These factors include experiences like economic hardship, unsafe living situations or environments, environmental disasters, and lack of job opportunities. Many immigrant families face additional push factors that may include war, persecution, or forced migration (Marks et al., 2020). "Pull factors," are items that draw others in and encourage families to migrate (Castles & Miller, 2009; Lee, 1996), such as job availability, wealth, and opportunity for educational advancement. Research suggests that both push and pull factors provide contexts for stress (Virupaksha et al., 2014). While families migrate, ultimately,

for safety and future orientation, they are still faced with difficulties in adjusting to new environments, complex local systems, language difficulties, and cultural disparities (Virupaksha et al., 2014). Beyond the stressful experiences migration processes and transitions have on families, Latine youth, in particular, must face fears related to their precarious position in the U.S. as immigrants or children of immigrants.

While DACAmented individuals are considered documented, it is vital to recognize the transitional nature of the DACA policy. As the policy is based on a two-year renewal period, DACA-eligible individuals who cannot afford the application fees biennially, miss a deadline for submission, or get their application denied must navigate through the difficult transition of suddenly becoming undocumented after being documented for a period of time. For ILYAs, a sudden switch to becoming undocumented after years of holding the same status can not only be stress-inducing but lead to multiple logistical challenges. As the population of DACA-eligible individuals grows older, such challenges may include things such as an inability to pay for family responsibilities and facing the reality of becoming deportable. As all DACA applications must go through the U.S. Citizenship and Immigration Services (USCIS) federal offices, all applicant information is readily available to government agencies, including the U.S. Immigration and Customs Enforcement, the Department of Homeland Security, and Customs and Border Protection.

**Mixed-status Families and Liminal Legality.** Among mixed-status families, in which at least one family member is not a U.S. citizen (Fix et al., 2001), the stigma, experiences with discrimination, and increased consciousness of legal status are marked by fear, hyperawareness, and hypervigilance (Satinsky et al., 2013). These risks and chronic uncertainties shape the daily activities and routines of Latine immigrant families (Cardoso et al., 2018; Salas et al., 2013). The

rapid and far-reaching changes in U.S. immigration policies have been fueling a sense of fear and uncertainties across the nation, particularly in the face of deportation (Roche et al., 2018; Wray-Lake et al., 2018). Between 2010 and 2013, an estimated 300,000 parents of U.S. citizen children were deported (Cardoso et al., 2018).

Belonging to a mixed-status family is associated with risks to psychological health, like depression or anxiety, particularly among youth and emerging adults (Marks et al., 2020; Yoshikawa, 2011). These psychological outcomes result from lack of access to public assistance, changing public policy related to legal status, parental deportation, and chronic stress and fear associated with a family's legal status (Slopen et al., 2016; H. Yoshikawa et al., 2019) Parents' undocumented legal status is a substantial barrier to normative developmental outcomes and perpetuates health inequalities across generations (Hainmueller et al., 2017; Perreira & Ornelas, 2011). Children of immigrants have been found to be at increased risk for developmental delay, housing instability, and limited access to social and health services as compared to children (Dawson-Hahn & Cházaro, 2019; Toomey et al., 2014; Yoshikawa & Kalil, 2011). Furthermore, in a study conducted by Smokowski and Bacallao (Smokowski & Bacallao, 2006) with Mexicanorigin immigrants, the researchers found decreased time as a family post-migration was associated with adolescents' loneliness, isolation, and risk-taking behavior. Parents in the study also became more authoritarian which precipitated parent-child conflict (Smokowski & Bacallao, 2006). Other research has shown that children with foreign-born parents tend to have high levels of internalizing and externalizing behaviors (Gonzales et al., 2002; Landale et al., 2015), which also increases parent-child conflict.

As DACA-eligible individuals must have arrived in the U.S. prior to their sixteenth birthday, it is imperative to understand the ways in which growing up undocumented with

undocumented parents impacts development. Additionally, DACA eligible individuals may become documented prior to others in their family, often leading to feelings of isolation and guilt (Abrego, 2019), as well as increased familial pressure to utilize the new benefits of being DACAmented (Abrego, 2019; Aranda, Vaquera, & Castañeda, 2021).

It has become clear within the last 25 years that familial trauma and historical oppression have inter-generational negative effects on families (Prager, 2003; Shabad, 1993). These factors have been shown to increase anxiety and related disorders within families who have had negative experiences pre-, during-, and post-migration (Paat & Green, 2017). Fear founded on legal vulnerability comes, mainly, from distress and anxiety surrounding deportation, separation, and detention (Yoshikawa & Kalil, 2011). Detention, separation, and deportation can have immediate, short-term, and/or immediate, long-term effects on families. These effects include loss of childcare, dramatic loss of income, reluctance to seek assistance from agencies, social isolation, depressive symptoms, anxiety, depression, and post-traumatic stress disorder (PTSD) in children and caregivers (Hirokazu Yoshikawa & Kalil, 2011). Whether children arrive with, before, or after their parents or caregivers, family separations, and reunions, are common during migration (Dreby, 2010). These separations and reunions, however, can be extremely stressful for caregivers and children, especially when long periods have gone by with no interaction between the dyads (Bouza et al., 2018).

Additionally, liminal legality must be understood to understand the magnitude of uncertainty a status such as DACA may hold. Liminal legality describes an uncertain status in which an individual is not fully documented or undocumented, but often straddling both (Menjívar, 2006). Another term to describe this experience is "legal limbo." Immigration policy determines who stands inside, outside, or in between the law and whether immigrants qualify as

full participants in society, as it dictates whether they will have access to resources and, if they do, to what kind (Menjívar, 2000; 2006) and for how long. Policies that reinforce liminal status include ones such as DACA and Temporary Protected Status (TPS) in which the program holder receives certain rights under the policy (e.g., a social security number), without full access to participate in society as a documented citizen (e.g., receive social security benefits). Research has found that individuals holding liminal status often put their lives on pause, waiting longer to have children, buy homes, and start careers due to the concern that at any moment these experiences can be taken away (Gonzales, 2015; Hamilton, Patler, & Savinar, 2021). Liminal legality itself is defined by uncertainty, thereby directly influencing rates of anxiety, depression, and other negative psychological outcomes in ILYAs (Flores Morales & Garcia, 2021; Siemons et al., 2017; Suarez-Orozco et al., 2015).

Anti-immigrant Sentiment. Media outlets have perpetuated the narrative of immigrants as the cause of terrorism, crime, unemployment, and cultural erosion for more than a decade (Ibrahim, 2011; Szkupinski Quiroga et al., 2014). Policies implemented by the Department of Homeland Security have focused on undocumented immigrants and immigrant detention, reinforcing the criminalization of immigrants in the U.S. (Szkupinski Quiroga et al., 2014). Many state and local policies are designed to make life more difficult for immigrants, particularly those who are undocumented, by blocking access to various forms of public space, services, and benefits (Szkupinski Quiroga et al., 2014). Research has shown this explicit attempt to control immigrants' activities has negative impacts on family well-being (Ayón & Becerra, 2013; Brabeck & Xu, 2010), such as higher levels of stress (Arbona et al., 2010; Cavazos-Rehg et al., 2007), and family disintegration (Ayón & Becerra, 2013; Chaudry & Fortuny, 2010). Immigrant families, therefore, face a myriad of unique stressors when legislative control is

combined with challenges around economic insecurity, barriers to education, poor health outcomes, and discrimination (Androff et al., 2011; Rubio-Hernandez & Ayón, 2016).

Anti-immigrant sentiment and policies such as family separation and travel ban further reinforce prejudice and increase ethnic discrimination and racial profiling (Casas & Cabrera, 2011; Rubio-Hernandez & Ayón, 2016). Immigrant families experience discrimination through assumptions made about their documentation status. This is based on the color of their skin and English proficiency (Ayón & Becerra, 2013; Córdova & Cervantes, 2010). Researchers have also described a well-established relationship between discrimination and poor physical and mental health outcomes that only serves to further oppress Latine immigrant youth and families (Rubio-Hernandez & Ayón, 2016; Umaña-Taylor & Updegraff, 2007; Williams et al., 2008).

Those who hold DACA status navigate anti-immigrant sentiment regarding their liminal status, along with the consistent denial and complaints surrounding the benefits of the program from policy makers and community members. Individuals opposed to the policy engage in anti-immigrant rhetoric to strengthen their arguments. Comments about immigrants being criminals and rapists, as well as nations that are predominantly made up by Black and Brown individuals being "shit-hole countries" have made their way through mass media as of recently, however these opinions have existed since immigration policies have been in place. Many DACA holders have been required to navigate the anti-immigrant sentiments as young, undocumented children and continuously throughout their development.

**Fear of Deportation.** Living with the threat of arrests and deportations is an additive stressor of being undocumented or living in a mixed-status family. Research suggests that immigration enforcement strategies, such as immigration raids, lead to family separation and ultimately negatively affect Latine child development, health, and security (Capps et al., 2007;

Rubio-Hernandez & Ayón, 2016). Due to the large number of mixed-status families currently residing in the U.S., the majority of children who are separated from their parents are U.S. citizens (Capps et al., 2007; Rubio-Hernandez & Ayón, 2016). Further studies have found that children separated from their parents showed symptoms of abandonment, trauma, isolation, depression, and exhibited behaviors of anxiety, such as frequent crying, changes in sleeping and eating behavior, and clinginess following family separation (Capps et al., 2007; Chaudry & Fortuny, 2010). Brabeck and Xu (2010) found that parents with higher levels of the legal vulnerability reported a greater impact of detention/deportation on the family environment and children's well-being, including emotional well-being and academic performance.

The 2016 presidential election has enforced stricter immigration laws that would increase arrests and deportation of undocumented immigrants (Vesely et al., 2019). While deportation, family separation, and enforcement policies were not new to the Trump administration, they have increased fear through inflamed rhetoric of escalations in deportations (Vonderlack-Navarro, Marco-Paredes, Mendez, & Velazquez-Kato, 2018). Under recent federal administrations, the U.S. has seen record-breaking numbers of immigration raids, as well as the largest raid in the nation's history where Immigration and Customs Enforcement (ICE) agents detained upwards of 680 immigrants at one time in Mississippi in 2019 (Solis & Amy, 2019). Current policies and rhetoric have increased fear for Latine families, leading to decreases in health care and social service utilization (Hacker et al., 2011, 2012; Lopez et al., 2017) and long-term negative impacts on psychological, emotional, and physical health (Cavazos-Rehg et al., 2007; Hacker et al., 2011, 2012; Lopez et al., 2017; Sullivan & Rehm, 2005).

