

DISSERTATION

POSTDOCTORAL FELLOWS' ATTITUDES TOWARD
IMMIGRATION AND UNDOCUMENTED STUDENTS' PURSUIT OF HIGHER
EDUCATION: A MIXED METHODS STUDY

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ABSTRACT

POSTDOCTORAL FELLOWS' ATTITUDES TOWARD IMMIGRATION AND UNDOCUMENTED STUDENTS' PURSUIT OF HIGHER EDUCATION: A MIXED METHODS STUDY

Previous research has demonstrated that certain attributes are associated with greater support of undocumented immigrants and undocumented students. While higher education has examined the attitudes and attributes of students, faculty, and staff regarding their opinions of undocumented students' pursuit of higher education, there is a gap in the literature when it comes to considering the opinions of postdoctoral fellows (postdocs). As the most highly trained group within the academic pipeline, postdoctoral fellows are increasing in number while tenure track positions are declining in the United States. Postdocs will become leaders inside and outside academia. How the academy has (or has not) socialized this group matters for the future of the academy and beyond. Furthermore, attributes associated with greater support of undocumented immigrants and undocumented students constitute attributes and experiences of many postdoctoral fellows. This transformative convergent mixed methods study uses a four-article approach to examine postdoctoral fellows' attitudes toward immigration and undocumented students' pursuit of higher education. The study employs Deaux's (2006) model for the social psychological study of immigration and the conceptual frames of Whiteness and allyship.

This study involves four key components, including a literature review, a quantitative study, a qualitative study, and a mixed methods discussion. The first component of the dissertation serves as a review to critically examine previous literature on opinions of

undocumented immigrants in the United States as well as undocumented students' access to higher education (Jach, 2019). The review considers the context of the current political climate and interrogates going beyond raising consciousness toward liberatory praxis (Freire, 2007). The second component of the study uses data from the General Social Survey (GSS) to examine respondents' attributes potentially associated with views of immigration. Specifically, the study conducted a preliminary analysis of whether respondents' attributes, including holding a possible postdoctoral position, predicted views of immigration, and whether immigrants should have the same education as Americans. Results suggested that a combination of respondents' attributes predicted these views, and that being a non-White, a non-U.S. citizen, and having a graduate degree each increased the odds that respondents would support undocumented immigrants and/or immigrant education. The third component of the study used qualitative methods to interview postdoctoral fellows about their views of undocumented students' pursuit of higher education and how they can support undocumented students. Participants were recruited through the National Postdoctoral Association, and eligibility requirements included having completed a doctoral degree, current employment as a postdoctoral fellow, self-identifying as White, having citizenship in the United States, and agreeing that undocumented students should be supported. Findings suggested that postdocs with a personal or professional connection exhibited greater support toward undocumented students. Participants articulated strategies for how to support undocumented students as an ally and expressed a need for adult education on how to exhibit such support. The final chapter and fourth component of the dissertation used a mixed methods approach to examine quantitative and qualitative findings. The convergence and divergence of results were considered using Deaux's (2006) model for the social psychological study of immigration. The closing chapter also considers implications for practice and future research.

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DEDICATION

For Anthony.

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CHAPTER 1 - OVERVIEW OF THE STUDY

“The world needs a sense of worth, and it will achieve it only by its people feeling that they are worthwhile.” -Fred Rogers

“No human is illegal on stolen land.” -Activist t-shirt

“Postdocs are people too.” -Placard on the desk of a postdoctoral fellow

As the above quotes emphasize, higher education has overlooked undocumented students and postdoctoral fellows for decades. The American Association of State Colleges and Universities (AASCU) (2018) recently named undocumented and Deferred Action for Childhood Arrivals (DACA) students one of the top five issues for state policy, and *Science* has dubbed the postdoctoral fellowship “a special kind of hell” (Ruben, 2013). Approximately 70% of high school graduates enroll in college (Bureau of Labor Statistics, 2017), and only 5-10% of undocumented students who complete high school will go on to college (Gonzalez, 2016). The number of postdoctoral fellowships in the United States is on the rise: there are more than 80,000 today, and the number increased 52% from 1998 to 2014 (Ferguson, Huang, Beckman, & Sinche, 2014). At the same time, there were seven times as many postdoctoral fellowships as there were openings for tenure-track professorships in the United States (Ruben, 2013). Although undocumented students experience barriers distinct from those encountered by postdoctoral fellows, the most highly trained group within the academic pipeline, both groups have been systematically overlooked by the system of higher education. Academia can address these overlooked groups by reinvigorating research that examines how to support undocumented students’ pursuit of higher education. Specifically, the academy can consider postdoctoral

fellows as a group worth examining when studying the attitudes of groups within the system of higher education. This study will examine views of undocumented immigration according to attributes associated with those of postdoctoral fellows. In addition, this study will consider postdoctoral fellows' support of undocumented students' pursuit of higher education.

Statement of the Problem

Previous research (Muñoz, 2015; 2016; Suarez-Orozco et al., 2015) has demonstrated that undocumented students encounter a variety of barriers when pursuing higher education (for a review, see Bjorklund (2018)). In addition, the current political climate within the United States has resulted in a “Trump effect”, or a negative impact on undocumented immigrants as a result of Trump’s presidency, in K-12 schools (Southern Poverty Law Center, 2016), and for undocumented students and within institutions of higher education (Muñoz, Vigil, Jach, & Rodriguez-Gutierrez, 2018; Nienhusser & Oshio, 2019). Researchers have called for local action to enhance all students’ educational experiences given Trump’s ongoing threats (Nguyen & Kebede, 2017). When coupled together, the evidence is clear that undocumented students confront myriad challenges when pursuing higher education. Such realities make it even more important to consider attitudes regarding undocumented students’ pursuit of higher education. Attitudes matter: Beck’s (1967) model of cognitive behavioral theory suggests that an individual’s thoughts inform feelings, and feelings can inform behaviors- in this case, acts which may constitute supporting or hindering undocumented students. Considering majority views, or the views of those with privileged identities such as legal status as well as those who are White, can provide greater understanding of how to ameliorate the negative climate these students encounter (Cadenas, Cisneros, Todd, & Spanierman, 2018; Cisneros & Cadenas, 2017). Furthermore, an examination of majority opinions can create opportunities toward improving the

climate for undocumented students' pursuit of higher education. Indeed, previous research has employed critical consciousness to consider what motivated adult allies to support undocumented students, and respondents identified connections with volunteers and self-reflection on political involvement as key factors (Forenza, Rogers, & Lardier, 2017).

A variety of research has examined different populations within higher education on their opinions of undocumented students' pursuit of higher education. Previous research has examined the opinions of undergraduate students (Garibay, Herrera, Johnston-Guerrero, & Garcia, 2016; Herrera, Garibay, Garcia, & Johnston, 2013). In addition, studies have examined the opinions of employees of the academy, including: leaders of institutions of higher education (Feranchak, 2007; Parrish, 2015), staff (Cadenas et al., 2018; Cisneros & Cadenas, 2017; Nienhusser, 2018), community college leaders (Nienhusser, 2014), and faculty members (Ishiwata & Muñoz, 2018; Salas, 2012). There is a gap in the literature on this topic when it comes to examining the opinions of postdoctoral fellows. I argue this gap is problematic because factors found to be associated with greater support of undocumented immigrants and undocumented students include characteristics and attributes that are likely to comprise those of many postdoctoral fellows. Furthermore, postdoctoral fellows have been overlooked as a group when considering broader research in higher education even though the number of postdoctoral fellows has been on the rise (Cantwell & Taylor, 2013).

Research problems consider the relationship that may exist between two or more variables (Morgan, Leech, Gloeckner, & Barrett, 2013). The research problem for this study considers the relationship between attributes of postdocs and their support of both immigration and undocumented students. The overall research question considers: to what extent do

postdoctoral fellows support immigration and undocumented students' pursuit of higher education? This can be addressed using a mixed methods approach.

Purpose and Study Overview

The previous literature on attitudes toward undocumented students' pursuit of higher education overlooks postdoctoral fellows, just as the literature in higher education generally overlooks postdoctoral fellows. This gap is problematic since the attributes and experiences of postdoctoral fellows have been found to be associated with greater support of undocumented immigrants and/or undocumented students. This dissertation uses a four-article approach to better understand the following research question: to what extent do postdoctoral fellows support immigration and undocumented students?

To address this research question, I consider: (a) how previous literature has examined views of undocumented immigration and undocumented students, specifically within the academy; (b) the relationship between attributes of being a postdoctoral fellow and views of undocumented immigration and education for immigrants; (c) how postdoctoral fellows can support undocumented students' pursuit of higher education in their current and future roles; and (d) how quantitative and qualitative findings converge or diverge using mixed methods. This study employs Deaux's (2006) model for the social psychological study of immigration. Specifically, the model considers the various levels of influence forming individual views, including social structures at large (macro), individual influences (micro), and where the macro and micro interact (meso). The study addresses a gap in the literature on attitudes regarding undocumented students' pursuit of higher education by examining the opinions of a group within the academy which has often been overlooked: postdoctoral fellows. This research contributes to

the existing literature on attitudes within the academy toward undocumented student by using mixed methods, an underutilized approach.

This study employs a transformative, convergent, mixed methods design (Creswell & Plano Clark, 2018). In Study A, a critical literature review, I examine the previous research on majority views of undocumented immigrants and undocumented students' access to higher education (Jach, 2019). In Study B, a quantitative study, logistical regression analyzes data from the 2014 General Social Survey (GSS) (Smith, Davern, Freese, & Hout, 2018). The preliminary analysis considers whether respondents' attributes, such as having a graduate degree and being employed in a position that is a possible postdoctoral fellowship (since postdoctoral fellow is not an occupation code in the federal schema), predict views of undocumented immigration and immigrant education. In Study C, a qualitative study, postdoctoral fellows were interviewed about how they view and can support undocumented students' pursuit of higher education. Study D interprets quantitative results and qualitative findings using mixed methods. A conceptual map of the overall dissertation study is shown in Figure 1.

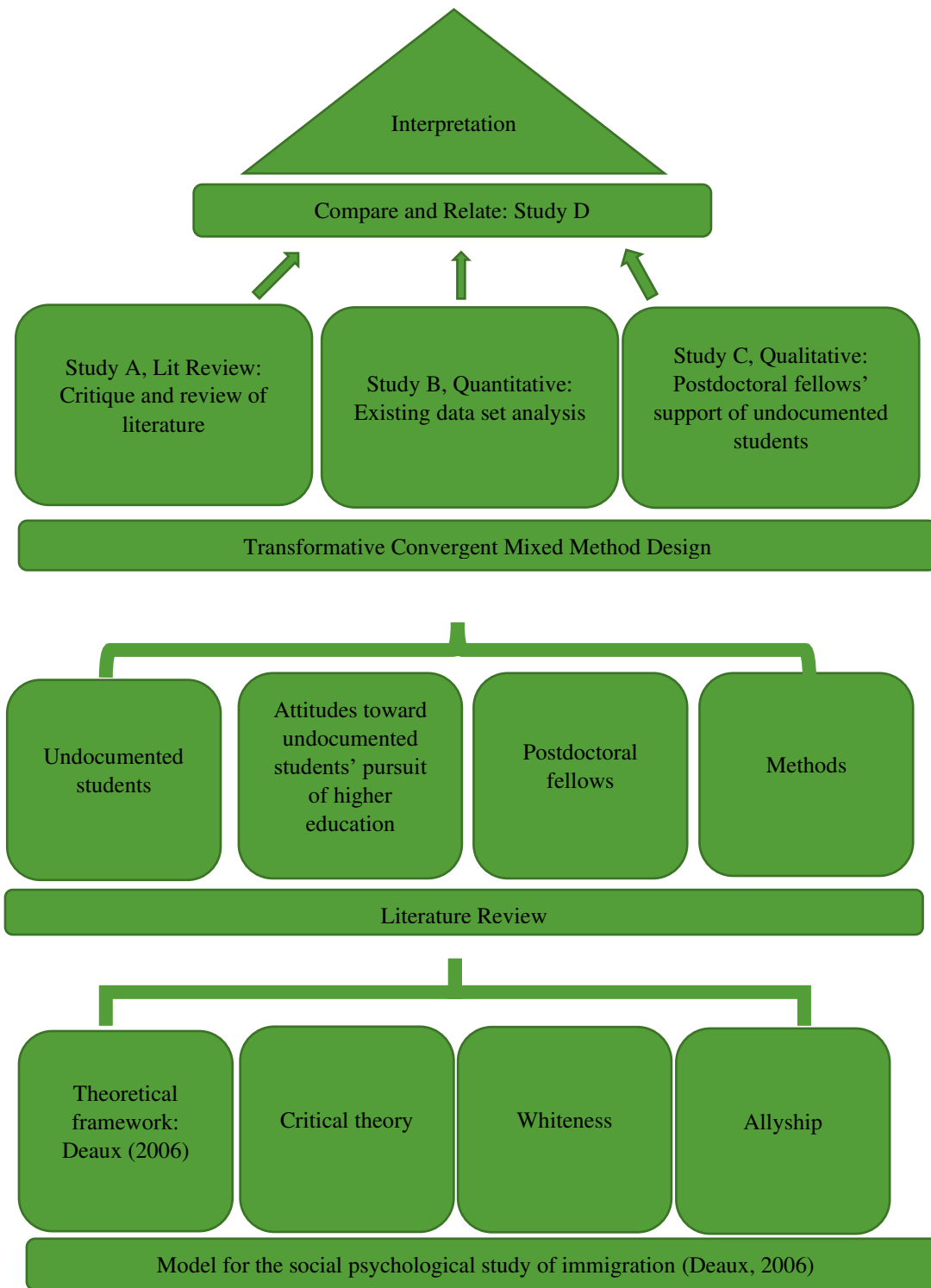


Figure 1. Concept map of the research design

Adapted from “Conception map of the research design” (Archibeque-Engel, 2014, p. 4). Used with written permission (S. Archibeque-Engel, personal communication, February 24, 2020).

Operational Definitions

Terms used throughout this study include undocumented student, DACA/ DACAmented, “illegal”, majority, attribute, opinion, attitude, postdoctoral fellow, and allyship.

An *undocumented student* can be defined as an individual who does not have legal status within the United States because they did not arrive with legal status or overstayed the limitations of their status. Some students in higher education have temporary legal status under the provisions of *Deferred Action for Childhood Arrivals (DACA)* and are known as *DACAmented*. DACA was initiated in 2012 by an Executive Order by President Obama. When meeting certain parameters, including age arrived in the United States and educational attainment, DACA recipients receive temporary status, which permits holders to obtain a driver’s license and bank accounts. Although the current Trump administration rescinded DACA in September 2017 with a 30-day window for current status holders to renew, recent judicial proceedings have forced the Trump administration to restore program renewals.

This study uses the term “illegal” in quotation marks to refer to the term as it has been used in existing literature and due to its use in current politics. The term “illegal” immigrant or “illegal” alien dehumanizes individuals into criminals and perpetuates the ability to render “illegals” as the other (Heath, 2018; Negron-Gonzales, 2013). For this reason, I denote “illegal” in quotation marks when used.

For the purposes of this study, *majority* refers to individuals with dominant or privileged identities in the United States. An example may be someone who identifies as White with citizenship status. As identity involves multiple factors, applying Anzaldúa’s (2012) borderlands perspective to majority identified individuals could suggest that individuals may identify with a

privileged identity in order to “pass” or associate with the status quo by associating with privilege through a borderland.

In the interest of simplicity, I use the term *attribute* in this dissertation to broadly refer to demographic characteristics and personal experiences that may describe individuals and groups. Just as hair color can be considered an attribute of an individual, demographic characteristics such as gender, race/ethnicity, and citizenship status, as well as individual experiences, such as graduate degree training and living in an urban environment, can be attributes of postdoctoral fellows.

The term *opinion* as defined by the Merriam-Webster online dictionary (2019a) can be defined as “a view, judgment or appraisal formed in the mind about a particular matter”. I use this term in the literature review (Jach, 2019) to consider public views and those of groups within the academy from a more objective stance.

To add nuance, the term *attitude* as defined by the Merriam-Webster online dictionary (2019b) can be defined as “a mental position with regard to a fact or state” or “a feeling or emotion toward a fact or state”. I employ the term attitude in this dissertation to move toward the understanding outlined by the theory of cognitive behavioral therapy (Beck, 1967), which posits that thoughts inform feelings, feelings inform behaviors, and in turn, behaviors can inform thoughts. That is, attitude goes beyond opinion by harnessing the reality that feeling and emotion are part of how worldviews are formed. Such feelings can in turn lead one to engage in behaviors which constitute support, apathy, or hindering support when it comes to the issue of undocumented students’ pursuit of higher education.

The term *postdoctoral fellow* (or postdoc) can be defined as a person “holding a doctoral degree who is engaged in a temporary period of mentored research and/or scholarly training for

the purpose of acquiring the professional skills needed to pursue a career path of his or her choosing” (National Postdoctoral Association, 2018b, para. 1).

This study uses Cabrera’s (2012) notion of *White allyship*. This concept suggests that Whites can become racial justice allies by working with People of Color (as opposed to for People of Color) (Cabrera, 2012). Furthermore, recent research has posited that White allyship is an ongoing effort rather than a competence to be achieved (Spanierman & Smith, 2017).

Theoretical Framework

This dissertation employs Deaux’s (2006) model for the social psychological study of immigration. The model incorporates three levels: the macro, meso, and micro. Just as Bronfenbrenner and Morris’ (1998) ecological framework considers the various systems of influence in an environment, Deaux’s (2006) model accounts for individual factors and views at the micro level, social structures at large at the macro level, and group viewpoints at the meso level, where the macro and micro interact. The model for the social psychological study of immigration (Deaux, 2006) applies to the present study because macro factors influence the current rhetoric surrounding immigration, such as the Trump effect (Southern Poverty Law Center, 2016; Muñoz, Vigil, Jach, & Rodriguez-Gutierrez, 2018). As President, Trump has used rhetoric demonizing immigrants on a routine basis. Contextual factors such as immigration policy inform the larger context situating current views. For instance, the Obama Administration’s implementation of Deferred Action for Childhood Arrivals in 2012 and the Trump Administration’s rescission of DACA in 2017 situate recent policy surrounding immigration. Micro factors comprise the experiences of undocumented students and postdoctoral fellows. Individual demographic factors and experiences in the higher education pipeline can inform attitudes, values, expectations, and motivations (Deaux, 2006). The

identities postdoctoral fellows bring with them to their training experience forms the micro level of how they perceive and are perceived in their environment. Deaux's (2006) model suggests that the meso level considers group attitudes, or how phenomena such as intergroup attitudes, social networks, and group stereotypes are formed. This study is particularly interested in how the larger macro factors, such as the structure of the academy and current political context, combine with micro, individual factors to inform the meso level of attitudes toward immigrants and undocumented students' pursuit of higher education.

Epistemologically, pragmatism underpins this study. According to Biesta (2010), pragmatism calls for acquiring knowledge through action and reflection. Furthermore, pragmatism embodies the values of democracy, freedom, equality, and progress (Greene & Hall, 2010). Since pragmatism involves using the most practical approach to address a research problem (Biesta, 2010), I propose a four-article dissertation to use distinct approaches to address the problem and to build on the strengths of both quantitative and qualitative data.

Critical theory also drives the development of this study. Hesse-Biber (2012) has posited that using a feminist approach to mixed methods research inclusive of women and oppressed groups can highlight voices and ways of thinking that have been devalued by dominant, patriarchal forms of knowledge. The feminist approach of mixed methods research reflects on absent voices and acts toward raising voices. Hesse-Biber's (2012) approach thus gives voice to undocumented students, postdoctoral fellows, and supporting undocumented students in the academy. In addition, Undocumented Critical Theory, or UndocuCrit, (Aguilar, 2019), embodies the tenet that "different experiences of liminality translate into different experiences of reality" (p. 2). Previous research has also suggested that viewing documented versus undocumented applies a binary which fails to capture individuals and the nuance of their

experience (Suarez-Orozco, Yoshikawa, Teranishi, & Suarez-Orozco, 2011). This study considers critical theory as a means of interrogating the status quo regarding attitudes in the academy toward immigration and undocumented students.

Conceptual Frames: Whiteness and Allyship

In order to examine attitudes toward undocumented students' pursuit of higher education, the concept of Whiteness must be critically and conceptually considered. Examining Whiteness matters because previous research has suggested that racial minorities reported more support for undocumented students than their White counterparts (Garibay et al., 2016). Indeed, Haney-López (2006) posited that the United States has a history of legalizing Whiteness as equivalence to citizenship status. The current political rhetoric against immigrants and building a wall along the U.S/Mexico border demonstrates the perpetuation of this systematic oppression. Lee (2005) delineated the complexities immigrant youth must navigate being "Up Against Whiteness". The dominance of Whiteness as a normalized form of racism and othering the minority is thus well documented.

More recently, scholars have continued to examine Whiteness within educational settings. Cabrera's previous work has extensively researched Whiteness among college students, which has illuminated Whites' views of minoritized groups within higher education (Cabrera, 2014a, 2014b; 2014c; 2018). Findings identified the perception that racism against Whiteness is on the rise (Cabrera, 2014a), and that White male undergraduates believed minorities were overly sensitive about racial jokes (Cabrera, 2014b). In addition, White males minimized issues of race in college and their racial views changed minimally during college (Cabrera, 2014c). Research has also documented the ways in which students and institutions comprising student affairs preparation programs protect Whiteness (Bondi, 2012). On the topic of attitudes toward

undocumented immigrants, a study examining the opinions of Whites using the 1996 and 2004 GSS found that older age, unemployment, and membership in the Republican party each increased the odds of disapproving of undocumented immigration while higher levels of education and being female decreased the odds (Berg, 2009). These findings illuminate the importance of considering Whiteness when examining majority opinions of undocumented students' pursuit of higher education.

White fragility also names a dominant and pervasive response majority-identified individuals have in response to considering their own race. DiAngelo (2011) defined White fragility as:

a state in which even a minimum amount of racial stress becomes intolerable, triggering a range of defensive moves. These moves include the outward display of emotions such as anger, fear, and guilt, and behaviors such as argumentation, silence, and leaving the stress-inducing situation. (p.1)

Matias (2016a) used DiAngelo's definition to be a socially-just educator when teaching by not permitting conversations to end without challenging her students' preconceived ideologies. In turn, White fragility can affect Students of Color, and if educators do not unpack their own Whiteness, understand White privilege, and address White fragility, they cannot encourage students to begin a racial healing process (Matias, 2016b). White fragility names an important reality of examining majority views of undocumented students' access to higher education. The work of Matias (2016a, 2016b) illuminated connections to the research on academy members' views of undocumented students' pursuit of higher education because acknowledging and unpacking this privilege can be a step toward working with undocumented and DACAmented students.

White allyship provides a lens that challenges the oppressive nature of Whiteness as citizenship (Haney-Lopez, 2006) and a front that immigrant youth must navigate (Lee, 2005). Cabrera (2012) called for White allyship in which Whites can become racial justice allies by working with People of Color (as opposed to for People of Color). As described by Cabrera (2012), “it is insufficient to simply criticize systemic oppression; one must also take action against it that is informed by theory, thereby developing praxis” (p. 381). Furthermore, recent research has posited that White allyship is an ongoing effort rather than a competence to be achieved (Spanierman & Smith, 2017). The literature has also issued calls to action both for how teachers can serve as allies on the front lines of working with undocumented students in schools (Luu, Dodson, Andrade-Ayala, & Rodriguez, 2017), and how counselors can help students transition from high school to higher education (Storlie & Jach, 2012). Most recently, research has demonstrated how People of Color engaged in racial justice activism have attributed their burnout to the attitudes and behaviors of White activists (Gorski & Erakat, 2019). These realities make it paramount for White people to partner with People of Color (Cabrera, 2012) and engage in their own self-work regarding Whiteness (Kendall, 2013).

As described by Spanierman and Smith (2017), White allyship is multi-faceted and an ongoing effort. White allyship can be defined as individuals who: demonstrate an understanding of institutional racism and White privilege, continuously self-reflect, commit to promoting equity, act toward disrupting racism on both micro and macro levels, work with People of Color, and navigate resistance from other Whites (Spanierman & Smith, 2017, pp. 608-609). In their delineation of challenges related to White allyship, Spanierman and Smith (2017) further posited that Whites must avoid positioning People of Color as objects of Whites’ efforts. Some research has demonstrated that experiences with oppression, such as White women’s experiences with

sexism and/or heterosexism helped individuals empathize with those experiencing racial oppression to a greater extent than White men (Case, 2012). Such “experiential affinity” (Boushel, 2000) can be helpful to White allies. However, Delgado (1996) has warned that Whites may superficially identify with People of Color, which can result in a sense of false empathy. Spanierman and Smith (2017) have called for Whites to engage in using their own experiences to challenge systemic oppression.

Researcher Positionality

Given previous research has demonstrated that undocumented students encounter numerous difficulties in terms of access to and persistence in higher education (Andrade, 2019; Bjorklund, 2018; Muñoz, 2015, 2016; Negrón-Gonzales, 2017; Serna & Cohen, 2017; Suarez-Orozco et al., 2015; Terriquez, 2015) and it is imperative for this research to continue, I am interested in attitudes within the academy toward undocumented students’ pursuit of higher education. Since previous research on attitudes about undocumented students’ pursuit of higher education has investigated various groups within the academy, I seek to examine the views of postdoctoral fellows. Postdocs form an overlooked group within higher education even though they constitute the final transition from the academic pipeline to the workforce. I am interested in examining postdoctoral fellows’ views of undocumented students’ pursuit of higher education to consider how postdocs as future leaders inside and outside of the academy can make a difference in developing pathways for undocumented students on campuses and through policy.

I identify as a White, heterosexual, cisgender woman with citizenship status in the United States who aspires to be a change agent. My identities inhabit substantial privilege. As a White heterosexual cisgender woman, I have perpetuated White hegemony. I do not have to recollect very far to be able to conjure an example. For instance: recently it was easier to not say anything

when my dad's friend made a racist joke because I could remain silent and be complicit as a "good" daughter rather than respond to a 70-something year old White man's offensive remark. Yet the costs of such silence and inaction compound over a lifetime: for me, for the speaker, for my father, for my family, and for society. I have also been able to plan my life with the assumption that I will succeed because of "hard work" and because I am "nice", when much of my success rests on the foundation of White, citizenship privilege. Furthermore, my position as an analyst in the Dean's Office at the University of Wisconsin-Madison School of Education embodies privilege. I help complete the U.S. News and World Report rankings survey, and I have the privilege of being employed at a top-rated public university.

I care about issues of campus climate for undocumented students because I believe that we will look back on the barriers we put up as a country and be ashamed. I wrote my college and graduate school entrance exams about being the great-granddaughter of German peasants living in Russia who left their families and homes in hopes of a better life in the United States. Without their willingness to leave a desolate situation behind for something better, I would not have the privileged existence I have now. As Isaac Newton wrote (Historical Society of Pennsylvania, 2019), I stand on the shoulders of those who came before me. And without this country's assumption that these White ancestors of mine were worthy of citizenship (Haney-Lopez, 2006), I would not be a fourth generation American.

I have learned about our country's immigration history as a student. While an undergraduate, I learned that we deemed who could enter the country and who was not allowed to enter based on eugenics and racism. I learned about undocumented immigration as a master's student at the University of Iowa. In Iowa City, I was surrounded by fields of corn. When I selected undocumented students as a topic for a class paper, I learned that the U.S. government

subsidizes corn for American farmers to the extent that it is cheaper for Mexico to import corn from the United States than for Mexican farmers to grow their own corn. This results in unemployment for Mexican farmers, and as the daughter of a White man in the suburbs of Milwaukee who experienced numerous layoffs in the telecommunications industry, I realized the unethical realities of our politics as a country. I cannot fathom the challenges Mexican farmers face when undercut by American subsidized corn, to the point of leaving their homes for a better life in the United States.

I have developed as a scholar because I have had the privilege of collaborating on quantitative and qualitative research teams. As a master's student aspiring to be a scholar and a change agent, I connected with a doctoral student who presented on undocumented students at a graduate student research presentation. She mentored me and we collaborated on a paper which resulted in my first co-authored publication (Storlie & Jach, 2012). As a White person with citizenship privilege, I benefitted from the plight of undocumented students by getting my first co-authored article published. As a doctoral student, I was employed as a graduate assistant on Dr. Munoz's research team for two years examining campus climate experiences of undocumented students. I have also had the privilege of collaborating with quantitative researchers using data from the Wabash National Study of Liberal Arts Education (Trolan, Jach, Hanson, & Pascarella, 2016). The possibility for mixed methods research to simultaneously embrace duality and singularity is especially helpful for me as a doctoral student having had experience on both qualitative and quantitative research teams. I have found both types of research to be illuminating in certain ways and limited in other ways.

I care about postdoctoral fellows because I have witnessed my spouse and my sister have the responsibilities of a full-time professional but be paid little more than a graduate assistant (or

less than a graduate assistant if considering the hourly rate of pay). The neoliberal academy (Slaughter & Rhodes, 2009) has found a cheap workforce within postdoctoral fellows: a highly trained group which can be lured into jobs which at times can simultaneously involve tasks far below their training and responsibilities above their paygrade. While the job market for tenure track positions within the neoliberal academy continues to decline, the number of postdoctoral positions- or cheap labor- continues to increase (Cantwell, 2013; Ferguson et al., 2014). How the academy has socialized this group matters not only for the future of higher education but for the future of our society, as postdocs are positioned to become leaders throughout the workforce.

Background

An examination of attitudes regarding undocumented students' pursuit of higher education, including those with majority identities such as being White and having legal status, may help inform opportunities for change (Cadenas et al., 2018; Cisneros & Cadenas, 2017). A Freirean approach (Freire, 2007) also provides an important critique of previous literature on majority opinions, in that much of the research fails to sufficiently make recommendations toward action for changing the status quo to address the myriad barriers undocumented students encounter when pursuing higher education. The lack of research on postdoctoral fellows within higher education generally, and specifically on the topic of examining attitudes within the academy on undocumented students' pursuit of higher education, may identify specific opportunities toward action. The following sections highlight areas of relevant literature on the topics of: undocumented students, attitudes about undocumented students' pursuit of higher education, and postdoctoral fellows.

Undocumented Students

Given that the American Association of State Colleges and Universities (AASCU) recently named undocumented students and DACA (Deferred Action for Childhood Arrivals) as one of the top five state policy issues (AASCU, 2018), institutions of higher education need to also prioritize the issue. More than 11 million undocumented individuals live in the United States, and of those, approximately 1.1 million are minors (Passel & Cohn, 2011). The political climate for undocumented students in the United States has been hostile under the Trump administration's anti-immigration stance. Trump's platform has touted "building a wall" at the expense of a record-length government shutdown, engaged in family separation at the United States-Mexican border, and led to the death of minors among those seeking asylum. Research has found negative repercussions of the "Trump effect" in schools (Southern Poverty Law Center, 2016) and within institutions of higher education (Muñoz et al., 2018; Nienhusser & Oshio, 2019).

Given the turbulent political climate on a national level coupled with the reality of vastly different state and institutional policies for undocumented students, the challenges become myriad. As of this writing, 18 states have in-state tuition, and some systems of higher education have passed in-state tuition for students (National Conference of State Legislatures, 2019). In-state tuition has been shown to benefit undocumented students on key measures of student success, including persistence and attainment (Ngo & Astudillo, 2019). The rhetoric in the United States about undocumented students' pursuit of higher education has turned into a binary with undocumented students as Dreamers (inhabiting and idealizing the American dream as well as the legislative proposal for the Development, Relief, and Education for Alien Minors [DREAM] Act which never passed) versus conservative stances seeking to reinvigorate the

status quo and strengthen it- by building a border wall. This rhetoric aligns with Deaux's (2006) notion of macro level factors when considering the study of immigration.

Previous research has illuminated the myriad obstacles encountered by undocumented students (for a review, see Bjorklund (2018)). While roughly 65,000 undocumented students graduate from high school each year (Passel, 2006), only 5-10% of undocumented students transition to higher education (Gonzales, 2016). Research by Muñoz (2015, 2016) elucidated that undocumented students confront numerous barriers in their pursuit of and persistence within higher education when coupled with their intersectional identities, which often include minoritized race and first-generation status. In a survey of undocumented undergraduates from more than 250 institutions of higher education, over two thirds of students reported experiencing discrimination based on their legal status within the past month (Suarez-Orozco et al., 2015). Such instances of discrimination illuminate the meso level of Deaux's (2006) model, with intergroup attitudes impacting the micro, or individual undocumented student experience, in a negative manner.

Researchers have also considered what contributes to the success of undocumented students and how institutions of higher education can create more inclusive educational experiences. Recent literature has made recommendations to higher education officials on navigating policy for undocumented students (Serna & Cohen, 2017) and strategic enrollment of undocumented students (Serna, 2017). Research has also shown that academically successful undocumented students have identified institutional supports and pro-immigrant public policy as factors that bolster their academic success and resiliency (Borjian, 2018). These studies suggest that addressing the macro level factors as elucidated by Deaux's (2006) model matter for undocumented students as a group and as individuals. In addition, researchers have considered

what contributes to undocumented students' activism and political engagement (Forenza et al., 2017; Muñoz, 2015).

Attitudes toward Undocumented Students' Pursuit of Higher Education

Literature has also examined attitudes regarding undocumented students' pursuit of higher education. Using the General Social Survey (GSS), one study examined symbolic politics and labor market competition and their association with views of undocumented students' access to higher education (Palmer & Davidson, 2011). Findings suggested that people who reported supporting bilingual education as well as believing that immigrants support the economy were more likely to report supporting undocumented students' access to higher education. Higher family income was also associated with less support of undocumented students.

Research toward undocumented students' pursuit of higher education has also surveyed the opinions of college students as well as others within academy. In a study of how urban and suburban students used language to describe undocumented status, Caicedo (2016) found that there were differences between urban and suburban college students. Specifically, urban students reported hearing the term "undocumented" more often while their suburban peers reported hearing the terms "alien", "legal", or "illegal" more often. Analyses also suggested that dichotomous legal-centered thinking framed the use of the term "illegal" while circumstantial thinking was associated with the term "undocumented." These findings underscore an important connection to the power there is in naming. The results also connect to an ethnographic narrative about a community college in North Georgia and response to undocumented status (Salas, 2012). That is, dichotomous thinking can contribute to dualistic thinking and undermining support for undocumented students.

Research based on cross-sectional surveys of undergraduate students conducted by the Higher Education Research Institute (HERI) at the University of California-Los Angeles has found a variety of factors to be associated with more support for undocumented students' pursuit of higher education. Specifically, certain demographic groups among undergraduate students reported higher levels of support for undocumented students, which included: racial minorities (as opposed to Whites), women (as opposed to men), non-native English speakers (as opposed to native English speakers), and those from a left-leaning congressional district (opposed to those who were not). In addition, holding liberal political views, being from a state with an in-state tuition policy for undocumented students, having experienced positive cross-racial interactions (as opposed to experiencing negative cross-racial interactions), and being supportive of undocumented students' access of higher education at the start of college were also associated with reporting higher levels of support for undocumented students (Garibay et al., 2016). The researchers also found that institutions receiving federal aid positively predicted more support, and private institutions predicted more support than public institutions.

A separate analysis indicated that taking an ethnic studies course, participating in a cultural workshop, and being a part of a cultural student organization were each positively associated with supportive views of undocumented students' access to higher education (Herrera et al., 2013). Conversely, the analysis revealed that endorsement of hard work as well as satisfaction with the current level of diversity of the student body were associated with less support for undocumented students' access to higher education. The findings from HERI exemplify micro (individual, such as gender), meso (intergroup attitude, such as Congressional district's voting history), and macro factors (presence of federal funding) as delineated by

Deaux's (2006) model for the social psychological study of immigration that have been shown to be associated with more or less support for undocumented students.

The literature on attitudes toward undocumented students' pursuit of higher education has also examined the opinions of administrators within higher education. In a phenomenological study examining advocacy for undocumented students, researchers profiled how two administrators constructed their support for undocumented students (Crawford & Arnold, 2016). Studies have also examined the opinions of higher education leaders in a variety of ways: a survey of leaders from institutions in multiple states (Feranchak, 2007), a qualitative study of 25 community college administrators (Jauregui & Slate, 2009), and opinions of religious leaders at Catholic institutions (Parrish, 2015). Nienhusser (2014) also examined the opinions of community interest group and community college leaders from the City University of New York. These studies demonstrate the variety of approaches to considering how positions of leadership matter in considering undocumented students' pursuit of higher education.

A few studies have also considered faculty opinions toward undocumented students' pursuit of higher education. Specifically, Salas (2012) conducted an ethnographic narrative of the political fallout following a town hall meeting about "illegal" Latino immigration at a two-year college in North Georgia. The study provided an in-depth description of the place and point in time by using ethnographic narrative. The author provided an important viewpoint from a faculty member at a community college (Salas, 2012). More recently, Ishiwata and Muñoz (2018) detailed how two faculty members supported an institutional response to the rescission of DACA by the Trump administration. This example case underscored how scholar-activists can not only serve as change agents, but also create the pathways for students, faculty, staff, and community members to also be institutional change agents (Ishiwata & Muñoz, 2018). Studies

about the viewpoints of faculty members also relate to Deaux's (2006) model because while faculty members may hold positional power in certain ways, they are also subject to the meso and macro factors within their campus and regional environments.

Most recently, researchers have employed Freirean (Freire, 2007) approaches to examine support of undocumented students within institutions of higher education. One study employed a pre-test/post-test approach to examine attitudes toward undocumented students before and after an intervention involving a DREAMzone training that did or did not include a video profiling personal stories of undocumented students (Cadenas et al., 2018). Both modalities improved participants' views compared to those who had not participated in the intervention. The study provided a viable, replicable method for institutions of higher education to create interventions to foster support and improve campus climate for undocumented students on their campuses. Similarly, Cisneros and Cadenas (2017) compared the results of a pre/post-test among attendees of a DREAMzone training. The test compared respondents' scores on competency and self-efficacy for working with undocumented students (Cisneros & Cadenas, 2017). Researchers have also examined institutional agents' abilities to incorporate undocumented/DACAmented status competency (UDSC) within their practice (Nienhusser & Espino, 2017). Naming UDSC provides a replicable means for institutions of higher education to incorporate necessary professional development and training for faculty and staff on their campuses by having definable means for those with majority privilege, including Whites and those with legal status, to develop professional competency. Nienhusser (2018) examined institutional agents' views of policy implementation and associated challenges. When considering Deaux's (2006) model for the social psychological study of immigration, these studies offer valuable insight into how an

intervention can change the meso-level group attitudes toward groups held by individual with micro-level differences in their background and experiences.

A Rationale for Examining the Views of Postdoctoral Fellows

Previous research on majority opinions of undocumented students' pursuit of higher education has examined a variety of populations but has overlooked postdoctoral fellows.

Research has considered attitudes regarding undocumented students' pursuit of higher education by examining the opinions of several groups within higher education, as displayed in Table 1.

Table 1.

Groups within the Academy Examined by Studies on Attitudes toward Undocumented Students' Pursuit of Higher Education

Group within the Academy	Citation(s)
Undergraduate students	Garibay et al., 2016; Herrera et al., 2013
Catholic leaders of institutions of higher education	Parrish, 2015
Leaders from states with/without in-state tuition for undocumented students	Feranchak, 2007
Staff	Cadenas et al., 2018; Cisneros & Cadenas, 2017
Institutional agents responsible for implementing policies about undocumented student enrollment	Nienhusser, 2018
Community college leaders	Nienhusser, 2014
Faculty members	Ishiwata & Muñoz, 2018; Salas, 2012

Furthermore, campuses are employing graduate assistants as support staff for undocumented students at places like the University of Denver and the University of Wisconsin-Madison. Since previous and current research has examined how leaders of institutions of higher education view undocumented students' pursuit of higher education (Feranchak, 2007; Nienhusser, 2018; Parrish, 2015), there is a modicum of work that has addressed this topic. However, there is a gap

in the literature examining how postdoctoral fellows view undocumented students' pursuit of higher education.

The gap that fails to examine how postdoctoral fellows view undocumented students' pursuit of higher education is problematic because factors found to be associated with greater support of undocumented immigrants and undocumented students are the characteristics and attributes overlap with those of many postdoctoral fellows. Specifically, previous research has shown the characteristics displayed in Table 2 to be associated with more support of undocumented immigrants and/or undocumented students' pursuit of higher education. In the table, each attribute is also designated with what level of Deaux's (2006) model for the social psychological study of immigration, with macro level factors designated with a capital "M" and micro level factors designated by a lowercase "m".

Table 2.