The Trump Administration contributed to a climate of heightened fear through a combination of increased enforcement, attempts to scale back temporary protections for

noncitizens, and barriers to legal migration (Dawson-Hahn & Cházaro, 2019; Vesely et al., 2019). As the U.S. moves into another presidential administration, the consistent back and forth, court proceedings, Supreme Court rulings, and bipartisan-versus-not debates that are ongoing will continue to make navigating the U.S. immigration climate confusing. The community of ILYAs in the U.S. exists in a precarious position and the consistent changes only make for an even more insecure, unstable status. The insecurity we are asking emerging and young adults to endure leads to documented and undocumented experiences of negative mental health outcomes that must continue to be explored.

#### **Mental Health Outcomes**

The mental health of immigrants has most often been framed in terms of the immigrant paradox, in which immigrants experience better mental health than their native-born counterparts despite their lower socioeconomic status of immigrants (Marks et al., 2014). Research has suggested that the impact of the immigrant paradox on children and youth is mixed, with some studies showing the benefit dissipates over time (e.g., Breslau et al., 2007), or there is no consistent pattern in positive or negative outcomes (e.g., Alegría et al., 2007). It is therefore important to understand the predictors and processes through which stressors affect the mental health of immigrants.

Despite the large population of Latine immigrants in the U.S., there is a lack of research on the mental health and well-being of this population (Gonzales et al., 2013; Grant et al., 2004; Kamal & Killian, 2015; Martinez et al., 2014). Immigrants play a vital role in the values, economy, and diversity in this country, and becoming aware of their psychological needs is pivotal to the ongoing success of the U.S. The literature on mental health and well-being for undocumented Latine immigrants indicates that they often suffer from high rates of depressive

symptoms, anxiety, and PTSD (Gonzales et al., 2013; Grant et al., 2004; Kamal & Killian, 2015; Martinez et al., 2014). Research has demonstrated that the outcomes of these aforementioned symptoms are not positive, and affect everyday tasks such as maintaining a job and/or relationships. Unfortunately, immigrant populations, such as Latine immigrants, do not actively seek out mental health services and often underutilize the services they do find (Chavira et al., 2014). In addition, the lack of health care services for undocumented immigrants, and immigrants in general, only exacerbates these issues; not receiving treatment for either mental or physical illness eventually worsens symptoms and can even result in more symptoms (Gonzales, 2011; Gonzales & Chavez, 2012).

Anxiety. Risks to mental health and wellbeing are magnified for ILYAs who must navigate these challenges, while simultaneously moving through the critical developmental period between adolescence and adulthood, normally a time marked by the development of self-reliance and increased legal and social responsibilities (Abrego, 2006; Siemons et al., 2017). In contrast to their U.S. citizen and legal resident peers, ILYAs' "illegal" status restricts access to structures of opportunity, obstructs societal integration, limits social support, and challenges their self-identity (Abrego, 2011; Gonzales, Suárez-Orozco, & Dedios-Sanguineti, 2013).

Though there is limited national-level data about the anxiety levels of ILYAs and undocumented college students, previous studies in smaller regions find troubling results. Immigrant Latine youth in North Carolina are at higher risk of having anxiety (28%) compared with U.S.-born youth (13–20%; Potochnick & Perreira, 2010). A report from the UndocuScholars Project survey, an online survey of undocumented college students, found that about 29% of men and 37% of women in the Project survey reported anxiety levels above the clinical cutoff (Teranishi et al., 2015). Within undocumented individuals, DACA-eligible adults

tend to report lower levels of psychological distress compared to non-DACA-eligible immigrants (Venkataramani et al., 2017).

Although Latine students report anxiety, researchers have noted distinct differences in the expression of symptoms that may lead to an underestimation of students who may be experiencing difficulties with anxiety. For example, Latine youth report more "diminished pleasure, decreased energy, low self-esteem, and crying" as compared to their European American, African American, and Asian youth, and more difficulty in concentration when reporting symptoms of anxiety (Anderson & Mayes, 2010; Choi & Gi Park, 2006). In studies that have been done with Latines, high levels of stigma have been documented (Leal, 2005; Varela et al., 2009). This stigma might exist because mental illness is seen as a weakness in the individual's characteristics such as a lack of willpower, poor motivation, or being intentionally unreasonable (Varela et al., 2009).

Choi & Gi Park (2006) propose that it may be more culturally acceptable for Latines to express their experiences of anxiety and depression through somatic symptoms (e.g., headaches, racing heart) rather than emotional symptoms (e.g., dread, nervousness). Adherence to the cultural construct of *machismo*, for example, may make it socially unacceptable for young Latino men to express their anxiety as internalized emotional difficulties that may be seen as weakness whereas somatization is an acceptable form of difficulty. Moreover, Latina women tend to use the term "*nervios*" which means "nerves" to describe their children's anxiety and behavior problems (Varela et al., 2009). Using the "*nervios*" term may better represent a symptom that is "fixable" and not permanent.

**Trauma.** Whilst the mental health outcome of trauma will not be discussed throughout this study, it is vital to acknowledge its implications. DACA-eligible individuals arrived in the

U.S. at any point prior to their sixteenth birthday. For those individuals who migrated at a later age, experiences of trauma are commonly remembered and influence other outcomes such as anxiety and depression. Additionally, trauma-based disorders, such as PTSD, have been organized within the anxiety disorders in the most recent edition of the Diagnostic and Statistical Manual (DSM-V; American Psychiatric Association, 2013).

Exposure to violence and other stressful life experiences of immigrant Latine families likely differ from those experienced by US-born Latines. Complex trauma describes the exposure to multiple traumatic events and the wind-ranging, long-term effects of the exposure (Ford, 2018). The events are generally severe and pervasive, including experiences like abuse or extreme neglect. The effects of complex trauma are often cumulative (Cloitre et al., 2009), but they also usually occur early in life. That being said, complex trauma can disrupt a child's development, both physically and emotionally (Ford, 2018). Once a person has experienced either a traumatic event or multiple, repetitive traumatic events, they develop a high risk of presenting with posttraumatic stress disorder (PTSD; Yehuda et al., 2001). Therefore, phases of the migration process (i.e., pre-migration, during migration, and post-migration) have specific risks and exposures that may differentially impact youth mental health outcomes (Cleary et al., 2018; Porter & Haslam, 2005). Studies that have examined exposure to trauma during migration have found a direct relationship with a range of mental health outcomes (Ehntholt & Yule, 2006; Ellis et al., 2008; Lustig et al., 2004), such as PTSD, depression, conduct disorder, and substance use.

#### Rationale

There has been a recent increase in research, particularly within the context of the sociopolitical climate since the 2016 election and immigrant-origin Latine young adults (ILYAs).

However, the issues of immigration policy and anti-immigrant rhetoric have been around for decades, and research has shown that there is an impact on ILYA's well-being (Torres et al., 2018; Vargas & Ybarra, 2017). It should also be noted that due to the consistent changes in immigration policy, it is difficult to grasp the impact of these transitions on ILYAs, particularly for an immigration policy such as DACA that provides liminal status and no pathway to citizenship. It is important to understand the dimensions that shape the mental health of Latinx undocumented students for several reasons. 60% of the approximately 125,000 undocumented students who graduate high school every year are Latine (Zong & Batalova, 2019), and a substantial number of young Latine persons have ties to the undocumented community either through direct self, family, and/or community ties (Vargas et al., 2017). Regardless of documentation status, Latine identity is associated with stereotypes and tropes about the undocumented population. Because of this racialized illegality, membership in the Latine and undocumented populations become conflated in public discourse and by the media (Enriquez et al., 2019; Menjívar, 2021).

To the authors' knowledge, there is currently no systematic meta-analytic review that addresses the relationship between challenges surrounding DACA, which include experiences of fear, worry, uncertainty, and anxiety among DACA recipients. The nonexistent synthesis of the exponentially growing literature in this area, therefore, leads to an inaccurate depiction of the anxiety-based outcomes in ILYAs residing in the U.S. Moreover, we currently lack a thorough discussion of the ways in which individual characteristics and strengths serve as protective factors for ILYAs facing anxiety due to ever-changing immigration policy (Kim et al., 2018)

Despite the extraordinary amount of literature on Latine mental health outcomes in the U.S., few emphasize the role that immigration policy and anxiety has on those outcomes. The

goal of the present study is to summarize, by means of meta-analysis, previous research on anxiety in immigrant-origin Latine young adults within the context of challenges surrounding DACA in order to understand the associations among these variables and sociodemographic moderators to identify the impact of this policy has on well-being.

#### **Theoretical Orientation**

Immigration policies shape the daily lives of the 11 million undocumented immigrants residing in the U.S., as well as the millions of people in the country living in mixed-status families (Abrego & Lakhani, 2015). Access to health care, higher education, employment, and even police protection is determined by documentation status (Abrego & Lakhani, 2015; Gleeson, 2012). The legal violence framework (Menjívar & Abrego, 2012) offers an analytical lens through which to understand the experiences of immigrants in the U.S.

The lens first posits that immigration laws are not neutral, and instead, the laws serve as legitimizing sources to harm immigrant communities (Abrego & Lakhani, 2015). Legal violence points to the less visible but deeply damaging laws and policies that cause suffering (Menjívar & Abrego, 2012), along with the direct harm produced by physical and sexual violence that immigrants experience through enforcement measures (Ellmann, 2019). The current immigration policies make way for forms of structural and symbolic violence.

Structural violence refers to the concealed social structures that produce outcomes such as insecurity in wages and a chronic deficit in basic needs through exploitive and discriminatory labor markets or educational systems (Abrego & Lakhani, 2015; Menjívar & Abrego, 2012). Symbolic violence refers to the internalization of social inequalities that reinforce accepting responsibility for their position in the social hierarchy, rather than attempting to dismantle the social structures that harm them (Abrego & Lakhani, 2015; Menjívar & Abrego, 2012;

Weininger, 2002). Both structural and symbolic violence highlights the systemic inequalities and suffering rooted in structures and institutions (Galtung, 1969; Menjívar & Abrego, 2012).

Ultimately, immigration law is not neutral. Immigration laws and policies have created pathways to legitimize harm to immigrants and treat them poorly by allowing for the dehumanization and criminalization of immigrants residing in the U.S. The legal violence lens is useful in this analysis because it underscores the central role of law in making possible and providing legitimacy to structural and symbolic forms of violence against immigrants; laws and policies both generate violence and make it socially acceptable. Therefore, this study applies the legal violence framework to (a) call attention to the ways in which DACA plays a direct role in negative mental health outcomes in ILYAs and (b) reveal how the normalization of anti-immigrant rhetoric, via the sociopolitical climate, has influenced rates of negative mental health outcomes in ILYAs.