Attributes Associated with Supporting Undocumented Immigrants and/or Undocumented Students' Pursuit of Higher Education

Attribute(s)	Strength of findings	Citation(s)
Attending graduate school (m)	($\beta = .08, p < 0.01$)	Haubert & Fussell, 2006
Endorsing cosmopolitan (vs. parochial) views (m)	Rejecting ethnocentrism ($\beta = .21, p < 0.001$)	
Identifying as a racial/ethnic minority (m)	Versus Whites: Blacks ($b = .121, S. E. = .039, p < .01$), Mexican/Chicanos ($b = .357, S. E. = .028, p < .001$), other Latinos ($b = .280, S. E. = .055, p < .001$), and other races ($b = .106, S. E. = .047, p < .05$)	Garibay et al., 2016
Identifying as a woman (m)	Versus a man ($b = .158, S. E. = .023, p < .001$)	
Being a non-native speaker of English (m)	Native English speakers were less supportive than non-native English speakers ($b = -.156, S. E. = .038, p < .001$)	
Being from a Congressional district that is more liberal (M)	($b = .002, S. E. = .001, p < .01$)	

Attending institutions receiving federal aid (M)	($b = .003$, S. E. = .001, $p < .05$)	
Being from a state that has policies permitting in-state tuition for undocumented students (M)	($b = .082$, S. E. = .034, $p < .05$)	
Endorsing the belief that immigrants support the economy (m)	($\beta = 0.513$, S.E. = 0.149, $p \leq .05$)	Palmer & Davidson, 2011
Supporting bilingual education (m)	($\beta = 0.550$, S.E., = 0.161, $p \leq .01$)	Herrera et al., 2013
Having experiences with positive cross-racial interactions (m)	($b = .01$, S. E. = .00, $p < .001$)	
Living in an area with a larger Latino population (M)	Whites were less likely to agree that America should take greater measures to exclude “illegal” immigrants ($b = -.015$, S. E. = .00, $p = .046$)	Berg, 2009
Living in a more urban environment (M)	Compared to urban community college students, suburban community college students reported hearing the term “undocumented” less often ($t=5.06$, $p < .01$) and the term “alien” more often ($t = -3.16$, $p < .01$)	Caicedo, 2016

The characteristics and experiences identified in Table 2 may be associated with the characteristics and experiences of many postdoctoral fellows. More women than men are obtaining terminal degrees and half of all American postdoctoral fellows are women (National Postdoctoral Association, 2018a). In addition, 50% of postdoctoral fellows are now from outside the United States (Xu, Gilliam, Peddada, Buchold, & Collins, 2018). Even the recent popular press has reported findings that while studies indicate academics lean politically left, college does not necessarily make students more liberal but does broaden their perspective (Jaschik, 2018). This suggests that a variety of experiences may inform worldviews. As postdoctoral

fellows have completed at least eight years of post-secondary education and as many as twelve or fifteen, they may have encountered experiences that have been shown to be associated with supporting undocumented students' pursuit of higher education. Indeed, through so many years of training, postdoctoral fellows perhaps have lived in an urban environment to attend an institution that broadened their perspective, and/or may have included experiencing positive cross-racial interactions. These experiences could have led to immersion in the endorsement of a more cosmopolitan worldview. Furthermore, having committed to many years to their education, postdoctoral fellows have arguably demonstrated a personal endorsement of education and may in turn be more likely to endorse education on a social level. These characteristics thus invite the study of postdoctoral fellows' support of undocumented students.

Overlooking postdoctoral fellows as a group within the academy is a gap within the literature of the entire field of higher education. This is a particularly problematic gap because there is an increasing number of postdoctoral fellows and fewer tenure-track positions for postdoctoral fellows within higher education (Cantwell & Taylor, 2013). Higher education touts the importance of understanding transitions in the academic pipeline. Indeed, researchers have examined first-year experiences, transfer experiences, study abroad experiences, cumulative learning experiences (such as capstones and independent study), transitioning to graduate education, and preparing for the world of work. Yet there seems to be a paucity of literature about the final, most privileged transition from moving through the academic pipeline into entering academe or the workforce: the postdoctoral fellowship.

To be sure, postdoctoral fellows are hardly a monolithic group within higher education. This reality could account in part for why postdoctoral fellows have not been examined as a population within higher education and instead by the occasional headline in *Nature* (Xu,

Gilliam, Peddada, Buchold, & Collins, 2018) or *Science* (Ruben, 2013). However, there are institution-level and national-level associations of postdoctoral fellows, with an increase in the number of postdoctoral fellow associations created at individual institutions over the past ten years (Ferguson, Huang, Beckman, & Sinche, 2014). Postdoctoral fellows will be future faculty members, think tank analysts, government leaders, researchers, and leaders within start-up companies. How the academy has (or has not) socialized this group matters not only for higher education but also for society more broadly, as higher education matters as a public good (Labaree, 1997).

Research on Postdoctoral Fellows

Examining the postdoctoral fellowship experience within higher education matters now more than ever because of the harsh realities of the postdoctoral fellowship as described by recent research (Angervall, Gustafsson, & Silfver, 2018; Bryan & Guccione, 2018; Cantwell & Taylor, 2013; Gloria & Steinhardt, 2017; Yang & Webber, 2015). The number of postdoctoral fellowships has been increasing (Cantwell & Taylor, 2013) while the number of tenure-track positions within the academy has been decreasing (Ruben, 2013). This reality underscores the importance of considering the experience of postdoctoral fellows and how they can contribute to change within and beyond the academy.

Postdocs constitute a diverse group. Although there is a lack of demographic data about postdoctoral fellows, a recent study on the U.S. National Postdoc Survey reported information from 351 institutions in the United States which garnered a total response of 7,603 individuals (McConnell, Westerman, Pierre, Heckler & Schwartz, 2018). More than half of postdoctoral fellows identified as women and more than half were non-U.S. citizens (McConnell et al., 2018). Survey results demonstrated that residency status varied by gender, with men having a greater

likelihood of reporting being a non-U.S. citizen (52% on a temporary visa, 42% U.S. citizens, 6% permanent residents) as compared to women (38% on a temporary visa, 56% U.S. Citizens, and 6% permanent residents). Salary reporting indicated that women were paid less than their male postdoc counterparts even when controlling for institutional type, marital status, being a parent, and majority/minority status. A total of 8.4% of respondents reported their primary field as psychology, the humanities, or social sciences, and the majority reported positions in STEM disciplines. The median salary was \$43,750 and the mean salary was \$46,988 among 7,551 respondents (McConnell et al., 2018). Xu et al. (2018) also found that only 45% of non-U.S. citizens remain in the United States after completion of their fellowship in the United States as compared to 90% of postdoctoral fellows originally from the United States.

Postdoctoral fellows encounter myriad issues in their employment at institutions of higher education, including low pay, long hours, and job insecurity (Camacho, Kukor, Lee, & Rosenberg, 2016; Cantwell & Taylor, 2013; Ruben, 2013). Postdocs can be especially vulnerable to discrimination based on gender, race, and/or citizenship status (Camacho, 2017; Camacho et al., 2016; Camacho & Rhoads, 2015; Cantwell & Taylor, 2013). Postdoctoral fellows are expected to maintain high standards of productivity within their PI's lab (Ruben, 2013). Furthermore, postdocs are often subject to maintaining the good graces of their PI (Camacho, 2017). Ultimately, the PI ends up being the individual who can make or break the experience of the postdoctoral fellow by connecting them with future job prospects or making their path forward more difficult. Research suggests that PIs, who are predominantly White males, prefer postdocs who are also White males and that the costs for visas for international postdocs are either complained about as expensive or deemed the responsibility of the postdoc (Camacho, 2017). Institutions of higher education have designed the postdoctoral fellowship to

be based on an appointment in a specific department or lab, with little structural oversight. The tendency for PIs to maintain the positionality as first author on a publication even when others have done more of the work is widely accepted in the academy, even though postdocs without U.S. citizenship are the most productive when it comes to publications (Camacho, 2017; Camacho & Rhoads, 2015). Finally, compensation and benefits have been a long standing issue for postdoctoral fellows (Ruben, 2013). Along with institutions of higher education, federal funding agencies have been slow to make recommendations for a livable wage and basic benefits, such as health insurance (Camacho & Rhoads, 2015). Deaux's (2006) model illuminates that postdoctoral fellows may encounter macro level challenges regardless of whether they identify as an immigrant.

Recent research continues to examine the trajectories of postdoctoral fellows and suggests that future research needs to consider them as a group worth examining. Studies have examined postdoctoral fellowships as they relate to career paths in research and teaching (Angervall et al., 2018) and whether a doctoral degree was “worth it” (Bryan & Guccione, 2018). Establishing support offices on campuses employing postdoctoral fellows can establish a centralized resource for postdoctoral fellows (Ferguson et al., 2014). In addition, issues left unaddressed in the University of California system has led to the unionization of postdocs (Camacho & Rhoads, 2015). Many universities do have a vested interest in where their doctoral graduates end up. For instance, the Graduate School at Colorado State University (2018) requires doctoral students submitting their dissertation to complete the Survey of Earned Doctorates. In 2016, a total of 47% of science and engineering doctorate recipients accepted a postdoctoral fellowship upon degree completion (National Science Foundation, March 2018). Although efforts to consider the rights of postdoctoral fellows and to understand their career

trajectories are valuable, the lack of research on postdoctoral fellows within the field of higher education leaves an opportunity for future research to examine how the academy transitions this highly trained group into their final transition into the employment sector.

Methodology and the Four Studies

While much of the research on attitudes in the academy toward undocumented students' pursuit of higher education has used quantitative or qualitative approaches, mixed methods research can combine quantitative and qualitative data to provide a fuller picture than using a single approach (Creswell & Plano Clark, 2018). Furthermore, Hesse-Biber (2012) has posited that using a feminist approach to mixed methods research inclusive of women and oppressed groups can highlight voices and ways of thinking that have been devalued by dominant, patriarchal forms of knowledge. This study uses a four-article convergent mixed methods study to build on previous research on the topic of attitudes within the academy toward undocumented students' pursuit of higher education. The study includes a critical literature review with a Freirean (2007) framework (Jach, 2019), an analysis of the 2014 GSS to examine views of undocumented immigration with a consideration of having a postdoctoral fellowship as a possible occupation, a study conducting qualitative interviews with postdoctoral fellows about their views and support of undocumented students' pursuit of higher education, and a mixed methods analysis combining qualitative and quantitative results.

This dissertation study addresses previous gaps in the literature regarding groups within the academy and their opinions of undocumented students' pursuit of higher education. Specifically, this study accomplishes this by: (1) considering postdoctoral fellows as a population, and (2) employing mixed methods. Furthermore, this study employs Deaux's (2006) model for the social psychological study of immigration. Immigration policy, political rhetoric,

and the academy inform macro levels of influence, individual identities and backgrounds inform the micro level of individual experiences and views, and the combination of these factors informs the creation of meso level factors, such as intergroup attitudes and stereotypes. Examining how postdoctoral fellows view immigration and support undocumented students' pursuit of higher education can be examined using Deaux's (2006) model to better understand the various contextual factors which inform attitudes. This section briefly outlines the three proposed studies, interpretation of the studies, overall delimitations, and overall limitations.

Study A

Jach, E. A. (2019). Understanding views on undocumented students' access to higher education: A critical review and call for action. *Journal of Critical Scholarship on Higher Education and Student Affairs*, 5(1), 51-63.

The first study conducts a literature review of research on majority opinions of undocumented immigrants and undocumented students. I critically examine previous literature on opinions of undocumented immigrants in the United States as well as undocumented students' access to higher education through a consideration of the context of the current political climate. The article interrogates going beyond raising consciousness toward acting, as invoked by Freire's (2007) liberatory praxis. The analysis calls for future research to continue to employ Freirean (2007) approaches to engage in creating pathways for undocumented students' pursuit of higher education. This manuscript has been published by *The Journal of Critical Scholarship on Higher Education and Student Affairs*.

The study has both delimitations and limitations. The fact that the literature review considers studies which have examined majority opinions of undocumented immigrants and

undocumented students' pursuit of higher education is a delimitation. A limitation of the study is that the literature is limited to a review of research prior to the time of its publication.

Study B

Jach, E. A., & Gloeckner, G. W. (2020). Attributes associated with postdoctoral fellows and views of immigration: A preliminary analysis using the General Social Survey. *Journal of Critical Thought and Praxis*, 9(1), Article 5. <https://doi.org/10.31274/jctp.9571>

This study addresses the overall study's research question by to investigating whether attributes associated with postdoctoral fellows predict views of immigration. While previous research has used publicly available data sets to examine majority opinions of undocumented immigrants (Berg, 2009; Davidson & Burson, 2017; Haubert & Fussell, 2006; Kunovich, 2013; Palmer & Davidson, 2011; Stringer, 2018), I sought to update this research by using the 2014 GSS (Smith et al., 2018). The GSS is a publicly available data set. I obtained confirmation from the Colorado State University IRB that conducting analyses of this data set does not constitute human subjects research (T. Felton-Noyle, personal communication, September 10, 2018). The research questions for this analysis included:

1. Is there a combination of age, sex, race, U.S. citizenship status, having a graduate degree, and having a possible postdoctoral fellowship occupation that predicts whether America should exclude "illegal" immigrants? (N=1012)
2. Is there a combination of age, sex, race, U.S. citizenship status, having a graduate degree, and having a possible postdoctoral fellowship occupation that predicts whether legal immigrants should have the same education as Americans? (N=1153)

This study conducts a preliminary analysis of whether respondents' attributes, including holding a possible postdoctoral position, predicted views of "illegal" immigration, and whether

immigrants should have the same education as Americans. Findings suggest that a combination of respondents' attributes predicted these views. Results also suggest that the odds of being more supportive of undocumented immigrants were higher for Blacks and other races (as compared to Whites) and for non-U.S. citizens (as compared to U.S. citizens). In addition, being a non-U.S. citizen and having a graduate degree each increased the odds that respondents would support immigrant education. This study contributes to the literature on understanding attitudes about immigration by conducting a preliminary analysis on the views of an overlooked group within the academy: postdoctoral fellows. The analysis also updates previous research that has used publicly available data sets such as the GSS to examine views of immigration (Berg, 2009; Haubert & Fussell, 2006; Palmer & Davidson, 2011) and replicates findings on attributes associated with greater support of undocumented immigrants and undocumented students' pursuit of higher education (Berg, 2009; Garibay et al., 2016; Kunovich, 2013). My contributions on this study include writing the article and conducting initial analyses. Dr. Gloeckner's contributions include advising on the statistical analyses and providing feedback on the article write-up.

The quantitative study also involves delimitations and limitations. The quantitative analysis is confined to an existing, publicly available data set: the 2014 administration of the GSS (Smith et al., 2018). In particular, this study is limited to the use of survey questions which employ dehumanizing language by using the term "illegal" (Negron-Gonzales, 2013). Employing this language as part of the dependent variable of the study perpetuates White, citizenship hegemony and is at odds with Hesse-Biber's (2012) notion of feminist mixed methods. Yet using the data set also underscores the potential for raising the voices of an overlooked group, such as postdoctoral fellows. Studies on immigration have continued to use

this language (Caicedo, 2016; Diaz, Saez, & Kwan, 2011; Garibay et al., 2016; Herrera et al., 2013), perhaps because it represents the language which continues to be used in our vernacular. Future research needs to employ more humanizing language regarding issues of immigration. The study is also delimited to using respondents' attributes as reported in the 2014 administration of the GSS survey, which includes occupation, demographics, and views of immigration. Limitations include that selecting only 2014 data from the GSS may decrease statistical power of the analysis. In addition, due to the self-reported responses comprising the GSS data set, recording errors could be embedded within the data set. The study may have limited generalizability since the sample only included respondents who had no missing data for relevant attributes and dependent variables. Finally, using data from 2014 may not be generalizable to current views because Trump was elected in 2016.

Study C

Jach, E. A., & Gupta, K. (TBD). How postdoctoral fellows can support undocumented students' pursuit of higher education. *Adult Education Quarterly* or *Exposition* or *Whiteness and Education*.

The third study uses qualitative methods to interview postdoctoral fellows about their support of undocumented students' pursuit of higher education. This study addresses the overall study's research question by examining how postdoctoral fellows can support undocumented students. The inquiry also addresses the gap in the literature by specifically considering postdoctoral fellows on the topic of attitudes in the academy of undocumented students' pursuit of higher education. The research questions for this study include:

1. What opinions and perceptions do postdoctoral fellows have about supporting undocumented students' pursuit of higher education?

2. How can postdoctoral fellows in their current and future roles support undocumented students' pursuit of higher education?
3. How can postdoctoral fellows challenge the master narrative about undocumented students perpetuated by the current political rhetoric?

Previously, I conducted a pilot study on this topic. The pilot study involved individual interviews with two postdoctoral fellows at a large Midwestern research university. Both participants identified as having citizenship status, being White, and having current employment as a postdoctoral fellow. In the pilot study, the two postdoctoral fellows expressed support for undocumented students' pursuit of higher education and notions of uncertainty about the ability to work as allies. They also made connections between supporting undocumented students' pursuit of higher education and their disciplines as well as their employing institution. The findings from this pilot study suggest the need for conducting a more in-depth study.

This study uses a constructivist grounded theory approach with the use of critical theory to interrogate the topic. As described by Bhattacharya (2017), "constructivist studies examine how participants form meanings and actions" (p. 105). Grounded theory is the generation of conceptual categories from data or evidence (Charmaz, 2011; O'Connor, Netting, & Thomas, 2008). Furthermore, this approach involves constant comparisons toward providing application and predictive power toward a form of interpreted truth. This study uses grounded theory toward "context-imbedded meaning making" thus invoking the need for "the demonstration of multiple perspectives, bounded subjectivity, trustworthiness and authenticity" (O'Connor, Netting, & Thomas, 2008, p. 44).

Upon obtaining IRB approval, this study recruited participants through the National Postdoctoral Association (NPA), a non-profit organization which has been committed to

advocating for postdoctoral fellows for more than fifteen years. As a graduate student affiliate member of NPA through Colorado State University, I submitted an email advertisement to recruit members of the organization to participate in the study. The NPA (2019) describes the process for these e-ads on their website. Requirements for participation included having completed a doctoral degree and current employment as a postdoctoral fellow at an institution of higher education. Participation was also limited to considering the views of those who self-identify as White citizens of the United States and agree that undocumented students should be supported in their pursuit of higher education. To address these eligibility criteria, the recruitment email contained a link to brief eligibility screening tool available online (see Appendix A). Interested participants complete the eligibility screening tool, and if eligible, were asked to submit an email address to be contacted about setting up an interview. Interviews were conducted via video conferencing. Interviews lasted approximately 45 minutes. Individuals who participated in an interview received a \$50 gift card. For a list of interview questions, see Appendix C.

Qualitative methods guided the data collection and analysis. With permission from participants, interviews were video recorded. All transcripts were transcribed verbatim. Any identifying information, such as name, title, and institutional affiliation, was removed from the transcript. Study participants had the opportunity to review transcripts and have any information stricken from the record. Analysis uses Charmaz's (2011) and Saldana's (2009) approaches for qualitative coding for social justice research. I engaged in initial coding and then re-reviewed all instances of codes. In addition, I worked with an auditor who has experience with mixed methods and/or qualitative research to review codes from the de-identified transcripts. After engaging in synthesizing all codes and seeking input from the study auditor(s), I re-examined all

coding. All study records will be kept according to privacy and confidentiality measures as approved by the CSU IRB. Findings indicated postdocs with personal or professional connections to undocumented students exhibited greater support. While postdocs articulated strategies to support undocumented students, they also expressed a need for adult education on the issue. Brookfield's (2005) critical theory for adult education invokes implications for practice and policy at institutions of higher education toward engaging postdocs as allies of undocumented students. My contributions to this study included conducting the data collection, analyses, and a draft of the manuscript. Dr. Gupta's contributions included informing the theoretical framework, making connections to adult education as well as policy, and providing feedback on the manuscript.

The qualitative study involves delimitations and limitations. Delimitations include the reality that interviews with postdoctoral fellows will be confined to what information the interviewees choose to share. Furthermore, transcripts may be limited to what information participants choose to keep in the record of transcription, as they will have the option to have anything removed. Analysis will include no more than ten postdoctoral fellows. A limitation of the qualitative study is that findings may not represent postdoctoral fellows who constitute the membership of the National Postdoctoral Association due to the nature of personal interviews with individuals.

Study D: Interpretation

Jach, E. A. (TBD). How postdoctoral fellows view and can support undocumented students: A mixed methods approach. *Journal of Mixed Methods Research, International Journal of Multiple Research Approaches, Cultural Studies - Critical Methodologies, or Exposition*.

The final and fifth chapter of the dissertation considers quantitative and qualitative results together and uses a mixed methods approach to explain findings and implications. The use of this method facilitates the combination of quantitative and qualitative data which can provide a fuller picture than using a single approach (Creswell & Plano Clark, 2018). In addition, Hesse-Biber's (2012) description of a feminist approach to mixed methods research can give voice to groups which have been devalued by dominant forms knowledge, such as patriarchy. While in distinctly different ways, postdocs and undocumented students have been devalued by the system of higher education.

I examine the results of each of the above quantitative and qualitative studies in relation to Deaux's (2006) model for the social psychological study of immigration. Results are compared side by side in a joint display with an analysis of diverging and converging results. Findings are also interpreted with consideration to the concept of Whiteness, including White allyship (Cabrera, 2012; Spanierman & Smith, 2017). This study uses convergent mix methods to examine postdoctoral fellows' views of immigration and how they can support undocumented students' pursuit of higher education. Finally, this analysis considers implications for practice in that postdocs can be engaged toward working as allies with undocumented students.

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CHAPTER 2 - UNDERSTANDING VIEWS ON UNDOCUMENTED STUDENTS' ACCESS TO HIGHER EDUCATION: A CRITICAL REVIEW AND CALL FOR ACTION ¹

Summary

This review critically examines previous literature on opinions of undocumented immigrants in the United States as well as undocumented students' access to higher education through a consideration of the context of the current political climate, and interrogates going beyond raising consciousness towards taking action, as invoked by Freire's (2000) liberatory praxis.

Introduction

Since the Trump administration's rescission of Deferred Action for Childhood Arrivals (DACA) in September 2017, undocumented students in the United States remain in limbo. Today, DACA provides limited protections for undocumented students who met qualifying requirements. Since the Obama administration's implementation of the Executive Order in 2012, the courts have debated the future of DACA and there are current cases ongoing. Recently, the Supreme Court refused to bypass an appellate court's review of a challenge to the DACA rescission forcing the Trump administration to resume renewals of DACA (Kopan, 2018). With Congress yet to solidify an alternative for DACA or agree on immigration legislation, the immense stress of an unknown future and negative political climate will continue to impact the undocumented student experience on college campuses across the country.

Previous research has named the difficulties undocumented students encounter at institutions of higher education (Bjorklund, 2018). Indeed, undocumented students encounter

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numerous barriers to their pursuit of higher education especially when coupled with intersectional minority identities, including race and first-generation status (Muñoz, 2015; 2016). In a survey of 909 undocumented undergraduates from 264 institutions of higher education, more than two thirds of students reported experiencing discrimination based on their legal status within the past month (Suárez-Orózco et al., 2015). Such challenges also are prevalent at the K-12 level. Lee (2005) demonstrated the complexities immigrant youth must navigate being “up against whiteness”, as described in the title of her book. Recent research has deemed that local action for undocumented students may be the best option under the Trump administration (Serna & Cohen, 2017). Furthermore, research on the experience of undocumented students during the Trump administration has demonstrated an exacerbation of student stress and heightened risk for “stopping out of their studies” (Andrade, 2019, p. 12). These realities make it imperative to understand how people with legal status, specifically Whites, construct their support of undocumented students’ access to higher education. In addition, Whites with legal status have the opportunity to become allies and counter the master narrative of undocumented students’ access to higher education, a narrative which renders these students as “illegal.” The purpose of this literature review is to critique current research on understanding majority opinions of undocumented immigrants, as well as undocumented students, through the lens of Freire’s (2000) liberatory praxis and an incorporation of postcolonial feminism. This review critically examines research to date and identifies opportunities for action towards improving undocumented students’ access to and persistence in higher education.

Theoretical Framework

The present critique employs Freire’s (2000) liberatory praxis and postcolonial feminism to analyze previous literature on majority opinions of undocumented students’ pursuit of higher

education. Freire's (2000) liberatory praxis entails raising consciousness and engaging with others (such as students and teachers) towards action informed by critical systemic analysis. Agents of institutions of higher education can define and work towards action steps to support undocumented students' pursuit of higher education. This review critiques previous literature through this lens of opportunity. Although previous research has illuminated ignorance, ambivalence, and even malice regarding the plight of undocumented immigrants and undocumented students, much of this literature fails to consistently design action, recommend action, or take action towards building advocacy for - and allyship with - undocumented students. This review critically examines previous literature on opinions of undocumented immigrants in the United States as well as undocumented students' access to higher education. This critique occurs in the context of the current political climate towards raising consciousness and, most importantly, taking action as called for by Freire's (2000) liberatory praxis. As described by Cabrera (2012), "it is insufficient to simply criticize systemic oppression; one must also take action against it that is informed by theory, thereby developing praxis" (p. 381).

This critique also employs postcolonial feminism to examine the binary surrounding the rhetoric between "illegal" immigrants and Dreamers. The term Dreamers refers to individuals who were brought to the United States as minors through no choice of their own (these individuals are also known as the 1.5 generation). As described by Bhattacharya (2017), postcolonial feminism is "especially conscious about the binary relationships formed when we create a line of division between two ideas" (p. 82). Postcolonial feminism challenges existing frameworks, including feminism, by seeking to incorporate intersectionality, including identities such as race, ethnicity, and gender, to dismantle and complicate the binary of feminism versus cispatriarchy, as well as intersectional systems of oppression (Crenshaw, 1991). Anzaldúa's

(2012) seminal work considered identities, such as identifying as Chicana, a lesbian, an activist, in a more nuanced way. That is, Anzaldúa (2012) suggested that rather than identities creating categories of “us” and “them,” binaries create borderlands which are lived, inhabited spaces. This review employs postcolonial feminism as a means of interrogating binary views about immigration and undocumented students’ pursuit of higher education. In this analysis, Anzaldúa’s (2012) notion of borderlands complicates the framing of immigration in current political rhetoric: supporting Dreamers versus barricading “illegal” immigration (such as through building a wall along the border of United States and Mexico). Together, Freire’s (2000) notion of liberatory praxis and postcolonial feminism invite the complication of the binary which currently dominates the immigration debate with an emphasis towards engaging in action.

Conceptual Framework

The conceptual framework considers the use of the terms “illegal” and citizen, as well as aspects of Whiteness. These concepts comprise important tenets for a critique of the literature about majority opinions of undocumented immigrants and undocumented students’ access to and persistence in higher education.

Use of Terms

This review employs the use of the terms “illegal” as well as citizen. Negrón-Gonzales (2013) asserted that the term “illegal” frames immigrants as criminal which functions as a means of dehumanizing others. For this reason, this paper uses the term “illegal” in quotes to reference the term as used in previous literature as well as how it is used within the current rhetoric surrounding the immigration debate in the United States. Indeed, Haney-López (2006) argued that the United States has a history of legalizing Whiteness as equivalence to citizenship status. Postcolonial feminism and Anzaldúa (2012) provide a valuable critique of the binary between

Dreamers seeking access to higher education and Whiteness as a requisite for citizenship status within the United States.

This analysis considers citizenship a form of legal status. Ong (1999) contended that globalization has more complex implications than economic consequences, in that globalization also motivates individuals and groups towards flexible citizenship. Thus, postcolonial feminism can also be applied to the binary between “illegal” and “citizen,” as Ong’s work demonstrates that there is more complexity to such a binary. For undocumented students, previous research has examined the rhetoric surrounding the use of terms such as “alien” and “undocumented,” finding through values analysis that using the term “alien” was associated with perceptions of the importance of legality and use of the term “undocumented” was associated with perceiving someone’s status as circumstantial (Caicedo, 2016). These findings demonstrate how everyday language used within conversations and written works evokes contextualization. In turn, the contextualization created using such terms contributes to frameworks which constitute ideas, viewpoints, and ideologies.

The terms access, persistence, and majority also play a role in this review. The term access refers broadly to “the ways in which educational institutions and policies ensure—or at least strive to ensure—that students have equal and equitable opportunities to take full advantage of their education” (Great Schools Partnership, 2014, para 1). At the time of this writing, DACA continues to be debated in the courts and only 18 states have legislated in-state tuition for undocumented students. These realities constitute a lack of consistent policy for undocumented students’ equal and equitable opportunity to attend institutions of higher education. Persistence refers to “continued enrollment (or degree completion) at any institution” of higher education (National Student Clearinghouse, 2015, para. 3). This broad definition suggests that consistent

progress toward undergraduate degree completion can be a measure of success. The term majority is a term that refers to individuals with majority identities in the United States, such as identifying as White with legal status. Since not all studies reviewed delimited samples by these two factors, this review uses the term majority to encompass dominant identities. As identity involves multiple factors, applying Anzaldúa's (2012) borderlands perspective to majority identified individuals could suggest that individuals may identify with their privileged identity in order to "pass" or associate with the status quo by associating with privilege through a borderland. Although beyond the scope of this review, future research needs to continue to dismantle the ways in which terms such as majority perpetuate the binary and decentralize issues of privilege.

Whiteness

Research on Whiteness provides important context for understanding White citizens' opinions of undocumented students' access to higher education. Since legalized Whiteness has defined citizenship status in our country's history (Haney-Lopez, 2006) and previous research has found that racial minorities reported more support for undocumented students than their White counterparts (Garibay, Herrera, Johnson-Guerrero, & Garcia, 2016), this review briefly considers a critique of Whiteness to raise consciousness towards liberatory praxis (Freire, 2000).

DiAngelo (2011) defined White fragility as:

a state in which even a minimum amount of racial stress becomes intolerable, triggering a range of defensive moves. These moves include the outward display of emotions such as anger, fear, and guilt, and behaviors such as argumentation, silence, and leaving the stress-inducing situation. (p.1)

Matias (2016a) used DiAngelo's (2011) definition of White privilege to be a socially-just educator when teaching by not permitting conversations to end without challenging her students' preconceived ideologies. She also argued that White fragility can affect Students of Color. She further pointed out that if educators do not unpack their own Whiteness, understand White privilege, and address White fragility, they cannot encourage students to begin a racial healing process (Matias, 2016b). In addition, Spanierman and Smith (2017) pointed out that White allyship is an ongoing effort rather than a competence to be achieved. Considering White fragility and White allyship matters when seeking to understand how Whites with citizenship or legal status in the United States make sense of undocumented students' access to higher education.

Although a review of the literature on Whiteness is beyond the scope of the present study, research on Whiteness provides important insight into majority views. Cabrera's previous work has extensively researched Whiteness among college students which helps to clarify Whites' views of minoritized groups within higher education. Cabrera's findings identified the perception that racism against Whiteness is on the rise (Cabrera, 2014a), White male undergraduates believed minorities were overly sensitive about racial jokes (Cabrera, 2014b), and White males minimized issues of race in college and their racial views changed minimally during college (Cabrera, 2014c). Thus, previous research exposed how White cispatriarchy is part of the social fabric of White students' views of minoritized individuals. In addition, Cabrera (2012) called for White allyship in which Whites can become racial justice allies by working with People of Color (as opposed to for People of Color). The importance of working with those of a marginalized group is integral to employing Freire's (2000) concept of liberatory praxis. Considering White fragility, White privilege, and White racial justice allyship

are critical for an examination of the literature on majority views of undocumented immigrants as well undocumented students' access to higher education to help inform consciousness raising towards Freire's (2000) liberatory praxis.

Review of the Literature

Literature on majority opinions of undocumented immigrants and undocumented students misses the opportunity to consistently recommend action, design action, or act to make substantive change towards developing praxis. This review provides a critique of literature regarding opinions about undocumented immigrants, as well as undocumented students' access to higher education which currently fails to: (a) sufficiently employ Freire's (2000) liberatory praxis, and (b) consistently identify exemplars of research in praxis which recommend, design, or report on how to advocate for and ally with undocumented students in their pursuit of and persistence in higher education.

Studies on Majority Opinions of Undocumented Immigrants

Previous research (Cowan, Martinez, & Mendiola, 1997; Diaz, Saenz, & Kwan, 2011; Haubert & Fussell, 2006) has examined opinions of undocumented immigrants within the United States often failing to sufficiently employ Freire's (2000) liberatory praxis to design, recommend, or take action towards developing praxis. In a survey of college students at a state university and community colleges near Los Angeles, CA, researchers examined attitudes toward "illegal" immigrants in response to a news story about recent beatings of two undocumented immigrants. Researchers found that "negative attitudes toward illegal immigrants are related to the stereotypes held about illegal immigrants, a humanitarian-egalitarian value system, and negative attitudes toward legal Mexican Americans" (Cowan, Martinez, & Mendiola, 1997, p. 412).

Opinion research has also unpacked negative views about undocumented immigrants related to views on employment. One such study identified an association between views about the economy and views about undocumented individuals (Diaz, Saenz, & Kwan, 2011). The authors concluded that “immigrants may become scapegoats of social discontent and thus be seen as potential usurpers of governmental and private resources” (Diaz, Saenz, & Kwan, 2011, p. 309). Such views suggest that resources are limited, and competition is inherent to accessing the available pool of resources. To analyze how immigrants impact the economy and society based on measures of group threat, labor market competition, and cosmopolitanism, Haubert and Fussell (2006) conducted regression analysis using data from the General Social Survey, carried out by the National Opinion Research Center. Findings identified higher levels of perceived group threat, higher levels of labor market competition within low-skill level jobs, and parochialism (as opposed to cosmopolitanism) as having an association with more negative views of immigrants (Haubert & Fussell, 2006). These results expose how majority opinions can be formed through a lens of fear within one’s tradition. However, these results fall short of taking the next step to identify clear ways to move towards action to counteract negative view formation.

More recent research has also examined factors associated with negative views of immigrants. A study identified that group threat perceptions were lower when job growth was expected in a specific occupation or sector, and education was associated with lower levels of perceived group threat as people in an occupation are more likely to have similar levels of education (Kunovich, 2013). In a study which included both college students and local community members, researchers found that higher levels of endorsing nationalism have also been associated with higher levels of endorsement of punishing immigrants, rather than the

citizens employing undocumented immigrants (Mukherjee, Molina, & Adams, 2012). The authors also found that patriotism and nationalism significantly predicted support for apprehending and punishing undocumented immigrants. Such findings shed light on the outcome of the 2016 presidential election and the current rhetoric about building a wall along the border with Mexico. That is, the attitudes of White U.S. citizens perpetuate stereotypes and negative attitudes against undocumented immigrants. These findings demonstrate how previous research has uncovered the majority's bias against undocumented immigrants and leave a gap for identifying action steps to increase support for undocumented immigrants.

Nationalism and political views have continued to be found to be related to views on undocumented immigrants. One such study found a significant interaction between high levels of group narcissism and national in-group identification, which negatively predicted attitudes toward undocumented immigrants who were also Latino (Lyons, Coursey, & Kenworthy, 2013). More recently, Stupi, Chiricos, and Gertz (2016) found that political ideology and education were the strongest predictors of perceived criminal threat, which in turn had the greatest influence on support for more punitive controls of undocumented immigrants. Although outside of the United States, an examination of university students in Spain which assessed subtle and blatant prejudice towards "illegal" immigrants who had crossed the border found that students' culture of origin was significantly associated with attitudes about migrants (Segura-Robles, Alemany-Arrebola, & Gallargo-Vigil, 2016). These findings demonstrate how constructs of "the other" are defined by divisive lines, both ideologically and politically. Ong's (1999) work suggested that globalization contributes to the flexibility individuals and groups press upon such divisions. Anzaldúa's (2012) premise of borderlands complicates such binaries by creating space within the boundaries for ideas and individuals to exist. Although the studies considered

in this section help to unpack the nuances of how majority groups view undocumented immigrants, they neglect to consistently take action towards developing praxis on how to support undocumented immigrants. As delineated in Freire's (2000) liberatory praxis, consciousness raising is insufficient but must be followed by action.

Studies on Majority Opinions of Undocumented Students' Access to Higher Education

Literature examining people's opinions of undocumented students' access to higher education has also insufficiently contributed to praxis as defined by Freire (2000). Using cross-sectional data from The Freshman Survey and The College Senior Survey, two studies demonstrated the association between student identities and experiences with views of undocumented students' access to higher education (Garibay, Herrera, Johnson-Guerrero & Garcia, 2016; Herrera, Garibay, Garcia, & Johnston, 2013).

Specifically, Garibay et al. (2016) used multilevel modeling to examine data from The Freshman Survey and the College Senior Survey to examine factors that may be associated with supportive views of undocumented students' access to higher education. For individual characteristics, the authors found that: racial minorities were more supportive of undocumented students than Whites; women were more supportive than men; native English speakers were less supportive than non-native English speakers; having a home address in a left-leaning congressional district was associated with greater support; and positive cross-racial interactions, supportive views at the start of college, and liberal views were associated with more supportive views of undocumented students' access to higher education. Institutions receiving federal aid, private institutions, and students in states with an in-state tuition policy for undocumented students also predicted higher levels of support. Factors associated with less support for undocumented students' access to higher education included: concerns about obtaining

employment after college, negative cross-racial interactions, and residing in a place without in-state tuition policies for undocumented students. These findings suggested that certain undergraduate student attributes were associated with support for undocumented students.

In a related analysis, Herrera et al. (2013) found that students' participation in an ethnic studies course, cultural workshop, and a cultural student organization were each positively associated with views supporting undocumented students' access to higher education. Conversely, higher levels of endorsement of beliefs in hard work as well as satisfaction with present levels of diversity within an institution's student body were associated with less support for undocumented students' access to higher education. Although Herrera et al. (2013) called for future research to investigate how interactions with undocumented students may be associated with majority views of undocumented students, these studies fail to sufficiently address how to take action on the issues related to undocumented students' access to and persistence in higher education. Herrera et al.'s (2013) findings suggested that undergraduate student experiences were also associated with support for undocumented students' pursuit of higher education, suggesting that future research could investigate whether intervening to create such student experiences could build support for undocumented students.

Other studies have also examined majority opinions of undocumented students' access to higher education. A mixed methods dissertation examined the opinions of leaders of institutions of higher education in nine states, which included places with and without in-state tuition policies for undocumented students (Feranchak, 2007). The study found significant differences in opinions based on leaders' ethnicity, political affiliation, institutional type, and state status on in-state tuition; however, no differences were found based on gender, position, age, or years of experience (Feranchak, 2007). Feranchak's (2007) results underscore the importance of political

and ideological differences in constructing views about undocumented students' access to higher education. Palmer and Davidson (2011) also reported factors associated with higher levels of support for undocumented students' access to higher education, such as supporting bilingual education and holding the belief that immigrants support the economy. Conversely, higher family income was associated with less support of undocumented students' access to higher education. In addition, an analysis of the 2006 Immigration Survey conducted by the Pew Research Center investigated the association between forms of nativism and attitudes about whether children of immigrants should be able to access education (Davidson & Burson, 2017). Findings revealed that economic and cultural nativism significantly predicted individuals' opposition to education for undocumented students (Davidson & Burson, 2017). Factors related to opinions of undocumented students' access to higher education including ethnicity, higher family income, and forms of nativism underscore the importance of critiquing and understanding Whiteness. These findings provide important insights into understanding what individual and contextual factors are associated with supporting undocumented students' access to higher education. However, the studies do not consistently design, recommend, or take action towards developing praxis to support undocumented students' access to and persistence in higher education.

Research Recommendations for Designing and Taking Action

Some studies have made recommendations for designing future research and taking on issues related to undocumented students' access to higher education. In an updated literature review of academic success outcomes for Latina/o undergraduate students, Crisp, Taggart, and Nora (2015) identified the need for future topics and more consistent use of terms and measures. In a dissertation examining leaders of Catholic universities' approach to undocumented students'

access to higher education, Parrish (2015) found that leaders expressed an obligation to protect undocumented students and their families through Catholic identities and making sense of leadership. Parrish's (2015) findings unpack how people in positions of power make sense of a topic often perceived as a binary in which an individual or an entity is either for or against undocumented students' access to higher education. Applying postcolonial feminism to these findings presents an interesting dimension. That is, perhaps, protection from Catholic priests perpetuates cispatriarchy, yet simultaneously serves as an action step towards undocumented students' access to higher education. In an ethnographic narrative detailing experiences of political fallout following a town hall meeting about "illegal" Latino immigration at a two-year college in North Georgia, the author called for engaging explicitly with contemporary political issues (Salas, 2012). The article demonstrated how the use of the derogatory language of "illegal" immigrants continues to uphold systemic oppression in which undocumented people are less than citizens. The study also placed a spotlight on the parochial. Given that previous research has found parochial views to be associated with less support of undocumented immigrants (Haubert & Fussell, 2006), the need for understanding what might nuance the binary of such views is an opportunity for future research. An incorporation of understanding and critiquing Whiteness also relates to future efforts towards raising consciousness, as called for by Freire (2000). Crisp, Taggart, and Nora (2015), Parrish (2015), and Salas (2012) provided positional illustrations of possible forms of designing and taking action to support undocumented students' access to and persistence in higher education.

More recently, Serna and Cohen (2017) reviewed the policies of 17 states which provide in-state tuition for undocumented students, as well as six states prohibiting in-state tuition benefits for undocumented students. They also reviewed system-wide actions of six state

systems of institutions of higher education. The authors concluded that local action to work towards supporting undocumented students' access to higher education may be the best option under the current Trump administration. Thus, Serna and Cohen (2017) provided recommendations for a place to start working towards praxis on an issue that has yet to be resolved on the national level. Their recommendations also inhabit Anzaldúa's (2012) notion of inhabiting a borderland: creating space against the master narrative which renders undocumented as "illegals."

Research which has Documented Acting on the Plight of Undocumented Students

Studies have also recorded taking action on the plight of undocumented students. These studies serve as exemplars of Freire's (2000) liberatory praxis in which consciousness raising also involves developing action. In a case study of three community colleges in borderland Texas (located near the border of Texas and Mexico), Jauregui and Slate (2009) identified non-institutional factors impacting undocumented student success, as well as institutional factors promoting undocumented student success. Institutional factors which promoted undocumented students' success in the areas of retention and achievement included admission policies, pre-requisite course requirements, communication, institutional commitment, and financial aid. Jauregui and Slate's (2009) work provides institutions of higher education with tangible issues that can be addressed to promote success for undocumented students. Crawford and Arnold (2016) identified personal factors which motivated individuals to decide to advocate for undocumented students through a phenomenological approach, offering important insights into how individuals in positions of power, including those serving students in institutions of higher education, can make sense of their role and how to make decisions toward advocacy. This study provided an important contribution by examining the individual level of advocacy and allyship,

illuminating how one person truly can make a difference in the lives of others. Serna (2017) also synthesized strategic enrollment management policy recommendations for inclusive practices of undocumented students. The recommendations identified possible solutions for strategic enrollment management offices, including a call to educate staff, consider the whole student, and help undocumented students access financial resources as well as transfer seamlessly from one institution of higher education to another. In addition, Reyna Rivarola (2017) considered current programs responding to the needs of undocumented students within higher education in light of the current sociopolitical context. Together, these studies demonstrate tactics of working towards Freire's (2000) liberatory praxis by going beyond raising consciousness to engage in action to improve undocumented students' access to higher education.