#### Methodology

Systematic review and meta-analysis are considered forms of evidence-based practice (Ganeshkumar & Gopalakrishnan, 2013; McNamara & Scales, 2011). Systematic reviews are used to answer any number of research questions, and subsequent meta-analyses can evaluate data disseminated in multiple quantitative research studies (Littell et al., 2008). A systematic review involves a specific sequence of seven steps. The steps are (1) define the research question; (2) determine the types of studies needed to answer research questions; (3) conduct a comprehensive search of the literature; (4) decide which research can be included or excluded based on inclusionary criteria; (5) critically appraise the included studies; (6) synthesize the studies and assess for homogeneity; and (7) disseminate the findings (Petticrew & Roberts,

2008). A systematic review and meta-analysis work in conjunction to first identify a body of research for synthesis via a reproducible, transparent process. Then, meta-analysis is the set of statistical techniques that allow for the quantitative synthesis of the studies identified by the systematic review process (Impellizzeri & Bizzini, 2012; McNamara & Scales, 2011).

Meta-analysis has gained respect across the social and medical sciences as a valid and rigorous methodology (Davis et al., 2014; Haidich, 2010). Meta-analysis involves the statistical pooling of similar quantitative studies including those found to have various degrees of significance (Higgins et al., 2020). A standard effect size is first calculated for each of the included studies followed by a calculation of a summary effect size generated by pooling effect sizes from each of the individual studies (Petticrew & Roberts, 2008). A key strength of meta-analysis is that it avoids biased interpretation as a function of individual study p-values and/or significance

Despite the growing body of literature available within the last decade (Abrego & Gonzales, 2010; Chavez et al., 2015; Torres et al., 2018), the impact of U.S. immigration policy on immigrant-origin Latine young adults (ILYAs) has yet to be systematically reviewed and meta-analyzed by researchers. Emerging and young adults enter a critical period of identity formation, friendship patterns, aspirations and expectations, and social and economic mobility (Gonzales, 2011). The transition to adulthood involves exiting the legally protected status of K to 12 students and entering into adult roles that require legal status as the basis for participation. Within the larger national context of coming of age, scholars have uncovered key differences in social class, country of origin, nativity, and immigrant generation (Gonzales, 2011; Rumbaut and Komaie 2010), therefore the implications of U.S. policy on ILYAs must be examined.

Systematically reviewing the Latine DACAmented young adult and immigration policy research available and meta-analyzing the results can guide practice and areas for future research. The current study aimed to: (1) describe the magnitude and direction of the correlation between anxiety and challenges surrounding DACA, and (2) attempt to identify, describe, and analyze the impact of demographic characteristics on the relationship. As such, the specific research questions in this study where:

- 1) What is the correlational magnitude of challenges surrounding DACA (i.e., fear, worry, uncertainty) on anxiety among DACA recipients?
- 2) Do the relationships between challenges surrounding DACA (i.e., fear, worry, uncertainty) and anxiety differ by participant characteristics (i.e., sex, age)

#### **Systematic Review of the Literature**

A systematic review of ILYAs and challenges surrounding U.S. immigration policy (i.e., DACA) was conducted as a means to thoroughly examine the research and literature from 2010 to 2020. According to Petticrew and Roberts (Petticrew & Roberts, 2008), a systematic review comprehensively identifies, appraises, and synthesizes all the relevant studies on a given topic. A systematic review is particularly pertinent to research in which there is uncertainty about the outcome of the prevalence of specific mental health outcomes. A systematic review was conducted to identify all potential eligible publications.

#### **Problem Formulation.**

The problem being investigated by this study is to determine the association of anxiety in Latinx young adults within the context of challenges surrounding DACA and sociodemographic moderators to identify the impact this policy has on well-being. Data generated from qualifying studies were analyzed using a meta-analysis and have been disseminated into a distinct

quantitative approximation (Cooper et al., 2009; Lipsey & Wilson, 2001; Petticrew & Roberts, 2008).

**Definition of Variables.** All variables were operationalized in the following definitions.

Deferred Action for Childhood Arrivals (DACA). An immigration policy that provides temporary protection to young people who were brought to the United States prior to the age of 16 and also allows them to apply for driver's licenses, work permits, and a social security number. DACA does not provide a pathway to citizenship. DACA-eligible individuals must fulfill the following criteria: (1) Entered the United States unlawfully prior to their 16th birthday; (2) Have lived continuously in the United States since June 15, 2007; (3) Were under age 31 on June 15, 2012 (born on June 16, 1981, or after); (4) Were physically present in the United States on June 15, 2012, and at the time of making their request for consideration of deferred action with U.S. Citizenship and Immigration Services (USCIS); (5) Had no lawful status on June 15, 2012; (6) Have completed high school or a GED, have been honorably discharged from the armed forces, or are enrolled in school; (7) Have not been convicted of a felony or a serious misdemeanor, or three or more other misdemeanors, and do not otherwise pose a threat to national security or public safety; (8) Immigrants up to the age of 31 can file for the protections and opportunities this program offers (USCIS, 2021).

Immigrant-origin Latine young adult (ILYA). ILYA's have been defined as an individual 18-35 years old who, at the time of the data collection, was enrolled in college-level courses. This age range aligns with Erikson's (1950; Douvan, 1997) life-course scholarship and ensures that non-traditional students (that would include DACAmented or undocumented) are accounted for.

Challenges surrounding DACA. Operationalized as fear, worry, and/or uncertainty experienced. These outcomes must be studied through quantitative measures of anxiety with questions specific to fear, worry, and/or uncertainty such as the GAD-7 (Spitzer et al., 2006), Beck Anxiety Inventory (Beck & Steer, 1997), and Intolerance of Uncertainty Scale (Buhr & Dugas, 2002). All scales must have been published and validated after to align with DSM-V definitions of anxious distress, as well as within the Latine young adult population.

#### Assessment of Study Quality.

The purpose of this appraisal is to assess the methodological quality of a study and to determine the extent to which a study has addressed the possibility of bias in its design, conduct, and analysis. In line with Cochrane (Higgins et al., 2022) and Joanna Briggs Institute (JBI; Aromataris & Munn, 2020) systematic review steps, two critical appraisers reviewed all articles selected for the study; the first appraiser was the author and the second was a recently graduated research assistant. The appraisal of study quality, risk of bias, and information needed for analysis were coded using the JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies (Moola et al., 2020). The tool does not have a grading system, rather the outcomes of the assessment are used to synthesize and interpret the results of the study. The checklist includes questions such as, "were the criteria for inclusion in the sample clearly defined?" and "were objective, standard criteria used for measurement of the condition?" The checklist provides transparency of research methods which permits an evaluation of the credibility and transferability of the results.

#### Criteria for Inclusion and Exclusion of Studies in the Review

The following criteria were used to determine whether a study should be included in the review for purposes of estimating the relationship between challenges surrounding DACA and anxiety amongst ILYAs with DACA..

- Peer-reviewed, academic articles were published between January 2010 and January 2020.
- 2. Dissertations or theses published on ProQuest between January 2010 and January 2020.
- 3. Participants are referred to as "young adults," "emerging adults," and "college students," and must be enrolled in undergraduate or graduate studies at the time of study participation. Participants must be aged 18-35 to be considered in the young adults' category.
- 4. Participant data was collected through self-report psychological and diagnostic measures that quantitatively assess any or all of the following: anxiety, fear, worry, stress, and/or uncertainty.
  - a. The study has to report means, standard deviations, results of statistical tests, *p*-values, etc. from which an effect size could be calculated.
- 5. Data must have been collected in the United States, and the language of publication may be either English or Spanish.

Due to the nature of the criteria listed above, qualitative studies were not included in the analysis. Although qualitative studies are valuable, they are difficult to code for quantitative purposes (Jeynes, 2017) and any attempt to do so could bias the results of the meta-analysis.

#### **Search Strategy for Identification of Relevant Studies**

**Literature search.** It is important in systematic reviews and meta-analyses that the literature search be approached systematically to exhaust both published and unpublished

research. Search terms are ideally identified with reference to the independent variable, dependent variable, and specification of the population of interest (Lipsey & Wilson, 2001). Search strings were selected in consultation with a librarian at Virginia Commonwealth University. The final search terms consisted of the following and were identical across search engines: (DACA OR "deferred action for childhood arrivals" OR "dream act") AND ("anxiety disorder\*" OR "anxiety" OR "generalized anxiety disorder\*" OR "gad") AND ("challenge\*" OR "fear" or "worry" OR "uncertainty"). Given the context of the start of the DACA policy, the publication year was restricted from 2011 through 2021.

Electronic databases. Studies were extracted from sixteen databases. These included:
PsycINFO, PubMed, Google Scholar, PsycArticles, ProQuest, All EBSCO, Web of Science,
Embase, Psychological and Behavioral Sciences Collection (PBSC), Public Administration
Abstracts, Political Science Complete, Academic Science Complete, Cinahl, Education Research
Complete, ERIC, and Social Work Abstracts.

**Reference lists.** Reference lists of studies found relevant for this review as well as related studies and meta-analyses were examined for sources of further relevant data.

#### **Conducting and Documenting the Search and Selection Process**

A detailed search account of data collection procedures and storage of records were maintained in Microsoft Excel (2018) to keep track of all searches including (1) periods searched; (2) databases utilized; (3) number of hits; (4) amount of time searching; and (5) search strings used. Studies were located primarily through the Virginia Commonwealth University library systems and were saved in an online citation manager: Zotero (2016). The selection procedure followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) model (Page et al., 2021). PRISMA is an evidence-based minimum set of items for

reporting systematic reviews and meta-analyses. In the first screening, duplicates were excluded. After duplicates were accounted for, the titles and abstracts obtained from the searches were examined before study selection in a preliminary screen and eliminated those that did not meet inclusion criteria. Full-text articles were then scrutinized on a secondary screen to determine the final sample. Inclusionary and exclusionary decisions made were documented throughout the reviewing and screening process.