Previous research has also identified formalized multicultural competencies for undocumented students (Nienhusser & Espino, 2017), as well as identified the effectiveness of training for practitioners to work with undocumented students (Cisernos & Cadenas, 2017). Nienhusser and Espino (2017) informed their undocumented status competency, or UDSC, through interviews with 45 agents from institutions of higher education in four different states. Naming what comprises UDSC provides a tangible, replicable tool for institutions of higher education to take action on issues of undocumented students' access to higher education.

Cisernos and Cadenas (2017) measured practitioner competency and self-efficacy for working with undocumented students based on attending a DREAMzone training on campus. DREAMzone training is a four-hour session with four learning outcomes: "(a) awareness of one's thoughts and feelings regarding undocumented students, (b) knowledge of laws and policies affecting the experiences of undocumented students, (c) direct contact with undocumented students, and (d) skills, practices, and resources for working with undocumented

students” (Cisernos & Cadenas, 2017, p. 191). Their work demonstrated how such an initiative makes a measurable difference in institutional agents’ ability to serve undocumented students and epitomizes Freire’s (2000) notion of liberatory praxis. Much like SafeZone training, designed to develop skills and understanding for people who identify as lesbian, gay, bisexual, transgender, queer, and/or allies, DREAMzone training can be replicated at institutions of higher education to inform faculty, staff, and students towards developing knowledge, skills, and confidence regarding undocumented students’ access to and persistence in higher education. Both UDSC (Nienhusser & Espino, 2017) and DREAMzone training (Cisernos & Cadenas, 2017) serve as valuable models for how research can document developing praxis towards supporting undocumented students’ access to and persistence in higher education. The studies embody notions of postcolonial feminism by challenging the binary of “illegals” and Dreamers. Furthermore, these studies provide tangible models which higher education researchers and institutions may be able to replicate in the context of their particular state and local policies.

Implications for Higher Education

A critique of the literature on opinions of undocumented students’ access to higher education using Freire’s (2000) liberatory praxis illuminates important implications for higher education, including designing research studies towards consciousness raising. In addition, institutions of higher education have the opportunity to act in clear, definitive ways towards providing a safer climate for undocumented students which promotes access, persistence, and allyship.

Research Efforts

First, research on majority opinions of undocumented immigrants as well as undocumented students’ access to higher education can go beyond raising consciousness to

recommend, design, and act to address the current challenges undocumented students encounter within higher education and the broader political climate. As posited by Cabrera (2012), moving from consciousness toward engaging in action is a means of realizing Freire's (2000) liberatory praxis. Future research can examine what factors contribute to raising consciousness among majority groups specifically on the issue of undocumented students' access to higher education, towards designing and implementing practices for college students. As previously called for by Herrera et al. (2013), researchers need to examine to what extent interactions with undocumented students may be associated with views about undocumented students' access to and persistence in higher education. This work can also use postcolonial feminism (Bhattacharya, 2017) and the notion of inhabiting borderlands (Anzaldúa, 2012) to deconstruct and unpack the binary of "illegal" immigrants, a term which continues to dehumanize and render immigrants in a lesser status within society (Negrón-Gonzales, 2013). Journal editors can also prioritize praxis in calls for research articles.

Action Steps at Institutions of Higher Education

Agents of institutions of higher education can define and work towards actionable items on the issues pertaining to undocumented students. From developing a coherent plan for strategic enrollment priorities (Serna, 2017) to implementing DREAMzone training (Cisneros & Cadenas, 2017), tangible options for improving access and climate for undocumented students exist and need to be replicated. In addition, institutional agents can think locally in terms of manageable next steps. Put another way, institutional agents can consider possible action steps, such as ending the use of "illegal" to describe people, which functions as a means of dehumanizing and criminalizing individuals (Negrón-Gonzales, 2013) and serves as a value-laden framing of one's circumstance (Caicedo, 2016). In addition, institutions of higher

education can develop a DREAMzone training for practitioners at institutions located proximally to one another. Attendees could then obtain a DREAMzone sign for individual office spaces to designate safe spaces for undocumented individuals, much like the SafeZone signs used to designate safe spaces for lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals.

Institutional agents can also seek feedback from campus as well as community Dreamer organizations. Building trust with these students and community members could provide opportunities for local discussion to identify gaps and generate possible solutions. As described by Cabrera (2012), allies need to work with People of Color, rather than for People of Color. The importance of allying with people in minoritized positions cannot be overlooked in this important work. In addition, future research should involve community-based research methodologies to empower undocumented students and allies toward Freire's (2000) liberatory praxis. Institutional review boards should be prepared to review studies involving current methodologies that can respond in a timelier manner to current societal bottlenecks, such as the need for praxis surrounding coherent immigration reform and policy.

Naming and Incorporating Whiteness

Employing Freire's (2000) liberatory praxis can also occur by engaging with White fragility (DiAngelo, 2011) and working towards becoming a racial justice ally (Cabrera, 2012). Although engaging in such work is an ongoing process (Spanierman & Smith, 2017), the opportunity to begin and continue this work is each day. Engaging with White fragility can occur in the classroom (Matias 2016a; 2016b). Faculty and instructors can also work to employ positive cross-racial interactions within their courses, which have been found to be associated with more positive views of undocumented students' access to higher education (Garibay et al., 2016). Inclusive hiring and retention practices can also foster positive cross-racial interactions

within institutions of higher education. Naming and incorporating Whiteness into future research to design interventions and dismantle the binary which currently frames the rhetoric surrounding undocumented students' access to higher education has the potential to make a difference in the trajectories of undocumented immigrants, as well as people with legal status.

Conclusion

Applying Freire's (2000) liberatory praxis to research on majority opinions about undocumented immigrants and undocumented students' access to higher education reveals that understanding these opinions is only a first step in raising consciousness. To meet the dire needs of undocumented students within higher education and within the political climate in the United States, researchers need to recommend, design, and take action towards developing praxis on the issue of undocumented students' access to and persistence in higher education. This critique acknowledges the importance of the work reviewed herein and serves as a call to go to the next step to truly raise consciousness by acting.

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CHAPTER 3 - ATTRIBUTES ASSOCIATED WITH POSTDOCTORAL FELLOWS AND VIEWS OF IMMIGRATION: A PRELIMINARY ANALYSIS USING THE GENERAL SOCIAL SURVEY ²

Summary

While research on supporting undocumented immigrants and undocumented students within higher education has examined the opinions of students, faculty, and staff, there is a gap in the literature when it comes to postdoctoral fellows. This study used data from the 2014 General Social Survey (Smith, Davern, Freese, & Hout, 2018) to examine whether respondents' attributes, including holding a possible postdoctoral position, predicted views of "illegal" immigration, and whether immigrants should have the same education as Americans. Findings suggested that a combination of respondents' attributes predicted these views. Results also suggested that the odds of being more supportive of undocumented immigrants were higher for minorities and for non-U.S. citizens. In addition, being a non-U.S. citizen and having a graduate degree each increased the odds that respondents would support immigrant education. This study contributes to the literature on understanding attitudes toward immigration by conducting a preliminary analysis on the views of an overlooked group within the academy: postdoctoral fellows.

Introduction

Given the current political climate in the United States which perpetuates negative rhetoric against immigrants, examining how individuals view undocumented immigration and education for immigrants matters. The term undocumented refers to an individual in the United

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States who does not currently have legal status; this may be due to having overstayed a temporary legal status or having arrived without legal status. Research has delineated the negative climate encountered by undocumented immigrants and undocumented students in the United States and within higher education (Bjorklund, 2018; Davidson & Burson, 2017; Muñoz, 2015, 2016; Suarez-Orozco et al., 2015).

Literature has also examined the opinions of a variety of groups found within the academy and their views on immigration as well as their views of undocumented students' pursuit of higher education. This research has considered the opinions of undergraduate students (Garibay, Herrera, Johnston-Guerrero, & Garcia, 2016; Herrera, Garibay, Garcia, & Johnston, 2013), as well as employees comprising institutions of higher education, including: campus leaders (Feranchak, 2007; Parrish, 2015), staff (Cadenas, Cisneros, Todd, & Spanierman, 2018; Cisneros & Cadenas, 2017; Nienhusser, 2018), community college leaders (Nienhusser, 2014), and faculty members (Ishiwata & Muñoz, 2018; Salas, 2012). There is a gap in the literature when it comes to considering the opinions of postdoctoral fellows. This gap mirrors the broader problem of failing to examine postdoctoral fellows as a group within the literature on higher education.

Examining the views of postdoctoral fellows matters because a variety of individual attributes have been shown to be associated with greater support of undocumented immigrants and undocumented students, and these factors may constitute those of postdoctoral fellows. The attributes associated with greater support of undocumented immigrants and undocumented students are also those that may often characterize postdoctoral fellows within higher education as the National Postdoctoral Association (Ferguson, Huang, Beckman, & Sinche, 2014) and recent research (Xu, Gilliam, Peddada, Buchold, & Collins, 2018) have suggested that

postdoctoral fellows are comprised of more women than men and more than half are from outside the United States. When it comes to research on attitudes toward undocumented students, being of a racial/ethnic minority (vs. White), being a woman (vs. a man), and being a non-native speaker of English (vs. a native speaker of English) (Garibay et al., 2016) have all been associated with more supportive views. In addition, being a woman has also decreased the odds of disapproving of undocumented immigration (Berg, 2009). Endorsing the belief that immigrants support the economy and supporting bilingual education have also been associated with more supportive views (Palmer & Davidson, 2011). Postdoctoral fellows constitute the highest level of formal training within the academy having attained a terminal doctorate in their field of study. Having higher levels of education (such as a graduate degree) has also been associated with more supportive views of undocumented immigration (Berg, 2009; Kunovich, 2013).

The experiences of postdoctoral fellows may also align with experiences which have been shown to be associated with more supportive views toward undocumented immigrants and/or undocumented students, as delineated by a variety of researchers (Berg, 2009; Caicedo, 2016; Feranchak, 2007; Garibay et al., 2016; Herrera et al., 2013). Given their many years of postsecondary training, postdoctoral fellows may have had an experience associated with exhibiting greater support, such as attending an institution receiving federal aid (Garibay et al., 2016), living in a more urban environment (Caicedo, 2016), living in an area with a higher Latino population (Berg, 2009), living in a state that has policies permitting in-state tuition for undocumented students (Feranchak, 2007), or having experiences with positive cross-racial interactions (Herrera et al., 2013). Older age has been shown to have increased the odds of disapproving of undocumented immigration (Berg, 2009). Although the attributes and

experiences constituting those of many postdoctoral fellows may be associated with greater support of undocumented immigrants, there is a gap in the literature examining the views of postdoctoral fellows on this topic. This gap mirrors the reality that higher education as a field seldom examines postdoctoral fellows as a group within the academy. Furthermore, this gap is problematic because with more than half of postdocs being from outside the U.S., this group is uniquely situated to view immigration in a different light than others within higher education.

To be sure, it can be difficult to examine postdoctoral fellows as a monolithic group because of the diversity of settings and types of work in which they are employed. Yet the failure of previous research to examine how postdoctoral fellows view undocumented immigrants is problematic because factors found to be associated with greater support of undocumented immigrants and undocumented students' pursuit of higher education are the characteristics and attributes that are likely to comprise those of many postdoctoral fellows. Furthermore, the paucity of research examining postdoctoral fellows as a group within higher education overlooks the reality that postdoctoral fellowships constitute the final transition from extensive training in the academy to the workforce. The lack of research examining this transition is notable given the tendency for higher education to extensively examine the numerous other transitions within the academic pipeline: first-year experiences, transfer student transitions, graduate student experiences, and career preparation.

The present study used data from the General Social Survey (Smith, Davern, Freese, & Hout, 2018) to examine attributes potentially associated with views of immigration, including those related to attributes associated with those of postdoctoral fellows. Specifically, this study conducted a preliminary analysis on whether a combination of respondents' attributes, including holding a possible postdoctoral position, predicted views of "illegal" immigration, and whether

immigrants should have the same education as Americans. This study contributes to the literature in higher education examining majority views of undocumented immigrants and undocumented students by addressing a gap in the literature when it comes to the attributes and views of postdoctoral fellows.

Review of Literature

Previous literature has examined majority opinions of undocumented immigrants, majority opinions within the academy of undocumented students' pursuit of higher education, and the experiences of postdoctoral fellows. This study is informed by these previous bodies of work. The analysis in this study addresses the gap in the literature regarding postdoctoral fellows' views of immigration using a large, publicly available data set, the GSS (Smith et al., 2018), to conduct preliminary analyses to consider postdoctoral fellows as a group.

Attitudes toward Undocumented Immigrants

Previous research on attitudes toward undocumented immigrants has considered personal viewpoints and ideology. Negative attitudes toward undocumented immigrants, such as rhetoric indicating people should go back to where they came from, have been found to be associated with endorsement of stereotypes about "illegal" immigrants, a humanitarian-egalitarian value system, and negative attitudes about legally present Mexican Americans (Cowan, Martinez, & Mendiola, 1997). As posited by Negrón-Gonzales (2013), the term "illegal" frames immigrants as criminals, functioning as a means of dehumanizing others. Thus Cowan, Martinez, and Mendiola's (1997) employment of "illegals" (as opposed to legal) demonstrated how study participants were able to sufficiently distance themselves from "the other." This othering and dehumanization connect with the historical reality that Whiteness has been legalized as a form of citizenship in the United States (Haney-Lopez, 2006). In addition, Gonzalez (2014) put forth a

historical analysis of “crimmigration”, or how immigration has been criminalized within the semantics of the national immigration debate. Conservative views informing opinions of undocumented migration have also been analyzed suggesting that ideology fuels opinions on the issue (Benfell, 2015). Conversely, pro-immigrant sentiment has been found to be associated with cosmopolitanism (Haubert & Fussell, 2006).

More recent research has also considered how ideology and viewpoint inform opinions of undocumented immigrants. Nativism has fueled the standpoint for which those with legal status believe immigrant children should be “kept out” of the United States (Davidson & Burson, 2017). In an analysis of views of college students and community members in the Midwest, nationalism was significantly related to measures for targeting immigrants but not for supporting efforts to penalize Americans for employing undocumented individuals (Mukherjee, Molina, & Adams, 2012). The analysis also determined that patriotism and nationalism significantly predicted support for apprehending and punishing undocumented immigrants. Mukherjee et al.’s (2012) findings shed light on the bias embedded within the opinions of those with privileged identities, including Whiteness and legal status. Similarly, a study of perceived criminal threat found that political beliefs and education level were the strongest predictors of views of immigration, with conservative ideology, lower levels of education, and lower income levels being associated with more punitive controls of immigration (Stupi, Chiricos, & Gertz, 2016).

The literature on attitudes toward undocumented immigrants has also examined aspects of identity. National in-group identification (strong identification as an American) and group narcissism (strong sense of entitlement as Americans) were found to be associated with negative views toward undocumented immigrants (Lyons, Coursey, & Kenworthy, 2013). In addition, previous research has studied the views of those in the helping professions, including mental

health professionals' views (Alfaro & Bui, 2018) and those of social workers in training programs (Held, Cuellar, & Cook Heffron, 2018). Samson (2015) also examined Asian American views of undocumented immigrants, finding that perceived political commonality with Blacks was associated with more supportive views of undocumented immigrants while perceived political commonality with Whites was associated with increased opposition to pathways for undocumented immigrants. These findings underscore the importance of individual factors, such as occupation as well as race, in examining views toward undocumented immigrants within the United States.

Attitudes toward Undocumented Students' Pursuit of Higher Education

Research has also examined public attitudes toward undocumented students' pursuit of higher education. One study examined symbolic politics and labor market competition and their association with views toward undocumented students' access to higher education (Palmer & Davidson, 2011). Findings suggested that people who reported supporting bilingual education as well as believing that immigrants support the economy were more likely to report supporting undocumented students' access to higher education. Higher family income was also associated with less support of undocumented student access to higher education.

Studies on attitudes toward undocumented students' pursuit of higher education have also examined the views of groups found within the academy, including students and employees. Considering the political rhetoric surrounding undocumented students in the state of Arizona, researchers examined the opinions of Arizona college students and their opinions toward undocumented Mexican immigrants (Diaz, Saenz, & Kwan, 2011). While assessing how urban and suburban students used language to describe undocumented status, Caicedo (2016) found that there were differences between urban and suburban college students. Specifically, urban

students reported hearing the term undocumented more often while their suburban peers reported hearing the terms “alien”, “legal”, or “illegal” more often. Analyses also suggested that dichotomous legal-centered thinking framed the use of the term “illegal” while circumstantial thinking was associated with the term undocumented. These findings also connect to an ethnographic narrative about a community college in North Georgia and the response to undocumented status (Salas, 2012) in that dichotomous thinking has the potential to undermine support for undocumented students.

Research based on cross-sectional surveys of undergraduate students conducted by the Higher Education Research Institute (HERI) at the University of California-Los Angeles has found a variety of factors to be associated with more support for undocumented students’ pursuit of higher education. Specifically, certain demographic groups among undergraduate students reported higher levels of support for undocumented students. Using hierarchical linear modeling, racial minorities were more supportive of undocumented immigrants’ access to education than Whites, including: Blacks ($b = .121$, S. E. = .039, $p < .01$), Mexican/Chicanos ($b = .357$, S. E. = .028, $p < .001$), other Latinos ($b = .280$, S. E. = .055, $p < .001$), and other races ($b = .106$, S. E. = .047, $p < .05$). Women were more supportive than men ($b = .158$, S. E. = .023, $p < .001$). Native English speakers were less supportive than non-native English speakers ($b = -.156$, S. E. = .038, $p < .001$). Students with a home address in a left-leaning congressional district were more supportive of undocumented immigrants’ access to education ($b = .002$, S. E. = .001, $p < .01$). However, having concerns about employment after college was associated with less support for undocumented immigrants’ access to education ($b = -.109$, S. E. = .013, $p < .001$). Attending an institution of higher education receiving federal aid was associated with more support ($b = .003$, S. E. = .001, $p < .05$). Finally, students from states with an in-state

tuition policy for undocumented students reported more support ($b = .082$, S. E. = .034, $p < .05$). A separate analysis (Herrera et al., 2013) suggested that experiences associated with supporting undocumented immigrants' access to education included taking an ethnic studies course ($b = .03$, S. E. = .01, $p < .05$), participating in a cultural workshop ($b = .09$, S. E. = .02, $p < .001$), participating in a cultural student organization ($b = .06$, S. E. = .02, $p < .01$), and having a positive cross-racial interaction ($b = .01$, S. E. = .00, $p < .001$). Conversely, believing that everyone can succeed through hard work ($b = -.18$, S. E. = .01, $p < .001$) and satisfaction with the present level of diversity within the student body ($b = -.07$, S. E. = .01, $p < .0001$) were both negatively associated supporting undocumented immigrants' access to education. Although these associations demonstrated significance, many of them had small effect sizes. Nevertheless, these findings demonstrate that many attributes and experiences have been associated with greater support of undocumented students.

The literature on attitudes toward undocumented students' pursuit of higher education has also examined the views of faculty and administrators within higher education. In a phenomenological study examining advocacy for undocumented students, the authors profiled how two administrators constructed their support for undocumented students (Crawford & Arnold, 2016). Studies have also examined the opinions of higher education leaders in a variety of ways: a survey of leaders from institutions in multiple states (Feranchak, 2007), a qualitative study of 25 community college administrators (Jauregui & Slate, 2009), and opinions of religious leaders at Catholic institutions (Parrish, 2015). Ishiwata and Muñoz (2018) also considered the views of faculty members and supports for undocumented students within their respective institutions. This research demonstrates that numerous studies have considered occupation

within the academy when examining views toward undocumented immigration and undocumented students, underscoring the gap of examining postdoctoral fellows.

The effectiveness of interventions to improve attitudes toward undocumented students within institutions of higher education has also been undertaken by various research teams. One study employed a pre-test/post-test approach to consider attitudes toward undocumented students before and after a DREAMzone training that may have included a video profiling personal stories of undocumented students (Cadenas et al., 2018). Both modalities improved participants' views of undocumented immigrants compared to those who had not participated in the intervention. The study provided a viable, replicable method for institutions of higher education to create interventions to foster support and improve campus climate for undocumented students on their campuses. Recent research has also examined institutional agents' abilities to incorporate undocumented/DACAmented status competency (UDSC) within their practice (Nienhusser & Espino, 2017). Naming UDSC also provides a replicable means for institutions of higher education to incorporate necessary professional development and training for faculty and staff on their campuses by having definable means for those with majority privilege, including Whites and those with legal status, to develop professional competency. Finally, Nienhusser (2018) examined institutional agents' views of policy implementation and associated challenges. Together, these studies demonstrate that a variety of attributes can be associated with support for undocumented immigrants and undocumented students. The literature also reveals that when considering the views of groups found within higher education, there is a gap in the literature for examining the attributes of postdoctoral fellows.