**Details of study coding categories.** Coding took place for all studies meeting the inclusionary criteria. A detailed codebook was created by the author to include all moderator and descriptive variables, which can be found in *Appendix A*. The coding procedure also followed the PRISMA model and was completed by two independent coders, one of which was currently in the psychology undergraduate program and the other recently graduated from the same program at Virginia Commonwealth University. Coders were trained via video training videos and a standard operating procedure document made by the author, as well as live training over Zoom. Three total training sessions were completed in which; (1) the author screen the code book, an example manuscript, and the standard operating procedure to walk through the additional coders through the process; (2) the author sent a second example manuscript to the coders and requested they code it together during the training session, and any discrepancies between the author and the coders were discussed; (3) the author sent a third example manuscript to the coders and requested they code it separately prior to the training session, and all codes were discussed together to determine if any discrepancies were found. The author acted as a final reviewer of all codes and provided the coding scheme, and coding samples. Inter-coder agreement for all categories included in the coding sheet was 85%, and intercoder-reliability coefficients were

above .70 in all cases. Coding disagreements were resolved by discussion between the research team.

In addition to descriptive information (journal published, year published, etc.), articles were coded for sample characteristics including the number of documented and undocumented ILYAs participated, methodological factors used, and quantitative data reported, among several other variables.

## **Meta-Analysis Statistical Procedures and Conventions**

Effect size computation. Quantitative data extracted from included studies were transformed into Pearson's r effect sizes. The effect size was calculated for each study that did not already report it and included enough quantitative data for the calculation (e.g., Cohen's d, odds ratio; Borenstein et al., 2009). If authors reported the effect size, that would be extracted from the study. These data were readily available in the text or tables of all studies (n = 6). Mean, standard deviation and sample size were used to get a weighed effect size with an overall confidence interval of the summary estimate and a p-value for the overall estimate.

Using a random-effects model to take into account sampling variance and between-study variance (DerSimonian & Laird, 2015; R. DerSimonian & Laird, 1986), effect sizes were pooled and weighted. To examine effect size heterogeneity, a forest plot was created to visualize the variation among the effect sizes, and statistical assessments of potential bias were included (i.e., I-squared and Tau-squared). A chi-squared test will be run in conjunction with the forest plot analysis to assess whether observed differences in results are due to chance alone and the magnitude of the variance (the effect size of the effect size heterogeneity). To explain heterogeneity, a multiple meta-regression analysis was done to control for confounding variables and reduce Type I error. Moderator analyses were conducted to make comparisons between

different subsets of groups. For this particular study, participants were split into subsets of sex, age, and geographic location.

**Software.** The author used Microsoft Excel (2018) for coding and tracking studies alongside Zotero (2016) for citation management. For the meta-analytic approach, R Studio (Rstudio Team, 2020) software was used. R is an ideal software package to perform meta-analyses because it is freely available and the scripts used can be easily shared and reproduced (Quintana, 2015). The following packages were used: "*metafor*" (Viechtbauer, 2010) and "*robumeta*" (Fisher & Tipton, 2015).

### Results

### **Literature Search**

Summary of Records Obtained Through Search Procedures. The search of all fifteen online databases returned a total of 2,449 records for review. The only database that did not return any relevant abstracts was Social Work Abstracts. Sources from ProQuest that were pulled included dissertations, theses, conference proposals, government publications, reports, and scholarly journals which returned 2,277 relevant abstracts. Whilst Google Scholar returned the largest number of relevant abstracts (3,140), only the first 250 abstracts were collected for screening due to the use of this database as a secondary source of relevant data. Additionally, a hand-search through the final samples' reference lists returned no relevant abstracts.

Summary of Search and PRISMA Flowchart. In total, 2,699 studies were identified across all search procedures. After the removal of duplicate studies, a total of 2,567 articles remained and were screened for relevance through a title and abstract review, at which point 2,364 records were removed. A total of 203 records were assessed for eligibility through a full-

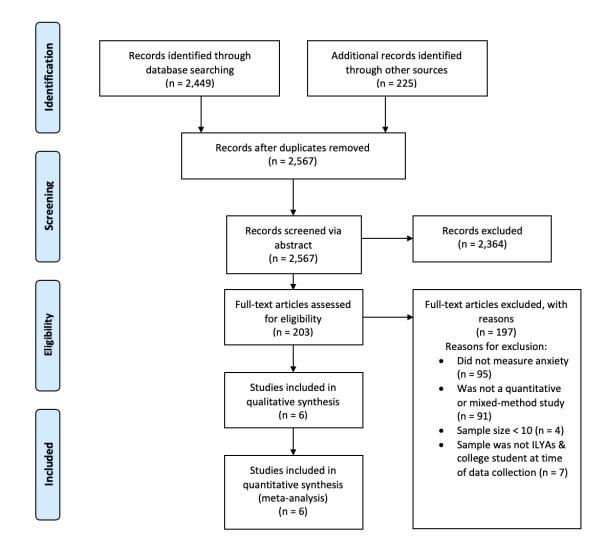
text review, and 197 of these were excluded for not meeting inclusion criteria. The primary reasons for exclusion included the study not measuring anxiety (95) and the methodology was solely qualitative (91). Thus, N = 6 studies were included in the descriptive analysis of studies. All final studies contained viable effect size data or provided data that contained interpretable or convertible effect size data. *Figure 1* includes the PRISMA flowchart detailing exclusion reasons through the search.

#### **Characteristics of Identified Studies**

Overview of Study Characteristics. The combined sample size of the six eligible studies was n = 2583 (Mage = 22.8). All studies were published since 2018, with five of the six being published within the last two years. Participants ranged in age between 18 and 30 years and were based across the U.S., with three of the six studies including multi-state locations. The number of sites in which studies collected data ranged from 3 to 34, and data was collected between 2015 and 2020. All studies collected data from the ILYAs via self-report, online measures. Two studies included mixed-methodologies in which online surveys were conducted along with semi-structured interviews. Studies examined different dimensions of challenges related to DACA, including anxiety, uncertainty, and stress. Whilst out of the scope of this study, the articles also assessed outcomes such as depression, self-esteem, and resilience. For further information on study details, see *Table 1*.

**Assessment of Study Quality.** The assessment of study quality using the JBI checklist indicated little variability in methodological robustness across the studies, and quality ratings (based on the number of "No's" given to each article) can be seen in *Table 2*. All of the studies clearly outlined inclusion criteria for the sample, provided a description of the sample, and described the setting in detail. Additionally, the exposure measured (for the purposes of this study, challenges

Figure 1. PRISMA flow diagram of the paper selection process



surrounding DACA),was assessed in valid and reliable ways and was objective across all studies. Outcomes were also measured in a valid and reliable way, and appropriate statistical analyses were chosen. Overall, the studies ranked high in study quality, though there were concerns regarding confounding factors. A majority of the studies did not identify any confounding factors but proceeded to control for them later on. Therefore, it appeared that the authors were aware that confounds existed and developed strategies for dealing with them, but did not clearly outline or define what those variables/factors were (JBI items 5-6). A copy of the JBI tool used to assess the study quality of the sample articles can be found in *Appendix B*.

*Table 1.* Description of included studies

Authors (year)	Sample size	Mean age (SD)	% Female	% Male	Geographic location	Construct measure	Study description
Alif et al. (2020) ^	150	23.75 (2.4)	51	49	New York	General Anxiety Disorder – 7	150 community college students were surveyed to examine whether fear of deportation, psychological distress, selfesteem, and academic performance varied across immigration statuses. DACA students experienced higher anxiety, isolation, and alienation than other temporary status students.
Calle (2021) *	10	25.8	80	20	Multi-state	Beck Anxiety Inventory	10 participants engaged in a mixed methodology study to understand the relationship between sense of belonging in the U.S., self-efficacy, outcome expectations, and mental health and well-being for Latinx DACA recipient college students.
Guadarrama (2021) *	50	21.38 (2.65)	34	66	Multi-state	Perceived Stress Scale	A study of 50 college students examined the risk (i.e., stress, rejection) and protective (i.e., resilience, persistence) factors, and their impact on academic outcomes of undocumented first generation Latinxs in public institutions in rural areas.
Flores Morales & Garcia (2021) ^	660	22.49 (3.76)	54	46	Multi-state	General Anxiety Disorder – 7	This study examined several factors (e.g., immigration, socioeconomic factors) associated with anxiety scores of undocumented Latinx college students who participated in the UndocuScholars Project national online survey in 2014. DACA

							recipients reported heightened levels of anxiety.
Long (2018) *	474	21.57 (4.46)	74	26	Texas	Depression Anxiety and Stress Scale	474 college students were surveyed to examine undocumented immigrant students' use of campus counseling services and the potential moderating effect of perceived discrimination. Findings suggest that higher rates of perceived discrimination is related to lower rates of counseling usage.
Velarde Pierce et al. (2021) ^	1,239	21.82 (3.4)	75	25	California	General Anxiety Disorder – 7	A survey of 1,277 undocumented college students in California aimed to determine the unique and combined effects of legal vulnerability and social support on anxiety and depression. Findings indicate that legal vulnerabilities, including discrimination, social exclusion, threat of deportation, and financial insecurity, and social support have direct effects on depression and anxiety symptomology.

*Note*: \* = dissertation; ^ = peer-reviewed study; *SD* = standard deviation

Table 2. JBI assessment of study quality

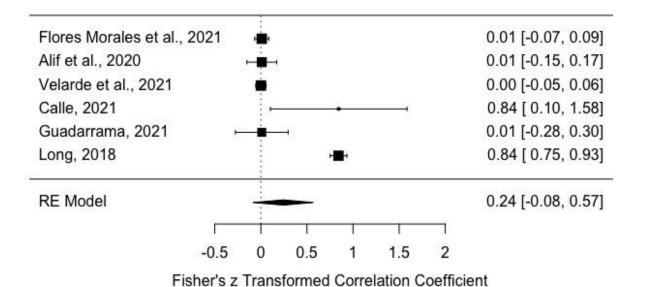
	Items responded	Items responded	Items responded	
Authors (year)	with "Yes"	with "No"	with "Unsure"	Details of "No/Unsure" items
Alif et al. (2020) ^	1, 2, 3, 4, 7, 8	5	6	-No confounds were identified (no)
				-Authors continued to control for
				variables in the analysis (unsure)
Calle (2021) *	1, 2, 3, 4, 7, 8	5, 6		-No confounds were identified and no
				description of controlling for any
				confounds appeared in the
				methodology or results sections (no)
Guadarrama (2021) *	1, 2, 3, 4, 6, 7, 8		5	-Confounds were identified but little
				detail was described as to how they
				were controlled for in the analysis
				(unsure)
Flores Morales &	1, 2, 3, 4	5	6	-No confounds were identified (no)
Garcia (2021) ^				-Authors continued to control for
				variables in the analysis (unsure)
Long (2018) *	1, 2, 3, 4, 7, 8	5, 6		No confounds were identified and no
				description of controlling for any
				confounds appeared in the
				methodology or results sections (no)
Velarde Pierce et al.	1, 2, 3, 4, 6, 7, 8	5		-Confounds were not explicitly
(2021) ^				described in the study

*Note*: \* = dissertation; ^ = peer-reviewed study

# **Effect Size Description**

The anchors for effect size interpretation are consistent with Cohen (1992), such that a "small" effect is r = .10 - .29, a "medium" effect is .30 - .49, and a "large" effect is .50 or greater. The random-effects model of correlation between anxiety and challenges surrounding DACA (where number of studies (k)=6 and number of participants (n)=2,583) showed a small-sized association, r = .24, 95% CI (-.08, .57). *Figure 2* shows a forest plot of the effect sizes included in this analysis.

Figure 2. Forest plot of study effect sizes



### Heterogeneity

There was evidence of significant heterogeneity in effect size across all estimates (Q(5) = 272.9, p < .0001). Additionally, there were large amounts of heterogeneity,  $i^2 = .9804$ , 95% CI (94.37, 99.73), suggesting that 98.04% of the variance in the data is estimated to be derived from effect

size differences. As the value of 0 was not seen,  $\tau^2 = .15$ , 95% CI (.05, 1.07), it can be confirmed that there is also between-study heterogeneity.

Tests of influence were conducted to better understand the influence each study held. It appeared that one study (Long, 2018) was influential to the heterogeneity of the current study. It should be noted that the Long (2018) study met all inclusion/exclusion criteria and therefore was left in for analysis. For more detailed information on the tests of influence, see Figure 3 which visualizes the printed dataset. Via visual inspection of the funnel plot (Figure 4), it appears that four of the six studies have small study bias and slight asymmetry. Due to the subjective nature of the visual inspection, an Egger's regression test was performed and was not statistically significant, (p = .38) therefore the objective measure indicates that there is no evidence for small study bias, and Kendall's  $\tau$  indicates that there is also no evidence for asymmetry (p = .14).

Figure 3. Tests of influence plots

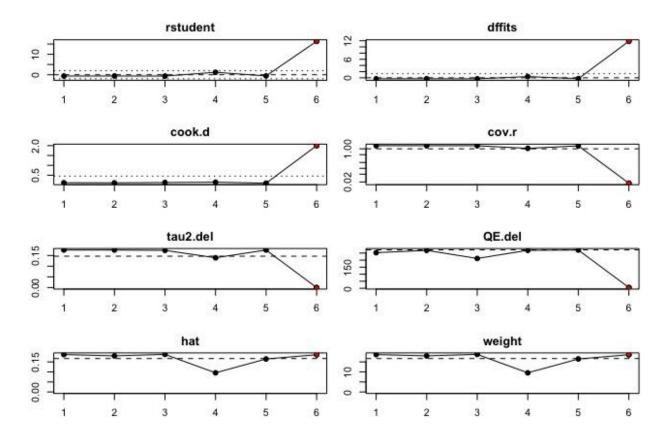
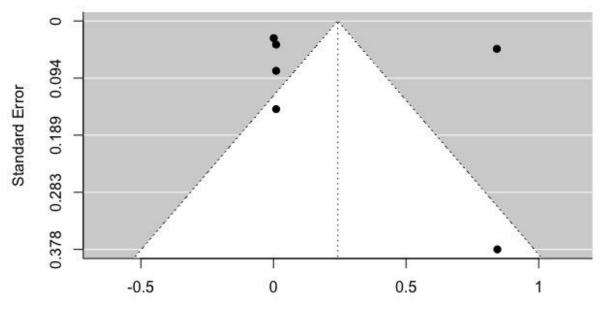


Figure 4. Funnel plot of outlier assessment



Fisher's z Transformed Correlation Coefficient

**Moderator Models.** Three moderator models were used to assess the moderating relationship participant mean age, sex, or geographic location had on the observed correlation. There was no evidence that mean age (Q(1) = 0.27, p = .61) or sex (Q(1) = 0.72, p = .40) moderated the association between anxiety and challenges surrounding DACA. Geographic location was observed to moderate the observed correlation, (Q(3) = 267.42, p < .0001). Specifically, the region of Texas was found to significantly moderate the relationship, (p < .0001), as compared to other recorded regions.

## **Discussion**

# **Summary of Meta-Analysis**

This meta-analysis investigated the correlation between anxiety and challenges surrounding DACA amongst DACA recipients enrolled in college. A total of N = 6 studies were

included in qualitative and quantitative analyses. One model was used for effect size synthesis. Moderator analyses indicated that age and sex did not moderate the anxiety-challenges correlation. There was a moderating effect of the geographic location on the observed correlation, though it should be taken with caution. Only one study was represented in this geographic location (Long et al., 2018) and it was also the only study that was influential amongst the sample. Outliers did not play a role in findings and there was no evidence of small study bias in the model, however, one study did play an influential role in heterogeneity. Whilst not much can be said for this model's consistency with past meta-analyses, the small effect size and the non-significant results may speak to the strengths-based and resiliency literature of immigrant-origin Latine young adults (ILYAs; Moreno et al., 2021; Siemons et al., 2017). There is, as of yet, insufficient evidence to identify anxiety as a risk factor for challenges surrounding DACA across this small set of studies.

Interpreting the meta-analysis raises some interesting points related to the ways in which anxiety and challenges surrounding DACA are related and how this relationship manifests in immigrant-origin Latine young adults who are DACA recipients. First, regardless of whether anxiety has a small or null correlation with challenging outcomes, it does not appear to explain a great deal of change in outcomes. Thus, we should reconsider arguments that anxiety on its own is a primary driver of other challenges surrounding DACA. Many DACA recipients live day-to-day in a precarious, uncertain status. It is not shocking that anxiety may be experienced, therefore it is important to navigate how research may be overestimating the trajectory anxiety has on ILYAs. There is great potential in understanding this small effect to better navigate future research around the individual- and community-level strengths of the Latine community. This has implications at multiple levels and must be examined further.

### **Summary of Descriptive Analysis**

Significant variability was observed across all levels of methodological coding, including at the study- and outcome levels. This variability existed both in study characteristics and the reporting of these characteristics. Missing data for methodological codes were common. In particular, participant demographics were often missing, including participant/family income, information on socioeconomic status, and descriptors of race/ethnicity. Without these data in future meta-analyses, moderator analyses will continue to be based on samples with low power or necessarily imputed missing information (Tipton, 2019). More consistent reporting of these factors may help to clarify some significant questions (Borenstein et al., 2010).

### Clinical, Research, & Policy Implications

Clinical Implications. Research that has non-significant results is often cast away and not utilized, particularly when it remains unpublished (Amrhein, Greenland, & McShane, 2019). Due to the desire for evidence-based resources, insignificant results can seem useless. However, it must be taken into account that in meta-analysis research, a non-significant result does not indicate that a relationship does not exist (Quintana, 2015). Therefore, the small effect that the observed correlation held may speak more to the strength and resilience of the ILYA community than their deficits or negative mental health outcomes. Whilst the harmful effects of immigration policy in the U.S. cannot be ignored, neither can the resiliency of DACAmented individuals (Borjian, 2018). Providers must contend with the norm to over-pathologize or overestimating the impact a status such as DACA may have on their patients/clients. Instead, if clinicians and/or providers assess how they can better utilize and understand the implications of being an ILYA and DACA recipient, they may become better able to navigate treatment options and outcomes utilizing a strengths-based, multicultural approach.

Additionally, providers should consider in what state they practice and how the messaging around safety and illegality plays a role in the well-being of the patients/clients they serve. For example, southern, border states tend to have higher populations of Latines, and yet have some of the harsher laws, regulations, and rhetoric against Black, Indigenous people of color (BIPOC) than other states (Ehrkamp & Nagel, 2014). Providers must examine the context in which their patients/clients exist to engage in comprehensive, client-centered care.

**Research Implications.** The sample size of this study, along with the review of sixteen online databases speaks to the low number of studies engaging the ILYA and DACA recipient communities. There is a need for more representation in research of BIPOC communities that is non-comparative to White samples and highlights the strengths of the community. Additionally, resiliency is a complex phenomenon that is not universally understood, therefore it is vital to engage in more strengths-based science that allows for more exploration of the topic, particularly amongst minoritized groups. Scientists must shift their perspective regarding the use of deficit models to guide their research, and instead should navigate how best to represent the community they are serving through their science. Additionally, researchers must beware of not focusing on deficit models in communities that show high levels of resiliency amidst chronic uncertainty and liminal status. DACA recipients already exist in a precarious position, therefore the concept that they have at least some level of anxiety or other more negative mental health outcomes should not be shocking. Also, DACA is not only for Latine-identified, college-aged individuals. The focus of this study was to examine college-aged ILYA's, though many more community members who have DACA were therefore not included in the sample. It is important to recognnize the reach and generalizability of this study to be based within a college-aged, Latine sample residing in the U.S. There is a significant need for more cross-cultural research to assess

the experiences of anxiety and challenges surrounding DACA amongst other immigrant-origin young adults. Finally, researchers should consider how reporting plays an important role in the understanding and application of their data. Few studies offered a breakdown of participant characteristics beyond sex and age. Scientists must remain conscientious of how adding additional sample characteristics to their published and unpublished data will only continue to elevate the voices of their participants and communities studied.

Policy Implications. Policies, due to their nature of being socially constructed, along with the Legal Violence framework (Menjivar & Abrego, 2012) reveal their status as a social determinant of health. It is vital to understand the long-term impact of policy on well-being not only for those directly affected but also for those in communities alongside immigrants. DACA as a policy only goes so far. Due to its time-limited nature, high renewal fee cost, and multiple restrictions, it does not work well for many immigrants in the U.S. Policymakers should consider the genuine insidious outcomes immigration policies have on those they impact and consider the community impact as well. Additionally, more efforts should be placed in the policy sphere to acknowledge the positive influence DACA recipients have on U.S. cities and communities. For example, throughout the COVID-19 pandemic, there were a recorded 27,000 DACA recipients working as doctors, nurses, and paramedics, and 1.5 million essential workers in delivery, shipping, and trucking services were also immigrants (Bier, 2020).

This study is one of the first in this research area. At the time of this study, the author was unaware of any other systematic meta-analytic review that was assessing the relationship between anxiety and challenges surrounding DACA. Thus, this study is novel and adds to the scholarship of ILYAs and DACA recipients. Additionally, a non-significant result does not mean there is no relationship, therefore this work can be built upon and should be in the future to better

understand the additional moderators present given the heterogeneity of the sample. This analysis also included gray literature and unpublished findings. This decreased the chance of publication bias, and also ensured research in this area was being acknowledged across the academic red tape that often exists.