Research on Postdoctoral Fellows

In the past five years, higher education has acknowledged postdoctoral employment trends and the realities of the life of a postdoctoral fellow (Angervall, Gustafsson, & Silfver, 2018; Bryan & Guccione, 2018; Cantwell & Taylor, 2013; Gloria & Steinhardt, 2017; Yang & Webber, 2015). The postdoctoral fellowship has been touted as “a special kind of hell” (Ruben, 2013, para. 1). Postdoctoral fellows encounter myriad issues in their employment at institutions of higher education, including low pay, long hours, and job insecurity (Camacho, Kukor, Lee, & Rosenberg, 2016; Cantwell & Taylor, 2013; Ruben, 2013). Furthermore, postdoctoral fellows can be especially vulnerable to discrimination based on gender, race, and/or citizenship status (Camacho, 2017; Camacho et al., 2016; Camacho & Rhoads, 2015; Cantwell & Taylor, 2013). Postdoctoral fellows are expected to maintain high standards of productivity within the team of their principal investigator (PI) (Ruben, 2013). Postdoctoral fellows are often subject to maintaining the good graces of their PI (Camacho, 2017). Ultimately, a postdoc’s PI may have the potential to make or break a fellow’s future by connecting him/her with future job prospects or making a path forward more difficult. Research suggests that PIs, who are predominantly White men, prefer postdocs who are also White men, and that the costs for visas for international postdocs are often deemed expensive and the responsibility of the postdoc (Camacho, 2017). The tendency for PIs to maintain the positionality as first author on a publication even when others have done more of the work is widely accepted in the academy, although postdocs without U.S. citizenship are the most productive when it comes to publications (Camacho, 2017; Camacho & Rhoads, 2015). Furthermore, institutions of higher education have overwhelmingly designed the postdoctoral fellowship to be based on an appointment in a specific department or lab, with little structural oversight (Camacho & Rhoads, 2015). Compensation and benefits have

thus unsurprisingly been a long standing issue for postdoctoral fellows (Ruben, 2013). Along with institutions of higher education, federal funding agencies have been slow to make recommendations for a livable wage and basic benefits, such as health insurance (Camacho & Rhoads, 2015).

Recent research continues to examine the trajectories of postdoctoral fellows. Although 50% of postdoctoral fellows (postdocs) are now from outside the United States, only 45% of these individuals remain in the United States after completion of their fellowship as compared to 90% of postdoctoral fellows originally from the United States (Xu et al., 2018). Studies have also examined postdoctoral fellowships as they relate to career paths in research and teaching (Angervall et al., 2018) and whether a doctoral degree was “worth it” (Bryan & Guccione, 2018). Establishing support offices on campuses employing postdoctoral fellows can establish a centralized resource for postdoctoral fellows (Ferguson, Huang, Beckman, & Sinche, 2014). In addition, issues left unaddressed in the University of California system has led to the unionization of postdocs in the system (Camacho & Rhoads, 2015).

The lack of research on postdoctoral fellows within the field of higher education, and the absence of considering the postdoctoral fellowship as a reportable occupation, leaves an opportunity for future research to examine how the academy transitions this highly trained group into their final transition into the employment sector. This study conducts preliminary analyses using an existing data set to examine whether attributes of postdoctoral fellows are associated with views of immigration, including views toward undocumented immigration and education for immigrants. The present analysis seeks to better understand how these future faculty, researchers, and leaders inside and outside of the academy may inform the research on majority views of undocumented immigrants and undocumented students.

Theoretical Framework

This study employs Deaux's (2006) model for the social psychological study of immigration. Specifically, the model considers three levels: the macro, meso, and micro. Similar to Bronfenbrenner and Morris' (1998) ecological framework, Deaux (2006) considers the various levels of influence forming individual views, including social structures at large (macro), individual influences (micro), and where the macro and micro interact (meso). The relevant macro social structures for this study include immigration policy, such as the Deferred Action for Childhood Arrivals (DACA) executive order signed by President Obama in 2012. DACA is relevant since this study employs the 2014 administration of the General Social Survey (GSS) (Smith et al., 2018). DACA provides temporary deferral of deportation. Larger sociological and demographic trends at the time of the 2014 administration of the GSS, such as the lack of a Congressional solution for undocumented students, and the representative nature of the GSS survey also encapsulate the Deaux's (2006) macro level.

The micro level factors considered by Deaux's (2006) model for the psychological study of immigration in this study include individual factors, such as citizenship status, gender, age, race, holding a graduate degree (or not), and holding a possible postdoctoral position. This study considers Deaux's (2006) macro level factors and their interaction with individual or micro level factors to assess intergroup attitudes at the meso level. The meso level of Deaux's (2006) model, or the interaction of macro and micro factors, includes intergroup attitudes (Caicedo, 2016). Specifically, the research problem for this study is to examine Deaux's (2006) meso level as to whether attributes associated with postdoctoral fellows predict views of "illegal" immigration and education for immigrants within the macro context.

Purpose and Research Questions

The purpose of this study is to examine whether respondents' attributes predicted views of immigration by conducting secondary data analysis using the 2014 administration of the General Social Survey (GSS) (Smith et al., 2018). The 2014 administration of the GSS was chosen because it is the most recently available administration of the GSS, which also includes occupation codes which could be used to consider those working in a possible postdoctoral fellowship. In order to isolate macro level factors, such as the 2012 implementation of DACA, the 2014 GSS was not combined with data from previous years for this study. Specifically, the present analysis examined whether having a possible postdoctoral position or duties related to those of postdoctoral fellows, along with other individual attributes, predicted views of immigration. The present analysis builds on previous literature using the GSS to examine views of undocumented immigrants and undocumented students (Haubert & Fussell, 2006; Kunovich, 2013; Palmer & Davidson, 2011). The current study uses more recent data: the 2014 GSS, as compared to the 1994 GSS (Palmer & Davidson, 2011), the 1996 GSS (Haubert & Fussell, 2006), the 1996 and 2004 GSS (Berg, 2009), and the 2006 GSS (Kunovich, 2013). The use of the 2014 GSS is uniquely timed after the 2012 implementation of DACA but before the election of Trump.

This study contributes to previous literature examining attitudes toward undocumented immigrants and undocumented students' pursuit of higher education by using a large, publicly available data set. This study also contributes to previous literature on this topic by conducting analyses to consider attributes of a population often overlooked within higher education, and specifically overlooked by the literature on attitudes toward undocumented immigrants within the academy: postdoctoral fellows. Since the researchers coded occupation codes for possible

postdoctoral fellowship positions, this analysis is considered preliminary. This study examines the following: (1) Does a combination of individual demographic factors, including employment as a possible postdoctoral fellow, predict views of undocumented immigration? (2) Does the same combination of individual factors predict views of education for immigrants? This study employed logistic regression to assess these research questions.

Methods

Instrument

The General Social Survey (Smith et al., 2018), used for secondary data analysis in this study, is a robust survey effort that has been conducted by the National Opinion Research Center (NORC) at the University of Chicago since 1972. The purpose of the survey is to facilitate research on American society and to provide updated, high quality data to social scientists, students, and policy makers (NORC, 2016a). The data collection is “designed to (...) monitor social change within the United States” (NORC, 2016a, para. 6). The GSS is designed to survey a random, representative sampling of households in the United States to participate in a 90 minute survey in person or over the phone (NORC, 2016b). The dependent variables used in this study were selected from the 2014 administration of the GSS to examine the most recent opinions available about immigration.

Participants

This study considered all respondents to the 2014 administration of the General Social Survey (GSS) (Smith et al., 2018) ($N=2538$). Since this study was conducted as a secondary analysis of the existing 2014 GSS data set, only the cases which had responses to all demographic variables and one of the dependent variables of interest were included. For the analysis of views of undocumented immigration, a total of 1012 cases were included, and for the

analysis of views of immigrant education, a total of 1153 cases were included. The largest sample available was used for each research question separately in order to meet the minimum requirement of 20 individuals per group when conducting logistic regression (Leech, & Barrett, & Morgan, 2015). Since the data set was publicly available (Smith et al., 2018) and had no connections to reidentifying information of participants, the study did not require the oversight of an institutional review board (Protection of Human Subjects Research, 2018). This was also confirmed by staff at the Colorado State University human research protection program (T. Felton-Noyle, personal communication, September 10, 2018).

Variables

Independent attribute variables constituted a host of individual characteristics, and previous literature helped to inform the inclusion of the variables used in the present study. Demographic, micro-level variables representing Deaux's (2006) model included: respondent age (18-99); gender (sex in the GSS data set, with options of either male or female); race/ethnicity (defined as White, Black, or Other in the GSS); U.S. citizenship status (citizen or non-citizen); having a graduate degree (or not); and whether the respondent had an occupation code that could be a postdoctoral fellow position or relate to duties of a postdoctoral fellow. The U.S. census occupation codes do not include postdoctoral fellows as an occupation, even though postdoctoral fellows are recognized by such federal entities such as the National Science Foundation and professional organizations such as the National Postdoctoral Association. Therefore, for this study, a possible postdoctoral position or position involving duties of a postdoctoral fellow included occupation codes from the U.S. census., rendering this study a preliminary analysis. For additional information about all variables, see Appendix B.

The dependent variables were based on questions about immigration from the 2014 administration of the GSS (Smith et al., 2018). These included the following items: agreement with the statement “America should exclude ‘illegal’ immigrants” (EXCLDIMM): 5, strongly agree; 4, agree; 3, neither agree nor disagree; 2, disagree; and 1, strongly disagree. In addition, the variable “legal immigrants should have the same education as Americans” (IMMEDUC) was considered, and options involved the same 5-point Likert scale.

To predict respondents’ views as supportive or unsupportive of “illegal” immigration and education for immigrants, dichotomous variables were created. For the dependent variable “America should exclude ‘illegal’ immigrants”, responses were re-coded into a binary variable, EXCLDIMM_binary, such that 0 indicated agreement with the statement and 1 indicated disagreement with the statement. The dependent variable for “Legal immigrants should have the same education as Americans” was also transformed into a binary variable, IMMEDUC_binary, such that 0 indicated disagreement with the statement and 1 indicated agreement with the statement. For both binary dependent variables, responses indicating neither agreement or disagreement were dropped.

Analyses

For the first research question, logistic regression was conducted using SPSS to assess whether the six predictor variables of age, gender, race, U.S. citizenship status, having a graduate degree, and having a possible postdoctoral fellowship occupation predicted whether “America should exclude ‘illegal’ immigrants”. Research question two used logistic regression in SPSS to examine whether the six demographic variables agreement with the statement “legal immigrants should have the same education as Americans”. This study met the assumptions for logistic regression specified by Leech, Barrett, and Morgan, (2015), which indicate that the outcome

variable is dichotomous and mutually exclusive, and that logistic regression can be used when a combination of categorical and dichotomous variables are being used to predict a dichotomous outcome. Both models were evaluated for issues related to multicollinearity by comparing bivariate correlation values, which ranged from -0.19 – 0.33, and by calculating Variance Inflation Factor (VIF) values, which ranged from 1.00 – 1.08. Since Menard (1995) recommended that VIF values are below 10.00, the VIF values for the present study were well below the suggested maximum.

Results

Logistic regression was conducted to assess whether the six predictor variables of age, gender, race, U.S. citizenship status, having a graduate degree, and having a possible postdoctoral fellowship occupation predicted whether “America should exclude ‘illegal’ immigrants”. Table 3 presents descriptive statistics (N=1012). The mean age for the sample was 50, and 51% of respondents identified as women (female). The sample was 76% White, 14% Black, and 10% Other Races. A total of 94% of the sample had U.S. citizenship, and 11% of the sample held a graduate degree. Only 2.2% of the sample (N=22) held a (possible) postdoctoral position. A total of 73% of the sample agreed with the statement, “America should exclude ‘illegal’ immigrants”, while 27% disagreed with the statement.

Table 3.

Descriptive Statistics for Agreement with the Statement “America Should Exclude ‘illegal’ Immigrants” (N=1012)

	Mean	Std. Dev.
Age	49.72	17.546
Sex	1.51	.500
Race	1.33	.643
U.S. Citizen	1.06	.244
Graduate degree	.1087	.31141
Possible postdoc	.0217	.14590
Excldimm_binary^	.2727	.44558

Note. ^ Agreement (0) or disagreement (1) with the statement “American should exclude ‘illegal’ immigrants”.

When all six predictor variables were considered together, they significantly predicted whether a respondent agreed with the statement, “America should exclude ‘illegal’ immigrants”, $\chi^2 = 104.354$, $df = 5$, $N = 1012$, $p < 0.001$. Table 4 presents the odds ratios.

Table 4.

Logistic Regression Predicting Agreement with “America Should Exclude ‘illegal’ Immigrants” (N=1012)

Variable	Odds ratio	SE	p
Age	.982	.004	<.001
Sex	1.189	.150	.250
Race	1.420	.114	.002
U.S. Citizen	7.959	.315	<.001
Graduate Degree	1.214	.247	.433
Possible postdoc	1.221	.521	.702
Constant	.045	.486	<.001

Note: Excldimm_binary: Agreement (0) or disagreement (1) with the statement “America should exclude ‘illegal’ immigrants”.

Results suggested that the odds of disagreeing with the statement “America should exclude ‘illegal’ immigrants” became greater as age decreased ($p < .001$). In addition, the odds of disagreeing with the statement increased for individuals identifying as Black or another race ($p = .002$), and for those who were not a U.S. citizen ($p < .001$). Put another way, not being a U.S. citizen, as compared to being a U.S. citizen, increased the odds that a respondent would disagree with the statement, “American should exclude ‘illegal’ immigrants,” by a factor of 7.959 ($p < .001$). In addition, having a graduate degree, as opposed to not having a graduate degree, increased the odds that a respondent would disagree with the statement by a factor of 1.214, and having a possible postdoc also increased the odds that a respondent would disagree with the statement of a factor of 1.221. Reporting being a woman (female) increased the odds that a respondent would disagree with the statement “America should exclude ‘illegal’ immigrants”. However, these relationships must be considered with caution since having a graduate degree, having a possible postdoctoral fellow position, and respondent’s self-reported gender were not significant factors even though the overall model significantly predicted responses.

Logistic regression was also conducted to assess whether the six predictor variables of age, gender, race, U.S. citizenship, having a graduate degree, and having a possible postdoctoral fellowship occupation predicted agreeing with the statement “legal immigrants should have the same education as Americans”. Table 5 presents descriptive statistics ($N=1153$). The mean age for the sample was 49, and 53% of respondents identified as women (female). The sample was 75% White, 15% Black, and 10% Other Races. A total of 93% of the sample had U.S. citizenship, and 12% of the sample held a graduate degree. Only 2.3% of the sample ($N=27$) held a possible postdoctoral position. A total of 91% of the sample agreed with the statement, “legal immigrants should have the same education as Americans”, while 9% disagreed.

Table 5.

Descriptive Statistics for Agreement with the Statement “Legal Immigrants Should Have the Same Education as Americans” (N=1153)

	Mean	Std. Dev.
Age	49.24	17.735
Sex	1.53	.499
Race	1.35	.661
U.S. Citizen	1.07	.253
Graduate degree	.1162	.32063
Possible postdoc	.0234	.15129
Immeduc_binary^	.9098	.28659

Note. ^ Agree (1) disagree (0) “Legal immigrants should have the same education as Americans”

When all six predictor variables were considered together, they significantly predicted whether a respondent agreed that legal immigrants should have the same education as Americans, $\chi^2 = 15.911$, $df = 6$, $N = 1153$, $p = 0.014$. Table 6 presents the odds ratios.

Table 6.

Logistic Regression Predicting Agreement with the Statement “Legal Immigrants Should Have the Same Education as Americans” (N=1153)

Variable	Odds ratio	SE	p
Age	.996	.006	.538
Sex	1.188	.207	.405
Race	.851	.159	.313
U.S. Citizen	9.234	1.020	.029
Graduate Degree	2.354	.446	.055
Possible postdoc	.816	.772	.793
Constant	1.086	1.132	.942

Note: Immeduc_binary: Agreement with statement “Legal immigrants should have the same education as Americans”

Results suggested that the odds of agreeing with the statement “legal immigrants should have the same education as Americans” increased when respondents reported not being a U.S. citizen ($p = .029$) and when respondents held a graduate degree ($p = .055$). In other words, not being a U.S. citizen increased the odds of agreeing with the statement “legal immigrants should have the same education as Americans” by a factor of 9.234, and having a graduate degree increased the odds of agreeing with the statement by a factor of 2.354. Although not significant, reporting being a woman (female) also increased the odds of agreeing with the statement. Conversely, being older, being White, and having a possible postdoctoral position all decreased the odds of agreeing with the statement “legal immigrants should have the same education as Americans”. However, these relationships must be considered with caution since the variables were not individually significant even though they were part of a model that significantly predicted respondents’ agreement with the statement.

Limitations

This study involved several limitations. First, this study used an existing data set to examine majority views of immigration. This study specifically examined the intersection between attributes associated with being more supportive of undocumented immigrants as well as undocumented students and present views of immigration. Since this study used an existing data set, the analyses considered dependent variables and attribute variables that were already available. This study also employed a dependent variable containing dehumanizing language: the term “illegal” immigrants (Negrón-Gonzales, 2013). This terminology may have biased responses to the survey item. This same bias may have informed responses to the question “legal immigrants should have the same education as Americans”. The education item also does not distinguish between K-12 education federally protected for all minors by *Plyler v. Doe*, 1982 and

higher education (which some states have deemed illegal). In addition, the 2014 administration of the GSS is recent enough to encompass DACA as a macro factor in terms of national policy but is not recent enough to account for the election of Trump in 2016. Put another way, the findings may not be generalizable to the present. Finally, this study created a variable to define a possible postdoctoral position since the census does not delineate postdocs as an occupation code.

Discussion

Using Deaux's (2006) model for the social psychological study of immigration, this study considered existing literature reporting on attitudes toward undocumented immigrants and undocumented students to inform an examination of individual attributes associated with supportive views of immigration. By employing the 2014 administration of the GSS, this study updated the findings of studies using administrations of the GSS from ten to twenty years ago (Haubert & Fussell, 2006; Kunovich, 2013; Palmer & Davidson, 2011). In addition, this study sought to conduct preliminary analyses to examine an overlooked population within the academy generally and on the topic of attitudes toward undocumented immigrants and undocumented students specifically: postdoctoral fellows. This study considered whether the combination of age, gender, race, U.S. citizenship status, having a graduate degree, and having a possible postdoctoral fellowship occupation predicted the binaries of "America should exclude 'illegal' immigrants" as well as "Legal immigrants should have the same education as Americans". Results suggested that this combination of variables significantly predicted agreement with both statements, even though holding a possible postdoctoral fellowship was not a statistically significant.

This study contributes to the literature on how groups within the academy view immigration. Since postdoctoral fellows have been an overlooked group within higher education (Camacho, 2017; Camacho & Rhoads, 2015), this study a gap in the literature. Furthermore, postdocs are positioned to have unique views of immigration given that more than half are from outside the United States (Ferguson et al., 2014; Xu et al, 2018). Considering whether an individual was in a postdoctoral-like occupation was part of a model that significantly predicted respondents' views regarding "illegal" immigrants and education of immigrants.

Applying Deaux's (2006) model for the social psychological study of immigration suggests that when combined with larger macro contexts, individual micro level factors informed meso level, or intergroup views, of "illegal" and legal immigrants. Specifically, Deaux's (2006) model puts forth that individual demographic factors of minoritized identities, including identifying as a racial minority and as a non-U.S. citizen, significantly predicted increasing the odds of respondents reporting more positive views of undocumented immigrants. Being a non-U.S. citizen was also associated with increasing the odds of agreeing that immigrants should have the same education as Americans. These findings corroborate previous research on attributes associated with more support for undocumented immigrants and undocumented students, in that being a racial minority, a woman, and a non-native English speaker has been associated with greater support (Garibay et al., 2016). Furthermore, just as the literature has suggested that higher levels of education are associated with more supportive views of undocumented immigrants (Berg, 2009; Haubert & Fussell, 2006; Kunovich, 2013), the present analysis also indicated that having a graduate degree was associated with increasing the odds of agreeing with the statement that "legal immigrants should have the same education as Americans." This study also found that as age increased, the odds decreased that a respondent

would disagree with the statement “American should exclude “illegal” immigrants” which also replicates previous findings (Berg, 2009). Since younger respondents had less of an issue with undocumented immigrants and were more supportive of education for immigrants, perhaps this indicates that views will alter over time.

Deaux’s (2006) model also suggests that the larger macro factors have continued to impact attitudes toward undocumented immigration. Since previous research had examined this topic using the GSS from 2004 and earlier, the 2014 administration considers larger political contexts such as DACA, changing state policy, and the notion of sanctuary cities and sanctuary campuses. However, use of the 2014 data set is also prior to the election of Trump and may not fully capture the “Trump effect”, or what the Southern Poverty Law Center (2016) has called the negative impact on undocumented immigrants. The “Trump effect” has been identified in K-12 schools and within higher education (Muñoz, Vigil, Jach, & Rodriguez-Gutierrez, 2018; Nienhusser & Oshio, 2019). It is possible that the present analysis illuminates the presence of negative attitudes toward undocumented immigrants and education for undocumented immigrants that served to catalyze the Trump effect in 2016. The model for social psychological immigration (Deaux, 2006) would suggest that the combination of individual, micro factors and larger, macro contexts combine to inform the meso views identified in this study.