#### Limitations

The present review must be interpreted in light of its limitations. This review only examines three potential moderators: age, sex, and geographic location. However, there was evidence of study heterogeneity, suggesting the presence of moderators. Further research is necessary to identify and evaluate these moderators, which could include socioeconomic status, comorbid health conditions, depression, and race. The measures each study used also speak to an additional limitation. As there was a representation of four separate measures, they all ask different questions, assess different symptoms/diagnosis, and contain different time frames. It is important to consider the ways in which these measures may have limited what this study can tell us about the acual relations between the construct of anxiety and challenges surrounding DACA. Lastly, articles matching inclusion criteria were solely quantitative and published in the last three years. Future research could code qualitative studies and this would increase the robustness of the relationship. There is also a wide range of times unaccounted for in which DACAmented young adults still remained a precarious status - it is vital to understand that the Trump administration was not the first to call into question the positioning of the DACA policy.

#### Conclusion

There is a small-sized correlation between anxiety and challenges surrounding DACA, across an array of measures and samples. The literature on anxiety as a risk factor for challenges surrounding DACA is inconclusive due to variability in methodology and findings. This review

indicates that anxiety is associated with geographic location. Further research is necessary to determine directionality (i.e. whether anxiety precedes challenges or the reverse), and assess how other factors such as depression or substance use play into this association. The inconsistency and lack of the current literature preclude the ability to draw conclusions as to whether anxiety is a mechanism for the connection between challenges and well-being. However, this review represents a critical step in organizing and evaluating the current research with bearing on anxiety as a mechanism, thus seeking to fill a research gap that has remained largely unaddressed.

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# Appendix A. Codebook

Variable	Data/Code	Instructions/Comments		
I. Study Characteristics				
Study Identifiers				
Study Number	1-	This is the number that uniquely identifies a study that is being coded. We will use regular integers and identify on a scale of +1.		
Reviewer ID	Initials	Identifier for each coder		
Citation	APA 7 format			
Contact Details	Email of corresponding author			
Source of Information	1 = Journal 2 = Unpublished report 3 = Dissertation 4 = Thesis 5 = Book/chapter 9 = Other			
Keywords		List keywords given by authors		
Year of Publication	YYYY	Year the report appears in print.		
Study Setting				
Country	0 = Not reported 1 = US 2 = Not US 3 = Multi-country (including US)	Country where the study was conducted *Any study reporting a score other than 1 will need to be deleted		
State	State abbreviations 0 = Not reported	Abbreviations for state in which the study was conducted		
Geographic location in the US	0= Not reported 1 = Northeast 2 = Southeast 3 = Midwest 4 = Southwest 5 = West			

	6 = Northwest	
Population Density	0 = Not reported	
	1 = Urban	
	2 = Rural	
	3 = Suburban	
Specific Setting	0 = Not reported	Setting in which data were collected/study was conducted
	1 = Hospital	
	2 = Primary care office	
	3 = Other healthcare office	
	4 = University	
	5 = Community center/organization	
	9 = Other	
Population Type	1 = Clinical	Type of population given the setting in which the study was
	2 = Community	conducted
	3 = Mix	
	9 = Not clear	
Report Type	0 = Not reported	If more than one reporting method was used, specify with
	1 = Self-report	commas: 1, 4
	2 = Parent-report	*Any study reporting a score other than 1 will need to be
	3 = Caregiver-report (other than parent)	deleted
	4 = Teacher-report	
Socioeconomic Status	0 = Not reported	If more than one was included, specify with commas: 1, 3
	1 = Low SES	
	2 = Middle SES	
	3 = High SES	
	II. Eligibility	
Reason for Exclusion	1 = Age group outside of 18-25	If more than one reason, specify with commas: 1, 3
	2 = Data collected outside of US	
	3 = Not self-report data	
	4 = No DACA recipients	
	III. Meth	ods
Theoretical Constructs		

Study Design	1 = RCT	Case-series: A study reporting observations on a series of
, .	2 = Controlled clinical trial	individuals, usually all receiving the same intervention, with
	3 = Time-series	no control group.
	4 = Pre-post	
	5 = Case-control	Case-control study: A study that compares people with a
	6 = Cohort	specific disease or outcome of interest (cases) to people from
	7 = Case-series	the same population without that disease or outcome
	8 = Cohort study w/ historical control	(controls), and which seeks to find associations between the
	9 = Cross-sectional	outcome and prior exposure to particular risk factors. This
	10 = Retrospective	design is particularly useful where the outcome is rare and
	11 = Observational	past exposure can be reliably measured. Case-control studies
	12 = Survey	are usually retrospective, but not always. (CC)
	13 = Mixed	
		Controlled (clinical) trial (CCT): This is an indexing term
		used in MEDLINE and CENTRAL. Within CENTRAL it
		refers to trials using quasi-randomization, or trials where
		double blinding was used but randomization was not
		mentioned.
		Cohort study: An observational study in which a defined
		group of people (the cohort) is followed over time. The
		outcomes of people in subsets of this cohort are compared, to
		examine people who were exposed or not exposed (or
		exposed at different levels) to a particular intervention or
		other factor of interest.
		A prospective cohort study assembles participants and
		follows them into the future.
		A retrospective (or historical) cohort study identifies subjects
		from past records and follows them from the time of those
		records to the present. Because subjects are not allocated by
		the investigator to different interventions or other exposures,

		adjusted analysis is usually required to minimize the influence of other factors (confounders).  Controlled before and after study: A non-randomized study design where a control population of similar characteristics and performance as the intervention group is identified. Data are collected before and after the intervention in both the control and intervention groups.  Randomized controlled trial: An experiment in which two or more interventions, possibly including a control intervention or no intervention, are compared by being randomly allocated to participants. In most trials one intervention is assigned to each individual but sometimes assignment is to defined groups of individuals (for example, in a household) or interventions are assigned within individuals (for example, in different orders or to different parts of the body)
Number of Sites		Number of sites where the study was conducted
Data Collection Year	YYYY	Year the data was collected/study was conducted
Data Collection (time	0 = Not reported	If specific number of that time period (e.g., 3 years) is
period)	1 = In years	reported, signify like this: $1.3$ (1 = years, 3 = 3 years)
	2 = In months	
	3 = In weeks	
	4 = In days	
Medium of Data	0 = Not reported	If more than one was included, specify with commas: 1, 3
Collection	1 = Electronic health record	
	2 = Paper/data coding	
	3 = In-person clinical interview	
	4 = In-person semi-structured interview	
	5 = Video tape	
	6 = Transcriptions	
	7 = Online survey	

	8 = Mailed paper survey	
IRB approved	$0 = N_0$	
	1 = Yes	
Inter-rater reliability	0 = No	
reported	1 = Yes	
Operational definitions	$0 = N_0$	
	1 = Yes	
Analytic Tools Used	0 = Not reported	
-	1 = SPSS	
	2 = STATA	
	3 = R	
	4 = SAS	
	5 = Epidata	
	6 = Atlast ti	
	7 = CMA	
	IV. Participants (Fill out R	PELEVANT sections)
Participant type	0 = Not reported	
	1 = Young Adult	
	9 = Mix (specify)	
Young Adult Participan	t Demographics	
Documentation Type	0 = Not reported	*DACA recipients are 3
(general)	1 = Undocumented	
	2 = Documented	
	3 = Both (liminal status)	
Documentation Type	0 = Not reported	If more than one was included, specify with commas: 1, 3
(specific)	1 = U.S. Born	*Only data relevant to DACA recipients will be used
	2 = Naturalized	
	3 = Family-based Visa/Green-card	
	4 = Refugee/asylum permission	
	5 = Special immigrant juvenile (SIJ)	
	6 = DACA	
	7 = TPS	
	9 = Other	

Sample size (n)		
Mean age in years	999 = Not reported	
SD age of sample		
Number of female		
participants		
Number of male		
participants		
Number of diverse		
gender-identified		
participants		
Number of White		
Number of Black/AA		
Number of		
Latinx/Hispanic		
Number of		
Asian/Pacific Islander		
Number of		
Native/Indigenous		
Number of bi-		
racial/mixed-race		
Age range		
Mean household	0 = Not reported	
income	1 = < 19,999	
	2 = 20,000 - 29,999	
	3 = 30,000 - 39,999	
	4 = 40,000 - 49,000	
	5 = 50,000 = 59,999	
	6 = 60,000 - 69,999	
	7 = > 70,000	
Languages offered for	0 = Not reported	
study (interview,	1 = English	
survey, etc.)	2 = Spanish	
	3 = Mixed	

	4 = Other	
[Mean] Education	0 = Not reported	
	1 = Elementary	
	2 = Middle	
	3 = High school/HS diploma	
	4 = Some college	
	5 = Bachelor's	
	6 = Some master's	
	7 = Master's	
	8 = Beyond master's	
	VI. Outco	mes
Anxiety measure type	0 = Not included	
	1 = Quantitative	
	2 = Qualitative	
Number of anxiety	0 = None reported	If reported, any number other than 0
measures		
Name of anxiety	0 = None reported	If reported, open-ended response
measure(s)		
Reference for anxiety	0 = None reported	If reported, open-ended response
measure(s)		
Worry measure type	0 = Not included	
	1 = Quantitative	
	2 = Qualitative	
Number of worry	0 = None reported	If reported, any number other than 0
measures		
Name of worry	0 = None reported	If reported, open-ended response
measure(s)		
Reference for worry	0 = None reported	If reported, open-ended response
measure(s)		
Fear measure type	0 = Not included	
	1 = Quantitative	
	2 = Qualitative	

Number of fear	0 = None reported	If reported, any number other than 0
Name of fear measure(s)	0 = None reported	If reported, open-ended response
Reference for fear measure(s)	0 = None reported	If reported, open-ended response
Uncertainty measure type	0 = Not included 1 = Quantitative	
Number of uncertainty measures	2 = Qualitative 0 = None reported	If reported, any number other than 0
Name of uncertainty measure(s)	0 = None reported	If reported, open-ended response
	VII. Rest	ults
Anxiety mean score		
Fear mean score		
Worry mean score		
Uncertainty mean score		
Correlation (anxiety X fear)		
Correlation (anxiety X fear)		
Correlation (anxiety X uncertainty)		

Appendix B. JBI Appraisal and Study Quality Checklist

# JBI CRITICAL APPRAISAL CHECKLIST FOR ANALYTICAL CROSS SECTIONAL STUDIES

	er				
Author_	Year		Record Number		
		Yes	No	Unclea r	Not applicabl e
1.	Were the criteria for inclusion in the sample clearly defined?				
2.	Were the study subjects and the setting described in detail?				
3.	Was the exposure measured in a valid and reliable way?				
4.	Were objective, standard criteria used for measurement of the condition?				
5.	Were confounding factors identified?				
6.	Were strategies to deal with confounding factors stated?				
7.	Were the outcomes measured in a valid and reliable way?				
8.	Was appropriate statistical analysis used?				
Overall a	ppraisal: Include	her info			

Comments (Including reason for exclusion)			

Appendix C. Curriculum Vitae

Isis Garcia-Rodriguez Richmond, VA 23223 garciaroi@vcu.edu 860.977.3275

#### **EDUCATION**

2021 to present Ph.D. in Counseling Psychology (third year); Latinx Psychology

Virginia Commonwealth University

Richmond, Virginia

2019 to 2022 M.S. in Counseling Psychology

Virginia Commonwealth University

Richmond, Virginia

Master's Thesis: Challenges among Latine DACA recipients and anxiety:

A Systematic Meta-analytic Review Mentor: Oswaldo Moreno, Ph.D.

2015 to 2019 B.S. in Psychology; Minor in Sociology: Health & Society

Suffolk University Boston, Massachusetts

Honors Thesis: Legal Status Effects on Parent-Child Relationships and

Parent Well-Being

Mentor: Amy K. Marks, Ph.D.

#### PEER REVIEWED PUBLICATIONS

Moreno, O., Williams, C., Muñoz, G., De Jesus Elias, M., Santana, A., Fuentes, L., **Garcia-Rodriguez, I.,** Hernandez, C., Hood, K., Johnson, K., Montemayor, B.N., The Spit for Science Working Group, Vassileva, J., Dick, D.M., & Amstadter, A.B. (under review). Moderating role of healthcare disruptions on friend and family pandemic-related negative life events predicting Latines' anxiety and alcohol use over time. *International Journal of Mental Health and Addiction*.

**Garcia-Rodriguez, I.,** West, S., Hernandez, C., Fuentes, L., Perrin, P., & Moreno, O. (under review). Psychometric network analysis: Logistical barriers to care and mental health outcomes in Latinx children residing in the U.S. *Clinical Child Psychology and Psychiatry*.

Hernandez, C, **Garcia-Rodriguez, I,** Fuentes, L., & Moreno, O. (accepted). *Family Acculturation: Understanding the acculturation gap through the caregiver-adolescent dyad.* (In Halpern-Felsher) Encyclopedia of Child and Adolescent Health.

Moreno, O., **Garcia-Rodriguez, I.**, Fuentes, F., Hernandez, C., Munoz, G., Fuellen, K., Hobgood, S., & Sargent, L. (accepted). Non-Latinx healthcare provider's knowledge and

awareness of Latinx geriatric clinical health needs: A focus group study using cultural Humility. Clinical Gerontologist. (Impact Factor: 2.646)

Merced, K., Ohayagha, C., Grover, R., **Garcia-Rodriguez, I.**, Moreno, O., & Perrin, P. B. (2022). Spanish translation and psychometric validation of a measure of acculturative stress among Latinx immigrants in the U.S. *International Journal of Environmental Science and Public Health*, 19, 2808.

Hernandez, C., Moreno, O., **Garcia-Rodriguez, I.**, Fuentes, L., & Nelson, T. (2022). The Hispanic paradox: A moderated mediation analysis of health conditions, self-rated health, and mental health among Mexicans and Mexican Americans. Health Psychology & Behavioral Medicine, 10(1), 180-198. https://doi.org/10.1080/21642850.2022.2032714

Nelson, T., Brown, M., **Garcia-Rodriguez, I.,** & Moreno, O. (2021). Gendered racism, anxiety, and depression: The mediating roles of gendered racialized stress and social isolation. *Ethnicity & Health*. https://doi.org/10.1080/13557858.2021.2002826

Moreno, O., Fuentes, L., **Garcia-Rodriguez, I.**, Corona, R., & Cadenas, G. (2021). Psychological impact, strengths, and handling the uncertainty among Latinx DACA recipients. *The Counseling Psychologist*, 49(5), 728-755. (IF: 2.263), <a href="https://doi.org/10.1177/00110000211006198">https://doi.org/10.1177/00110000211006198</a>

Moreno, O., Willis, K.D., Ortiz, M., **Garcia-Rodriguez, I.**, Akinkugbe, A.A., & Corona, R. (2021). Private and social religious coping on life satisfaction: Examining cultural factors as moderators among Latinxs. *Journal of Mental Health, Religion, and Culture*. Advance online publication, <a href="https://doi.org/10.1080/13674676.2021.1880382">https://doi.org/10.1080/13674676.2021.1880382</a>

Caporiccio, C., Louis, K. R., Lewis-O'Connor, A., Quealy Son, K., Raymond, N., **Garcia-Rodriguez, I.A.**, & Gonzales, L. (2019). Continuing education for Haitian nurses: Evidence from qualitative and quantitative inquiry. *Annals of Global Health*, 85(1), 1–7. <a href="https://doi.org/10.5334/aogh.2538">https://doi.org/10.5334/aogh.2538</a>

Glass, N., Clough, A., Kukke, S., James, L., Miller, E., ... **Garcia-Rodriguez, I.**, Perrin, N. (under review). The providers, advocates, and technology for health and safety (PATHS) project: Best practices for rigorous evaluations of partner violence prevention and response in primary care settings. *Journal of Primary Care and Community Health*.

#### PEER REVIEWED PRESENTATIONS

**Garcia-Rodriguez, I.,** West, S., Perrin, P., & Moreno, O. (2021, August). *Network analysis: Logistical barriers to care and mental health outcomes in Latinx children.* Poster presented at the American Psychological Association Annual Convention.

**Garcia-Rodriguez, I.A.,** & Moreno, O. (2021, July). *Immigration policy and trauma among mixed-status Latinx youth: A systematic review*. Poster to be presented at the 6<sup>th</sup> Biennial APA Division 45 Research Conference, Ann Arbor, MI.

Moreno, O., Willis, K., Ortiz, M., & Garcia-Rodriguez, I.A. (2021, June). *Religious coping on life satisfaction: Examining culturalisms as moderators*. Poster presented at the 32nd International Congress of Psychology, Prague, Czech Republic.

- Moreno, O., Fuentes, L., Ortiz, M., **Garcia-Rodriguez, I.,** & Corona, R. (2020, December). *Latinx cultural factors around the immigration political climate among first-generation emerging adults*. In R. Corona (chair), Navigating a sense of "otherness:" The experiences of Latinx adolescents and emerging adults. Symposium to be presented at the 2020 SRCD Special Topic Meeting: Construction of the 'Other': Development, Consequences, and Applied Implications of Prejudice and Discrimination, Rio Grande, Puerto Rico.
- Tirado, C., **Garcia-Rodriguez, I.A.,** & Moreno, O. (2020, November). *Acculturation and religious fatalism: A contribution to the discussion of psychological healthcare utilization among Latinxs*. Poster to be presented at the American Psychological Association Division 17 Society of Counseling Psychology 2020 Conference, New Orleans, LA.
- Moreno, O., Fuentes, L., & Garcia-Rodriguez, I.A. (2020, October). *Nativity group's differences, cultural factors, alcohol and drug disparities among U.S. Latinxs*. In L. Sanchez-Johnson (chair), Reducing Latinx health disparities and promoting health equity in Latinx communities. Symposium to be presented at the National Latinx Psychological Association 2020 Conference, Denver, CO.
- Argueta-Contreras, J., Rodriguez, J., Fuentes, L., **Garcia-Rodriguez, I.A.,** & Moreno, O. (2020, October). *Adverse childhood experiences and psychological outcomes among recently arrived Latinx immigrant youth in the Southeastern United States*. Poster to be presented at the National Latinx Psychological Association 2020 Conference, Denver, CO.
- **Garcia-Rodriguez, I.A.** & Moreno, O. (2020, October). *U.S. immigration policy and mental health outcomes among Latinx youth over the last decade: A meta-analysis*. Poster to be presented at the National Latinx Psychological Association 2020 Conference, Denver, CO.
- Hernandez-Figueroa, K., Carranza, J., Argueta-Contreras, J., **Garcia-Rodriguez, I.A.,** & Moreno, O. (2020, April). *Demographic factors and attitudes toward mental health medication treatments among Latinxs*. Poster to be presented at the American Psychiatric Association Annual Meeting, Philadelphia, PA, cancelled due to COVID-19.
- Carranza, J., Hernandez-Figueroa, K., Argueta-Contreras, J., **Garcia-Rodriguez, I.A.**, & Moreno, O. (2020, April). *The bio-psycho-social-cultural domains and its impact on psychopharmacological utilization among Latinxs*. Poster to be presented at the American Psychiatric Association Annual Meeting, Philadelphia, PA, cancelled due to COVID-19.
- Garcia-Rodriguez, I.A. & Moreno, O. (2020, March). *Immigration policies on adolescent trauma among mixed-status Latinx families: A systematic review*. Poster to be presented at the American Association of Hispanics in Higher Education 2020 Annual Conference, Costa Mesa, CA, cancelled due to COVID-19.
- Rodriguez, J.D., **Garcia-Rodriguez, I.A.,** & Moreno, O. (2019, October). *Financial stress, nativity, and perceived well-being among Latinas: A discussion towards the Immigrant Health Paradox*. Poster to be presented at the 19<sup>th</sup> annual Institute for the Study and Promotion of Race and Culture, Boston, MA.