Implications for Institutions of Higher Education

These findings have important implications for institutions of higher education. The results from this study suggest that institutions of higher education may want to consider ways to engage postdoctoral fellows on their campuses in initiatives designed to support immigrants and support undocumented students. Since individual factors which may be attributes of many postdoctoral fellows were found to be part of a model significantly predicting views of “illegal”

immigration and immigrant education, postdoctoral fellows may be uniquely positioned to garner support for these vulnerable groups. Institutions of higher education can consider how postdoctoral fellows may respond to interventions such as DREAMzone (Cadenas et al., 2018) or incorporating Undocumented/DACAmented Status Competency to their training (Nienhusser & Espino, 2017). Given that previous research has touted the concerning trajectory for postdoctoral fellows (Camacho, 2017; Camacho & Rhoads, 2015; Ruben, 2013), engaging postdoctoral fellows into community building efforts has the potential to foster potential benefits, such as generating a sense of belonging and creating mentorship opportunities. Institutions of higher education should also ensure that postdoctoral fellows are given the flexibility to engage in this important work as part of their full-time employment.

Implications for Policy

Postdoctoral fellows constitute not only the future of tenure-track faculty within the academy but also future government officials, policy analysts, and entrepreneurs. Since more than half of postdocs are from outside of the United States (Ferguson et al., 2014; Xu et al., 2018), engaging postdoctoral fellows toward partnering for the success of immigrants and undocumented students can benefit members of all three groups individually and collectively while simultaneously benefitting the larger community. Engaging postdoctoral fellows in greater support of immigrants and undocumented immigrants can provide pathways for the development of more inclusive policies in a variety of disciplines and sectors. In turn, these sectors can work to drive the need for more comprehensive policy solutions at institutional, state, and national levels.

Future Research

This study also raises opportunities for future research. Although the analysis generated a category of possible postdoctoral fellows, future data collection efforts in the field of higher education and beyond should consider postdoctoral fellows as an occupation. Such data collection efforts will bolster an established profession, since professional organizations already exist for postdoctoral fellows (National Postdoctoral Association, 2018) and the number of local organizations are on the rise (Ferguson et al., 2014). Furthermore, identifying postdoctoral fellows as an occupation and as a subpopulation within the academy matters because this group is positioned to become leaders in the future workforce inside and outside of the academy. Future research should also make humanizing language, as described by Negròn-Gonzales (2013), a standard for engaging in questions about views of undocumented immigrants and immigrant education.

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CHAPTER 4 - HOW POSTDOCTORAL FELLOWS CAN SUPPORT UNDOCUMENTED STUDENTS' PURSUIT OF HIGHER EDUCATION ³

Summary

Research on attitudes within the academy toward undocumented immigrants and undocumented students has overlooked the views of postdoctoral fellows (postdocs). With the number of postdocs in the United States on the rise and the current political climate encompassing negative rhetoric against immigrants, how the academy has (or has not) socialized this highly trained group matters for the academy and future policy in the United States. Since previous research has shown that racial minorities and non-U.S. citizens exhibit greater support for undocumented students, this study conducted individual interviews with postdocs who identified as White, U.S. citizens. Findings indicated postdocs with a personal or professional connection to undocumented students exhibited greater levels of support toward undocumented students. Those lacking these connections exhibited greater levels of White immunity (Cabrera, 2017) and what this study terms citizenship immunity. In addition, postdocs expressed a need for adult education on the issue of supporting undocumented immigrants and students. Postdocs also articulated possible strategies for how to support undocumented students and how to engage as an ally with these students, suggesting postdocs have the power to counteract negative rhetoric and work toward more inclusive policy for undocumented students.

³ This chapter is a draft of a manuscript that has yet to be submitted for publication with Dr. Kalpana Gupta as second author. My contributions to this manuscript include conducting the data collection and analyses as well as drafting the initial literature review on postdocs, findings, and discussion. Dr. Gupta's contributions include developing the sections on critical theory from an adult education perspective, the theoretical frameworks, and connections to policy, as well as feedback on the writing.

Introduction

Literature on the topic of undocumented students' experiences with campus climate (Muñoz, 2016; Suarez-Orozco et al., 2015) has elucidated myriad barriers this group encounters when pursuing higher education (for a review, see Bjorklund (2018)). The American Association of State Colleges and Universities (AASCU) (2018) identified undocumented and Deferred Action for Childhood Arrivals (DACA) students as one of the top five issues for state policy consideration. An undocumented student is an individual who does not have legal status within the United States because they did not arrive with legal status or overstayed the limitations of their status. Some students in higher education have temporary legal status under the provisions of DACA, which was initiated in 2012 by an Executive Order by President Obama. When meeting certain parameters, including age arrived in the United States and educational attainment, DACA recipients receive temporary status enabling one to obtain a driver's license and bank accounts. Although the current Trump administration rescinded DACA in September 2017, judicial proceedings forced the Trump administration to restore program renewals. A more comprehensive solution for undocumented students has yet to be ratified by Congress.

Undoubtedly the AASCU's naming of these issues is in part due to the current political climate within the United States, which has resulted in a "Trump effect", or a negative impact on undocumented immigrants as a result of the election of Trump (Southern Poverty Law Center, 2016). The "Trump effect" has been a reality for students in K-12 schools (Southern Poverty Law Center, 2016) and within institutions of higher education (Muñoz, Vigil, Jach, & Rodriguez-Gutierrez, 2018; Nienhusser & Oshio, 2019). Research has called for local action to ameliorate all students' educational experiences given Trump's ongoing threats (Nguyen &

Kebede, 2017). Such realities make it important to consider attitudes regarding undocumented students' pursuit of higher education. Cognitive behavioral theory suggests that an individual's thoughts inform feelings, and feelings can inform behaviors (Beck, 1967). Therefore, considering attitudes toward undocumented students can inform how to engage in behaviors and actions that may ameliorate the negative climate for undocumented students (Cadenas, Cisneros, Todd, & Spanierman, 2018; Cisneros & Cadenas, 2017).

Research regarding attitudes toward undocumented students' pursuit of higher education has considered a variety of groups within the academy but has overlooked postdoctoral fellows. Studies on this topic have considered the opinions of undergraduate students (Garibay, Herrera, Johnston-Guerrero, & Garcia, 2016; Herrera, Garibay, Garcia, & Johnston, 2013), and the opinions of employees of the academy, including: leaders of institutions of higher education (Feranchak, 2007; Parrish, 2015), staff (Cadenas, Cisneros, Todd, & Spanierman, 2018; Cisneros & Cadenas, 2017; Nienhusser, 2018), leaders at community colleges (Nienhusser, 2014), and members of the faculty (Ishiwata & Muñoz, 2018; Salas, 2012). However, this body of work has overlooked postdoctoral fellows, even though the number of postdocs has been on the rise (Cantwell & Taylor, 2013; Xu, Gilliam, Peddada, Buchold, & Collins, 2018). Indeed, Ferguson, Huang, Beckman, and Sinche (2014) estimated that there are more than 80,000 postdocs in the United States and there was a 52% increase in the number of postdocs from 1998 to 2014. For every tenure track position open for hire, there are approximately seven postdocs currently employed (Ruben, 2013). Postdoctoral fellows will become not only future faculty but also future research scientists, policy makers, and leaders inside and outside of the public sector. How the academy has or has not socialized postdocs on the issue of supporting undocumented students matters not only for the future of higher education but also for influencing more

inclusive policy for undocumented students despite ongoing negative rhetoric. The need for more inclusive policy is critical given Congress has yet to identify a more comprehensive solution for undocumented students.

This study was part of a larger project which sought to address the gap in the literature regarding postdoctoral fellows' attitudes toward undocumented students. Recent research has shown that identifying as a racial/ethnic minority as well as a non-native speaker of English have been associated with greater support of undocumented students (Garibay et al., 2016). In addition, identifying as a non-citizen of the U.S. has been associated with greater support of undocumented immigration and education for immigrants (Jach & Gloeckner, 2020). This study employs critical theory (Brookfield, 2005; Freire, 2007) and acknowledges that higher education was founded through systemic oppression and continues to perpetuate White supremacy (Cabrera, 2017). Thus, to better understand how postdoctoral fellows support undocumented students' pursuit of higher education in their current and future roles, this study interviewed individual postdoctoral fellows who self-identified as White, U.S. citizens who agreed that undocumented students should be supported in their pursuit of higher education.

Relevant Literature

Previous literature on attitudes toward undocumented students within the academy and the lack of literature regarding the attitudes of postdoctoral fellows informs the present study.

Postdoctoral Fellows

Postdoctoral fellows are positioned to garner experiences which have been shown to be associated with exhibiting greater support toward undocumented immigrants and/or undocumented students. Experiences which research has demonstrated have been associated with greater support of undocumented students have included: attending an institution of higher

education which receives federal aid (Garibay et al., 2016), residing in an urban environment (Caicedo, 2016), residing in a neighborhood with a higher Latino population (Berg, 2009), living in a state that has policies permitting in-state tuition for undocumented students (Feranchak, 2007), as well as having positive cross-racial interactions (Herrera et al., 2013). Political views have also been associated with attitudes toward undocumented immigration. More support of undocumented students has been associated with individual endorsement of liberal views (vs. conservative views) and having a home address in a Congressional district that is more liberal than conservative (Garibay et al., 2016). Conversely, previous research suggested that membership in the Republican party increased the odds of an individual's disapproval of undocumented immigration (Berg, 2009). Finally, individual endorsement of cosmopolitan views over parochial views has also been associated with greater support of undocumented students (Haubert & Fussell, 2006).

A variety of individual factors have been associated with greater support of undocumented students. As described, being of a racial/ethnic minority (vs. White), being a woman (vs. a man), and being a non-native speaker of English (vs. a native speaker of English) (Garibay et al., 2016) have all been associated with more supportive views. Supportive views have also been associated with endorsement of the belief that immigrants do support the economy as well as with support of bilingual education (Palmer & Davidson, 2011). Higher levels of education, such as having obtained a graduate degree or professional degree, has been associated with more supportive views of undocumented immigration (Berg, 2009; Kunovich, 2013). Therefore, it is possible that the individual demographic attributes as well as the individual training and life experiences of postdocs may be associated with greater support of undocumented immigrants and/or undocumented students, rendering them a group worth

considering when it comes to research on attitudes within the academy toward undocumented students.

Postdocs constitute a diverse group, and their experiences are hardly monolithic. The U.S. National Postdoc Survey found that more than half of postdoctoral fellows identified as women and more than half were non-U.S. citizens (McConnell, Westerman, Pierre, Heckler & Schwartz, 2018). The survey further delineated that residency status varied by gender, with men more likely to self-identify as a non-U.S. citizen (52% on a temporary visa, 42% U.S. citizens, 6% permanent residents) as compared to women (38% on a temporary visa, 56% U.S. Citizens, and 6% permanent residents). Reported salaries indicated that women were paid less than their male counterparts even when controlling for a variety of factors, including institutional type, marital status, having dependents, and identifying as a minority.

Research has acknowledged postdoctoral fellows have been overlooked within higher education even though they contribute high levels of productivity at a very low cost (Gloria & Steinhardt, 2016; Yang & Webber, 2015). When postdoctoral fellows are considered, they may be categorized within the same group as graduate students. For instance, the American Educational Research Association [AERA] has a special interest group on “Graduate and Post-Doctoral Education across the Disciplines” (AERA, 2020). While there is limited research on postdoctoral fellows, studies have illuminated the issues many encounter while employed at institutions of higher education, including low pay, long hours, and job insecurity (Camacho, Kukor, Lee, & Rosenberg, 2016; Cantwell & Taylor, 2013). Furthermore, postdoctoral fellows can be especially vulnerable to discrimination based on gender, race, and/or citizenship status (Camacho, 2017; Camacho et al., 2016; Camacho & Rhoads, 2015; Cantwell & Taylor, 2013). Research examining the experiences of postdoctoral fellows has primarily focused on issues

pertaining to career trajectory (Levitt, 2010; Xu et al., 2018), labor issues (Camacho & Rhoads, 2015; Camacho, 2017; Cantwell & Taylor, 2013), and career engagement (Gloria & Steinhardt, 2016; Yang & Webber, 2015) rather than considering the attitudes of postdoctoral fellows. The present study reinvigorates research on postdoctoral fellows by considering them a group worth examining when it comes to understanding attitudes within the academy given postdoctoral fellows will move into important roles within and outside of higher education.

Critical Theory through an Adult Education Lens

Whiteness permeates systems in the United States, and when it comes to immigration and Whiteness, Haney-López (2006) postulated that the United States has a history of legalizing Whiteness as equivalence to citizenship status. While Whites may become defensive by the notion of White privilege because of the difficulties they may encounter in their life, Cabrera (2017) argued that White immunity focuses on the fact that “People of Color are precluded from equitable treatment” (p. 82). The current political rhetoric against immigrants and building a wall along the U.S/Mexico border demonstrates the perpetuation of this systematic oppression. Adult education offers a disciplinary lens from which to understand opportunities to combat this oppression. The approaches mentioned next embody such opportunities and have been led by two predominant leaders in adult education, Paulo Freire and Stephen Brookfield.

Freire (2007) proposed liberation from oppression is a process that requires reflection and action to be transformative in its results. Instrumental to his concept for liberatory praxis are the acts of solidarity, dialogue, and conscientization. As described through his work, solidarity is formed not by acting on behalf of someone else, but rather by acting with, or in other words, alongside someone (Freire, 2007). Dialogue in adult education practice represents more than a conversation among individuals and leads to ways of knowing (Vella, 2002). Similarly for

Freire, dialogue involves the need for co-learning to exist and for people to be jointly responsible in the process towards transforming reality. Conscientization is the act of raising consciousness in order to develop an awareness of unjust situations with the purpose of wanting to change them. This awareness requires critical thinking skills that deeply explore attitudes that inform one's thoughts and actions.

In the same way Freire's (2007) seminal concept of liberatory praxis seeks to raise consciousness toward taking action, Brookfield (2005) posited that "a critical theory of adult learning must focus on understanding how adults learn to challenge ideology, contest hegemony, unmask power, overcome alienation, learn liberation, reclaim reason, and practice democracy" (p. xii). Higher education in the United States was founded through slave labor (Wilder, 2013), and White hegemony continues to dominate higher education (Cabrera, 2017). Brookfield furthered that critical theory for adult learning facilitates the possibility to "understand not just how the world is but also how it might be changed for the better" (2005, p. 7). His view on critical theory provides the means to contend the White hegemony that dominates higher education. He emphasized that the way people learn to construct and deconstruct their own experiences and meanings can lead them to recognize the systemic oppression that permeates dominant ideologies in everyday practices. Due to the belief that knowledge learning is a social construct, this type of critical reflection is integral to the employment of critical theory (Brookfield, 2005). In his later writings, Brookfield, a White male, specifically cautions the use of allyship on a surface level, and should in fact be understood as consistently showing up in support of marginalized populations and "putting yourself on the line" (Brookfield & Associates, 2019, p. 308). His view on allyship is another example of the importance of taking action to transform realities.

Purpose

This study addresses the gap in the literature related to examining attitudes within the academy toward undocumented students by interviewing postdoctoral fellows. Specifically, this study was part of a larger project which sought to examine the extent to which postdoctoral fellows support immigration and undocumented students. The present study considered how postdoctoral fellows who identify as White U.S. citizens can support undocumented students' pursuit of higher education in their current and future roles toward enacting more inclusive policy for undocumented students. The research questions for this study included:

1. What opinions and perceptions do postdoctoral fellows have about supporting undocumented students' pursuit of higher education?
2. How can postdoctoral fellows in their current and future roles support undocumented students' pursuit of higher education?
3. How can postdoctoral fellows challenge the master narrative about undocumented students perpetuated by the current political rhetoric?

Theoretical Frameworks

This study employed Brookfield's (2005) critical theory for adult learning through interviews with White postdoctoral fellows who identified as U.S. citizens about their attitudes toward supporting undocumented students' pursuit of higher education and how postdoctoral fellows can support these students. Brookfield (2005) stressed the need for not just understanding realities within the world, but more importantly, to use critical theory to advance and transform those realities. This framework illuminates the importance of considering postdocs' attitudes toward undocumented students in order to contest White hegemony and White immunity, as described by Cabrera (2017). Postdoctoral fellows have been highly trained

by the academy to understand the world and change it through research. This study examined how the academy has (or has not) influenced how postdoctoral fellows construct their attitudes toward undocumented students as well as how postdocs can support these students. This study specifically delimited participation to White postdocs who identified as U.S. citizens because previous research on attitudes toward undocumented students has suggested that racial minorities reported more support for undocumented students than their White counterparts (Garibay et al., 2016; Jach & Gloeckner, 2020). Critical theory for adult learning as delineated by Brookfield (2005) guides the present study by facilitating a consideration of how postdocs have learned themselves and might teach others to support undocumented students' pursuit of higher education.

This study also considered findings through Deaux's (2006) theory for the social psychological study of immigration. Deaux's (2006) model employs three levels: the macro, meso, and micro. Similar to Bronfenbrenner and Morris' (1998) ecological framework, Deaux (2006) deems the various levels of influence which form individual views, including social structures at large (macro), individual influences (micro), and where the macro and micro interact (meso). The strategies identified at Deaux's (2006) three levels connect to Beck's (1967) cognitive behavior theory, in which feelings inform behaviors. These levels also correspond to the notion of various echelons of policy related to undocumented students, including policies at the institutional, local, state, and national level.

Methods

This study employed a constructivist grounded theory approach with the use of critical theory to interrogate the topic of postdoctoral fellows' support of undocumented students' pursuit of higher education. This approach was used to examine how participants' meanings and

actions formed conceptual categories. As described by Bhattacharya (2017), “constructivist studies examine how participants form meanings and actions” (p. 105). Grounded theory is the generation of conceptual categories from data or evidence (Charmaz, 2011; O’Connor, Netting, & Thomas, 2008). Furthermore, this approach involves constant comparisons toward providing application and predictive power toward a form of interpreted truth. This study used grounded theory toward “context-imbedded meaning making” thus invoking the need for “the demonstration of multiple perspectives, bounded subjectivity, trustworthiness and authenticity” (O’Connor, Netting, & Thomas, 2008, p. 44). Specifically, this study endeavored to consider the context of the postdoctoral fellowship in addition to examining postdoctoral fellows’ support of undocumented students. For instance, the primary researcher engaged postdoctoral fellows in a discussion of their connection to their current employing institution. The interview questions also considered the individual context of participants’ institutional, local, state, and national policy regarding undocumented students. For a full list of interview questions, see Appendix C.

After obtaining institutional review board approval through Colorado State University, the primary researcher recruited postdoctoral fellows to participate in individual interviews. The primary researcher sent a recruitment email to the National Postdoctoral Association by purchasing the rights to distribute an e-advertisement per their website’s instructions (National Postdoctoral Association, 2019). Requirements for participation in an individual interview included having completed a doctoral degree and current employment as a postdoctoral fellow. In addition, participation was also limited to considering the views of those who self-identified as White citizens of the United States and agreed that undocumented students should be supported in their pursuit of higher education. To address these eligibility criteria, the recruitment email contained a link to brief eligibility screening tool available online via

Qualtrics. Approximately 200 individuals completed the eligibility survey. Roughly half of all respondents met eligibility requirements, and these individuals received a follow-up email inviting them to sign up for an individual interview. A total of ten individual interviews were conducted via Zoom video conferencing. Upon obtaining participant permission, the primary researcher video recorded each interview. Participants received a \$50 amazon gift card via email for participating in an interview. Recordings were then transcribed via a third party transcription service (Rev.com, 2020). Audio files of recorded interviews were securely transferred to the third party transcription service. To enhance trustworthiness, participants were offered the opportunity to review a copy of their transcript and remove anything they did not want included in the study. Nine out of ten participants chose to review their transcript and remove any information of their choosing.

Transcripts and interview notes were reviewed using Charmaz's (2011) and Saldana's (2009) approaches to qualitative coding for social justice research. The primary researcher read and re-read the transcripts. The primary researcher initially coded all interviews, and then re-reviewed all instances of codes. Then, the primary researcher engaged in comparison with all coded interviews toward constant comparison to nuance and collapse coding. A study auditor was hired to review of all codes toward further enhancement of trustworthiness of study findings. Infante Consulting and Research (2019) provided a full audit of all coding, including feedback on the creation of several additional codes. All transcripts and coding were re-reviewed based on the feedback. All codes were compared to identify thematic elements.

Positionality

First author: I identify as a White, cisgender, heterosexual woman born in the United States with citizenship privilege. I served as the primary researcher for this study. As the great-

granddaughter of German Russian peasants who immigrated to the United States, I am afforded the privilege of standing on the shoulders of those who came before me (Newton, Historical Society of Pennsylvania, 2019). This privilege is manifest in that each generation of my family has obtained a higher level of education (as my great-grandparents attended grade school, grandparents completed high school, parents completed college plus my mom completed her master's, and my siblings both have their doctorate). The topic of undocumented students' pursuit of higher education is an area which I have conducted previous research on as a graduate student (Muñoz et al., 2018; Storlie & Jach, 2012). I am on the journey of acknowledging and understanding my White, cisgender privilege in my work as a graduate student and aspiring scholar. While I aspire to engage in critical theory as defined by scholars such as Brookfield (2005) and Freire (2007), my perception of this work occurs through my experience of identifying as a White citizen of the United States and the experience of others perceiving me as a White U.S. citizen.