- Garcia-Rodriguez, I.A., Ribas Camargo, T., Blackwell, R., & Marks, A.K. (2019, October). *Legal status effects on Latinx parent well-being*. Poster to be presented at the National Latinx Psychological Association 2019 Conference, Miami, FL.
- Wells, Y.V., Stark, A., & Garcia-Rodriguez, I.A., & Harkins, D. (2019, August). *Anger and remorse through two social media lenses: Text messages versus YouTube videos*. Poster presented at the American Psychological Association Annual Convention, Chicago, IL.
- Garcia-Rodriguez, I.A., & Marks, A.K. (2019, May). Legal Status Effects on Parent-Child Relationships and Parent Well-Being. Poster presented at the Suffolk University College of Arts and Sciences Honors Symposia, Boston, MA.
- Garcia-Rodriguez, I.A., & Marks, A.K. (2019, April). *Legal Status Effects on Parent-Child Relationships and Well-Being*. Oral presentation presented at the Third Annual McNair-Ballotti Undergraduate Research Symposium, Boston, MA
- Garcia-Rodriguez, I.A., & Marks, A.K. (2019, March). Legal Status Effects on Parent-Child Relationships and Well-Being: Preliminary Findings. Poster presented at the Eastern Psychological Association 2019 Meeting, New York, NY.
- Pieloch, K.A., **Garcia-Rodriguez, I.A.,** & Marks, A.K. (2019, March). *Multilevel resilience characteristics of children with trauma histories*. Poster presented at the Society for Research in Child Development Biennial Meeting, Baltimore, MD.
- Patrick, K. A., Gallegos-Guajardo, J., Youn, S., Moreno-Martinez, A., Carroll, H., Garcia, I. A., & Marques, L. (2018, December). Building mental health research capacity in Mexico: Exploring barriers and facilitators using the consolidated framework for implementation research. Poster presented at the 11th Annual Conference on the Science of Dissemination and Implementation, Washington, D.C.
- Lewis-O'Connor, A., Zermeno, A., & Garcia-Rodriguez, I.A. (2018, November). *Use of patient portal to recruit participants experiencing intimate partner violence: an Intervention study.* Poster presented at Discover Brigham 2018, Boston, MA.
- Wells, Y. V., Stark, A., & Garcia-Rodriguez, I. A. (2018, November). *Studying Emotional Expression in In-Person and Social Media Situations*. Poster presented at the National Collegiate Honors Council (NCHC) Conference, Boston, MA.
- **Garcia-Rodriguez, I.A.,** & Marks, A.K. (2018, October). *Legal Status and Parenting Styles: Effects on Parent-Child Relationships and Well-Being*. Oral presentation presented at the Florida International University McNair Scholars Conference 2018, Miami, FL.
- **Garcia-Rodriguez, I. A.,** Pieloch, K.A., & Marks, A. K. (2017, November). *Examining the effect of trauma on community-level resilience in children*. Poster presented at the National Collegiate Honors Council (NCHC) Conference, Atlanta, GA.

#### **INVITED PRESENTATIONS**

Garcia-Rodriguez, I., Camarena, C., Aruaz, N., & Chavez, N. (2021, April). *Conversando entre compadres*. SACNAS Graduate Council, Richmond, VA.

**Garcia-Rodriguez, I.** (2020, December). *McNair Alumni Panel*. Suffolk University McNair Scholars Leadership Summit, Boston, MA.

Garcia-Rodriguez, I.A., & Marks, A.K. (2019, November). *Portz Scholar Presentations*. NCHC Portz Scholars provide summaries of their research, 2019 National Collegiate Honors Council Conference: Disrupting Education, New Orleans, LA.

**Garcia-Rodriguez, I.A.** (2019, March). *Networking Tips & Tricks*. Student panelist for Honor's LLC Speed Networking Event at Suffolk University, Boston, MA.

**Garcia-Rodriguez, I.A.** (2019, March). What Does a Senior Project Look Like? Student panelist for Honor's Students Advising Session at Suffolk University, Boston, MA.

• Presentation was also recorded to be posted on the Suffolk University website for incoming students.

Garcia-Rodriguez, I.A. (2018, September). *Internship Information Session*. Student panelist for Social Sciences Day at Suffolk University, Boston, MA.

#### RESEARCH EXPERIENCE

2019 to Present Graduate Research Assistant

La Esperanza Research Program at VCU (Richmond, VA)

Projects: Cultural and Structural Barriers for the Detection of Dementia in Latino Older Adults, Early Immigration, Policy and Psychological Impact (E.I.P.P.I), & Culturally Enhancing Motivational Interviewing for Latinx

Adolescents

Supervisor: Oswaldo Moreno, Ph.D

2019 to Present Graduate Research Assistant

Virginia Foundation for Healthy Youth (Richmond, VA)

Projects: Culturally Enhancing Motivational Interviewing for Latinx

Adolescents

Supervisors: Oswaldo Moreno, Ph.D.; Rosalie Corona, Ph.D.

2018 to 2019 Research Intern

Brigham & Women's Hospital – C.A.R.E. Clinic (Boston, MA) Project: Coordinated approach to resilience and empowerment

Supervisor: Annie Lewis-O'Connor, PhD.

2017 to 2019 Research Assistant

Suffolk University Psychology Research Lab (Boston, MA)

Project: Remorse training in a postmodern and post-cultural world

Supervisor: Yvonne V. Wells, PhD.

2017 to 2019 Research Assistant

Youth Development in Context Lab (Boston, MA)

Project: Legal vulnerability in Latino immigrant families: An exploration

of the psychological impacts of liminal legality

Supervisor: Amy K. Marks, PhD.

2018 Dissertation Research Assistant

Veteran Upward Bound, Suffolk University (Boston, MA)

Project: A narrative description of veteran students' perspectives of

institutional services

Supervisors: Alicia Marie Reddin, M.Ed.; Abráham Peña-Talamantes,

PhD.

2018 Research Intern

Massachusetts General Hospital Research Disparities Unit (Boston, MA)

Project: Positive Minds, Strong Bodies

Supervisor: Sheri Markle, MA.

2017 to 2018 Research Intern

Massachusetts General Hospital Community Psychiatry (Chelsea, MA) Project: Program for Research in Implementation and Dissemination of

Evidence-based Treatments (PRIDE) Supervisor: Luana Marques, PhD.

2017 to 2018 Research Intern

Harvard University Culture & Intergroup Relations Lab (Cambridge, MA)

Project: Ancestry DNA and cultural biases

Supervisor: Sasha Kimel, PhD.

2017 to 2018 Research Assistant

Youth Development in Context Lab (Boston, MA)

Project: Multilevel resilience characteristics of children with trauma histories: What can be gained and what is missing from in-home

interventions?

Supervisor: Kerrie Pieloch, PhD.

#### **CLINICAL EXPERIENCE**

2021 to Present *Practicum trainee* 

Virginia Commonwealth University, Center for Psychological Services

and Development, Multicultural Clinic

Duties: Provide therapeutic interventions using multicultural framework with a caseload of 5 community-based clients per semester; Experience with two assessment batteries using a wide variety of standardized tests;

Experience with bilingual therapeutic interventions

Supervisors: Shawn Jones, PhD, LCP; Mary Beth Heller, PhD, LCP

2020 to 2021 Practicum trainee

Virginia Commonwealth University, University Counseling Services Duties: Provide brief intervention therapy to caseload of 10 students per

semester; Experience with use of CCAPS, SAFE-T, and SLAP

assessments; Community outreach; Case management

Supervisors: Miki Skinner, PhD., LCP; Katie Bekkeli, PsyD., LCP

2019 to 2021 Interpreter

Capital Area Immigrants' Rights (CAIR) Coalition

Duties: Conduct psychological testing in Spanish including the use of the

MoCA-B and the TSI-2; Translate during clinical interview

Supervisor: Carla Galusha, PhD., LCP

#### HONORS/AWARDS

2021	Virginia Commonwealth University, Dean's List Spring 2021
2020	Virginia Commonwealth University, Dean's List Fall 2020
2020	Virginia Commonwealth University, Dean's List Spring 2020
2019	Virginia Commonwealth University, Dean's List Fall 2019
2019	NCHC Portz Scholar Thesis Competition Recipient
2019	NCHC Portz Scholar Thesis Competition Suffolk University Nominee
2019	Excellence in Honors Award, Outstanding Honors Thesis in Social
	Science
2019	Excellence in Honors Award, Outstanding Honors Thesis in Psychology
2019	Suffolk University Psychology Department Elizabeth William's Award
2019	Suffolk CAS Honors Program Travel and Research Fellowship
2019	Suffolk CAS Honors Program Travel and Research Fellowship
2018	McNair Summer Research Academy Research Stipend
2018	NCHC Portz Interdisciplinary Fellowship Recipient
2018	NCHC Portz Interdisciplinary Fellowship Suffolk University Nominee

#### LOCAL & PROFESSIONAL SOCIETIES/ORGANIZATIONS

2022 to Present Society for Advancement of Chicanos/Hispanics and Native Americans in Science, Graduate Council Member 2021 to 2021 COVES Science Policy Fellowship, Policy Fellow for the Office of Recovery Services for the State of Virginia 2020 to Present Global Alliance for Behavioral Health and Social Justice: Migrant and Displaced Persons Task Force, Student Member 2020 to Present Global Alliance for Behavioral Health and Social Justice: Student and Early Career Task Force, Student Member Capital Area Immigrants' Rights (CAIR) Coalition, 2019 to Present Volunteer Interpreter 2019 to Present Latinos in Virginia Empowerment Center, Victim's Advocate 2019 to Present Virginia Commonwealth University Latinx Graduate Student Association, President 2019 to Present NLPA Special Interest Group: Child, Adolescent, and Family Psychology, Social Media Representative 2019 to Present NLPA Special Interest Group, Latinx Health Equity and Health Disparities, Member 2019 to Present NLPA Special Interest Group: Undocumented

Immigrant Collaborative, Member

2019 to Present	Association for Psychological Science, Graduate Student Affiliate		
2019 to Present	Virginia Association for Psychological Science, Student Member		
2019 to Present	National Latinx Psychological Association (NLPA), Member		
2018 to Present	Eastern Psychological Association, Associate Member		
	2018 to Present American Psychological Association: Divisions 17,		
	45, 56, Student Member		
2018 to Present	McNair Scholars Program, McNair Scholar Alumni		
2018 to Present	Psi Chi: International Honor Society in Psychology, Member		
2018 to Present	Health Career Connection (HCC), Alumni		
2017 to Present	Society for Research on Child Development (SRCD), Latino Caucus		
	2017 to 2018 Society for Research on Adolescence (SRA)		
	Undergraduate Scholars Program, Undergraduate Scholar		

#### **REFERENCES**

Oswaldo Moreno, Ph.D.
Assistant Professor of Psychology
Research Program Director at La Esperanza Research Program
Virginia Commonwealth University (VCU)
806 W Franklin St., Richmond, VA 23284-2018
(804) 828-6624 \* Email: oamoreno@vcu.edu

Amy K. Marks, Ph.D.
Department Chair
Professor of Psychology
Research Program Director at Youth Development and Context Laboratory
Suffolk University College of Arts & Sciences
73 Tremont St., Boston, MA 02108
(617) 573-8017 \* Email: <a href="mailto:akmarks@suffolk.edu">akmarks@suffolk.edu</a>

Annie Lewis-O'Connor, Ph.D.
Senior Nurse Scientist
Founder & Director of C.A.R.E. Clinic
Division of Women's Health, Department of Medicine
Brigham and Women's Hospital
1620 Tremont St., Boston, MA 02120
(617) 525-9580 \* Email: aoconnor@bwh.harvard.edu

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