Second author: I identify as an Asian-American, born in India and obtained U.S. citizenship as a young adult, and raised in a middle-class family. My parents, also born in India and obtained U.S citizenship in the 1970s-1980s, were public school teachers and they, my siblings, and I all possess higher education degrees. I am a cisgender, heterosexual and able woman. My doctorate degree in Adult and Post-Secondary Education, along with being cisgender, heterosexual, and at times, citizenship affords me privilege in certain situations; however, I am no stranger to the effects of marginalization. My positionality as second author of this article is to offer adult education as a disciplinary and theoretical lens that provides opportunities for postdoctoral fellows to engage in critical awareness that leads to action.

Participants

This study involved an individual interview with ten postdoctoral fellows. A total of six women and four men participated. Six participants were working at a public research university, three were at a private research university, and one was at a government agency. Research areas of the various participants varied, and included disciplines in STEM (Science, Technology, Engineering, and Mathematics), health sciences, and the social sciences. There were no postdoctoral fellows in the fields of the arts or humanities. Geographical representation across the United States included four participants employed in the Northeast, two in the South, three in the Midwest, and one in the West. A total of seven postdoctoral fellows were working in states without in-state tuition for undocumented students, two in states with in-state tuition for undocumented students, and one in a state prohibiting enrollment of undocumented students at institutions of higher education (National Conference of State Legislatures, 2019). Three participants self-disclosed as members of the lesbian, gay, bisexual and/or transgender (LGBTQ) community.

Findings

The coded transcripts resulting from this study yielded a variety of themes which contribute to the understanding of how postdoctoral fellows make sense of supporting undocumented students' pursuit of higher education. The first research question for this study sought to examine what opinions and perceptions postdoctoral fellows have about supporting undocumented students' pursuit of higher education. Among the ten White, U.S. citizen postdocs who participated in this study, those who described a professional or personal connection to undocumented students and/or undocumented immigrants exhibited greater levels of support and less apathy toward undocumented individuals. White immunity (Cabrera, 2017)

and citizenship immunity constitute how individuals who lacked personal or professional connections with undocumented students were able to go about their lives without having to make sense of the issues undocumented students encounter, while having personal or professional connections bolstered individual postdocs' support of undocumented students.

White Immunity and Citizenship Immunity

Several participants shared not personally knowing anyone who was undocumented. For instance, one participant shared: "I actually don't know any[one who is] undocumented, or they might be, and I just don't know they're undocumented." Another student explained how he was not aware of undocumented student issues as a university student:

I wasn't really involved in a lot of undergraduate student groups, and I didn't really seek those out. I was focused on my work. So, I'm sure there were groups, and I'm sure I saw flyers or shout-outs or emails about attending groups, but I just didn't attend any of them because I either felt that I wasn't part of that group or I just didn't have time to go.

Cabrera's (2017) notion of White immunity was present in the responses of the postdoctoral fellows who said they did not know anyone who was undocumented or had never encountered anyone who was undocumented. In this sense, the lack of personal or professional connection described by several postdoctoral fellows in this study exhibited a form of citizenship immunity, in that their citizenship privilege made them immune from needing to understand issues of concern regarding legal status. One male postdoc shared: "Maybe I'm just white male supremacy over here and don't get exposed to it because people are scared to ask or bring it up." Furthermore, several of the participants who did not have a personal or professional connection to undocumented immigrants or undocumented students shared that they were not familiar with issues pertaining to in-state tuition for undocumented students, even though there are currently

19 states with in-state tuition provisions for undocumented students pursuing higher education (National Conference of State Legislatures, 2019). For instance, when asked about their views on in-state tuition for undocumented students, one postdoc shared: “I don't know. I've never thought of that before.” In these instances, White immunity (Cabrera, 2017) and citizenship immunity served to make these postdocs immune from having to think about these issues.

Professional and Personal Connections

Several participants shared professional or personal experiences that informed their support for undocumented immigrants and undocumented students. One postdoctoral fellow shared that she served as an expert witness for asylum cases during her time as a graduate student. She had experience conducting mental health status exams in a detention center in the southern region of the United States. She shared a story of conducting the mental health status exam for a 20 year old woman:

She was from El Salvador, and she had been brutally raped by MS-13, and so she came to the U.S. because that was the only chance to survive, because she was refusing to be a drug mule.

The professional experience of conducting a mental health status exam for this survivor clearly had an impact on how this postdoctoral fellow viewed the world and the importance of issues relevant for undocumented immigrants and undocumented students. The postdoc also shared her experiences as a teaching assistant in which she encountered students who disclosed their undocumented status to her. She shared:

I was a TA [teaching assistant] for a few years, so we had masters and undergraduate students who identified as DACA or from mixed status families in the classroom. And then when I taught on my own, undergrad, I had a student that came to me about saying

that she was DACA, and the tremendous stress of that and that was fall 2017, obviously things haven't really gotten much more alleviated. But that was when you were hearing about all the deadlines and people were starting to panic, and not really knowing what the future was going to be. Not that it's not in any less jeopardy now, but I think when they were talking about the deadlines and the renewals, it was definitely very heightened.

Another participant shared her experience of volunteering for a mentoring program which helped high school students apply to college in the northeastern United States. She shared:

While our program was not supposed to accept undocumented individuals, most years when it came time for college applications and we were supporting the students as they were making decisions surrounding their college applications, it would often come out that one of the students was undocumented and just had never known. So that's I think when I first started to become aware of this is an issue that impacts real people and it's not just something that you hear about in the news.

Given that more than half of postdoctoral fellows are from outside the United States (Xu et al., 2018), several participants in this study were also familiar with visa issues for their colleagues. One postdoc shared: "I've definitely known people not so much that are undocumented, but that were here on visas, and so I think just kind of having that personal connection probably helped." The power of having a professional connection helped postdocs realize how that connection bolstered and motivated their supportive views, as described by a postdoc working in the health sciences:

And I think if more people knew somebody, I think there wouldn't be that fear. But I think in terms of the media really cultivates this culture of fear, and about people who are

unknown or someone that they don't know, so then they start to think it's going to impact them as well.

Thus, having an individual connection with undocumented students and/or undocumented immigrants helped postdoctoral fellows make sense of why supporting these groups mattered.

Individuals with personal connections also exhibited stronger support of undocumented students' pursuit of higher education. For instance, one participant shared a personal experience regarding a romantic relationship which made her familiar with issues encountered by undocumented individuals:

I dated a guy who had a daughter in Mexico, and his daughter could have U.S. citizenship because he was her father, but her mother was Mexican. And so, she could come to the U.S., but the mother never could. There was no pathway for this child's mother to even get a visa for any length of time. It was just not a thing.

The participant shared this personal experience as a means of explaining how her personal understanding helped her see how others do not have this insight. She went on: "And I don't think people understand that if (...) you're a person from Mexico or from a Central American country, there's no line." This participant also had a personal connection with undocumented immigrants because of a personal hobby, horseback riding. She shared:

[D]uring the time that I rode horses, I knew a lot of undocumented people who worked with horses because it was very common that the people who worked in the stables or worked with the horses were undocumented and kind of paid under the table and that sort of thing. And because of my relationships with those people, I really came to have a lot of respect for them and a lot of sympathy for kind of the situation they were in. And I'm

just very much in favor for changing immigration policy in a way that makes sense for everybody.

Another participant shared about a personal friendship she had with an undocumented person which helped her understand the importance of these issues. She shared:

Particularly like me coming from the Deep South and having many friends who are Latino in terms of representation, and a dear friend of mine pursued higher level education but she was undocumented for many years up until about high school I want to say. She's today a successful nurse practitioner but her family migrated from Mexico to the US, to Florida, and had lived up in the rural South. So just understanding experiences like that and hearing fears from people who I know personally on that level.

The professional and personal experiences of postdoctoral fellows helped these individuals have an awareness of issues pertaining to undocumented immigrants and undocumented students, which in turn bolstered their support for these groups.

“But it’s just I feel like I know so little”: Need for Adult Education

Postdoctoral fellows also expressed a need for adult education. Many of the participants expressed a need for more information about how to support undocumented students. One postdoc shared: “I don’t know a whole lot and I wish I knew more...”, and similarly, another shared: “But it’s just I feel like I know so little.” Postdocs quickly owned their lack of knowledge regarding issues pertaining to undocumented students and what might help. One postdoc shared “I’m probably not nearly as informed on the issues [as] I should be” while another stated “I’m not entirely sure what would specifically help.” One postdoc expressed regret over this reality by articulating: “So I’m sadly not as well informed as I should and/or hope to be in terms of the state of affairs for individuals who are undocumented.” Participants also

articulated what type of training and information they needed in order to be able to better support undocumented students. When asked about what would help postdoctoral fellows support undocumented students, one postdoc shared:

I also think just being aware of other ways that I can help. So other things that people may need. How I can frame my language to better support individuals who are living undocumented. So, I'm not saying things that are offensive or basically coming from an area where I don't understand fully their situation, making me seem like I'm insensitive.

Similarly, another postdoc shared:

I think understanding what are the best ways to be an active ally if these are people I'm regularly in contact with? What are the best ways to be a more active ally if these are not people that I'm regularly in contact with, particularly at a university or local level?

Another postdoc shared that just participating in the study raised their awareness of the issues.

The postdoc stated: “Our conversation has made me more aware currently of my lack of knowledge about DACA and Dreamers, but it makes me want to understand it better for the future.” Thus, engaging in adult education for postdoctoral fellows can help them further develop their awareness and skills to specifically address the needs of undocumented students.

How Postdocs Can Support Undocumented Students

While postdocs expressed a need for adult education regarding issues pertaining to undocumented students, they also identified numerous strategies regarding how to support undocumented students' pursuit of higher education, and these ideas constitute findings related to the second research question for this study. The support strategies described by the participants in this study can be described through Deaux's (2006) model for the social psychological study of immigration. Postdocs had numerous ideas and suggestions about how

they might support undocumented students in their current and future roles. These support strategies included macro or political level, meso or institutional level, and micro/individual level strategies.

When asked about how postdoctoral fellows could support undocumented students, participants in this study named a variety of support strategies at the political or macro level. Several postdocs discussed voting for candidates in government who supported undocumented students. They also discussed learning who their representatives are and contacting them regarding undocumented student issues. One postdoc also suggested a letter writing campaign to representatives. Two participants discussed having personally participated in a march or demonstration for undocumented students, and several participants suggested this as a way to support undocumented students in the future. Finally, postdocs discussed political organizing as a means of plugging into the collective to support undocumented students. One postdoc shared:

I think there's one phrase that comes to mind, power in numbers and in representation.

So being an ally is a means of showing, finding local groups, or chapters that are already working towards common goals that have been set.

The notion of political organization and plugging into other groups also extended to political activism via social media. Postdoctoral fellows shared that they used their own personal Facebook pages to repost information about undocumented students. Another postdoc disclosed that she found an individual cause to donate to via Instagram. Thus, social media can be a means of continuing to spread individual awareness, organizing a collective of people who value certain viewpoints, and fundraising for specific organizations or causes.

The participants in this study also identified a variety of support strategies for undocumented students at Deaux's (2006) meso level, which included strategies at the

institutional level. Most of the postdocs who participated in an interview shared information about involvement in a postdoctoral association at their employing institution, the postdoctoral studies office at their employing institution, or the National Postdoctoral Association, which was the listserv through which they were recruited to participate in this study. Several postdocs suggested distributing information to build awareness through membership in these groups. This could also extend to other institutionally based groups depending on the site, such as the graduate council/senate at an institution or the postdoctoral fellow union. Another postdoc suggested participating in the Center for Gender and Refugee Studies Expert Witness Database, through the University of California Hastings College of Law (no date). A few postdocs suggested integrating larger awareness of undocumented students into campus committee work, teaching practices, and mentoring of undergraduate and graduate students. The opportunities to engage in training about how to support undocumented students and engage in allyship connect to Brookfield's (2005) concepts of challenging ideology and contesting White hegemony to transform realities and Freire's (2007) concept of solidarity.

When asked about DreamZone training (Cadenas et al., 2018), or a training offered at institutions of higher education to educate participants about undocumented student issues and available supports, all ten of the postdocs agreed that this would be a valuable training. Previous research has shown that DreamZone training had a positive impact ameliorating participants' views of undocumented students and on how to support undocumented students (Cadenas et al., 2018). In this study, most of the participants went further to suggest that something like DreamZone training should be made accessible to postdocs via existing organizations or associations, or through required or optional training available at their employing institution. One postdoc suggested incentivizing participants:

Obviously, incentives are really great. I know that for the LGBT Safe Zone at (public research university name), I think there was an incentive. (...) I know that my mentor took classes for diversity [and] (...) each one was different, (...), and then at the end they were basically given a laptop for their lab to use.

Previous researchers have also delineated what constitutes multicultural competency in this domain, formalized by undocumented status competency or UDSC (Nienhusser & Espino, 2017). The participants in this study indicated that using existing organizations would be an effective way to offer DreamZone and other trainings about undocumented students.

The postdocs in this study identified individual strategies for the purposes of ameliorating undocumented students' pursuit of higher education that they can engage in on an individual basis in their current and future roles. This consideration of the individual represents the micro level as described by Deaux's (2006) model. Several postdocs discussed speaking up in conversations, whether at home, with friends, in the lab, or in the classroom. The notion of acting on one's privileged identities came up for participants. One White, male, heterosexual postdoc shared:

I think being in that position makes me more powerful than some people, not that I'm seeking power, just the appearance of a White male and the backing of that in society. I think having that power and using it too for good, whether that's undocumented students or having PhD students or whatever that is, is a great thing that should be used people will listen to you and they won't dismiss you as easily.

This postdoc went on to share how his own identity showed up differently in a room when compared to how others show up:

My wife is in academia, she's a postdoc. She's a white female. The difference between when I walk into a room and when she walks into a room, we're probably equally smart, is so insane. I almost get immediate respect without saying anything, and she gets dismissed immediately. So, I think using the privilege is really important for people who have it.

The participants in this study also took to heart the need to engage in personal work to make a difference. One postdoc shared: “The only thing I could really do is understand what I could do to help”. When asked about what being an ally to undocumented students would look like, one postdoc responded: “So I mean obviously being a friend, not judging them for being here.”

On the micro level, postdoctoral fellows also talked about how supporting undocumented students could be a part of their future employment. A few postdocs also suggested writing about undocumented students as part of their diversity statement for tenure-track position applications while on the job market and asking about undocumented students when engaging in the campus visit and interview process. Several postdocs suggested a desire to exhibit greater support for undocumented students in their future employment as tenure-track professors. A few participants also expected to have more power to be able to advocate for students upon having faculty status, whether by hiring undocumented students in their lab or mentoring students. One postdoc shared how it was the responsibility of mentors within academia to support all students: “I feel like any type of student, we should probably help in some capacity. If you're a student, you're probably trying to get better and improve your life situation, whatever that may be.” The findings suggest there is a clear need for adult education to not only inform, but to offer opportunities for dialogue, reflection, and actionable steps.

Countering the Master Narrative

In response to the third and final research question for this study, postdocs can counter the master narrative against undocumented immigrants through supportive strategies at Deaux's (2006) micro, meso, and macro levels through collective organization, or Freire's (2007) liberatory praxis. While the master narrative has perpetuated negative rhetoric against immigrants and undocumented students and resulted in negative impacts known as "Trump effect" in K-12 schools (Southern Poverty Law Center, 2016) and institutions of higher education (Muñoz et al., 2018; Nienhusser & Oshio, 2019), postdocs in this study identified numerous ways to support and advocate for undocumented students in their current and future roles. To be sure, a White immunity (Cabrera, 2017) and citizenship immunity enabled some postdocs to be unaware of issues affecting undocumented students. Yet personal and professional connections with undocumented immigrants as well as undocumented students had a profound impact on postdoctoral fellows' conviction that these groups should be supported.

The participants in this study named a variety of strategies for supporting undocumented students which connect to Brookfield's (2005) critical theory for adult learning. One postdoc summarized:

I think that a lot of postdocs have had contact with the immigration system and have seen kind of how messed up it is. And so, I would think that in general, postdocs would be a good community to kind of tap into to kind of mobilize for some activism in that area. Another postdoc shared: "Postdocs tend to be among one of our more diverse groups on campus given that we've come from all of these different institutions." Postdoctoral fellows and their associations can engage in a variety of support strategies to serve as allies of undocumented students. The postdocs in this study were recruited through the National Postdoctoral

Association, and most of the participants were also part of or aware of a postdoctoral association at their employing institution. Engaging these groups in the important issue of supporting undocumented students can help ameliorate the need for adult education described by the participants in this study, and work toward advocacy for more inclusive policy for undocumented students in institutions of higher education and in other sectors. This work can continue to counter the negative rhetoric used against undocumented students and undocumented immigrants in the current political climate toward counteracting the Trump effect (Southern Poverty Law Center, 2016). Such work has the potential to catalyze more comprehensive policy solutions for undocumented students at the institutional, local, state, and national levels. Engaging in support strategies at the macro, meso, and micro levels as delineated by Deaux's (2006) model for the social psychological study of immigration can empower postdoctoral fellows to engage in activism in their current roles and prepare them for advocacy work in their next career step and beyond. These findings connect to Brookfield's (2005) notion of critical theory for adult learning and Freire's (2007) concept of liberatory praxis in that postdoctoral fellows can work together to raise consciousness regarding issues affecting undocumented students toward engaging in allyship and advocacy with these students.

Discussion

The findings from this study suggest that postdoctoral fellows are uniquely positioned to engage in supporting undocumented students' pursuit of higher education. Postdocs are situated to engage in this work regardless of whether their career continues inside or outside of academia. Given that the number of postdoctoral fellows in the United States is increasing (Ferguson et al., 2014) while the number of tenure track positions in the academy is on the decline (Ruben, 2013), postdocs will continue to enter employment in other roles, including government agencies,

private research institutes, non-government organizations, and other areas. Considering the attitudes of postdoctoral fellows matters because this group has been overlooked in the research within the academy regarding attitudes toward undocumented students. In addition, a consideration of attitudes matters because understanding attitudes can inform how individuals develop their feelings and behaviors, as defined by Beck's (1967) theory of cognitive behavior. The findings from this study suggested that postdocs have a willingness to engage in allyship with undocumented students. Due to their high level of training, postdoctoral fellows are adept learners, and the participants in this study identified numerous strategies for postdoctoral fellows to engage in support strategies and opportunities to learn more about how to advocate for undocumented students. These findings suggest postdoctoral fellows would opt to engage in adult learning opportunities to develop skills related to allying with undocumented students. The prospect to further participate in adult education offers a deeper understanding of becoming an advocate and form an allyship that only occurs by taking action (Brookfield & Associates, 2019). Moreover, in the words of Freire, "The more active an attitude men and women take in regard to the exploration of their thematics, the more they deepen their critical awareness of reality and, in spelling out those thematics take possession of that reality" (2007, p. 106). Clearly, an exploration of postdoctoral fellows' attitudes illuminates how they can work together to raise consciousness toward engaging in action.

The use of grounded theory in this study contributed to identifying key thematic elements which point to the unique ability for postdoctoral fellows to support undocumented students, engage in opportunities for adult education, and inform more inclusive policy for undocumented students and undocumented immigrants in postdocs' future roles inside and outside of academia. Interviews with postdoctoral fellows indicated that personal and professional connections with

undocumented immigrants and undocumented students contributed to greater motivation to support these populations. Through their high level of training within the academy, several postdoctoral fellows had these encounter while others expressed experiences which can be tied to Cabrera's (2017) notion of White immunity and what the present study deemed as citizenship immunity. While postdoctoral fellows expressed a need for adult education on how to best support undocumented students' support of higher education, they also identified numerous strategies at Deaux's (2006) micro, meso, and macro levels on how to support undocumented students and engage in advocacy. Although postdoctoral fellows are often isolated in their individual labs and areas of research, organizations such as the National Postdoctoral Association and institution-level postdoctoral associations are situated to offer adult education opportunities on how to advocate for undocumented students as a postdoctoral fellow and as a leader inside or outside of the academy. An example of Freire's (2007) notion of raising consciousness is to offer in-person or online versions of DreamZone training (Cadenas et al., 2018), which constitute a replicable method of engaging postdocs in adult education to work toward improving campus climate for undocumented students.

Postdoctoral fellows will serve as future tenure-track faculty in the academy, research scientists in the private sector, and leaders within government and non-government organizations. With more than half of postdoctoral fellows constituting individuals from outside the United States (Xu et al., 2018), even postdocs ensconced in White immunity (Cabrera, 2017) and citizenship immunity are likely to encounter someone different from them through their training experience. The findings from this study identify numerous strategies for postdoctoral fellows to engage in active support for undocumented students' pursuit of higher education now and in their future roles. Continuing to engage this group matters not only for ameliorating more

inclusive policy for institutions of higher education, such as the American Association of University Professors' (AAUP) open proclamation of the Sanctuary Campus Movement (AAUP, n.d.), but also for informing more inclusive policy at the local, state, and national level. This study suggests that the first steps towards a more inclusive policy for undocumented students starts at a local level with more training/adult education on how to become an advocate for transforming realities. While postdocs may not be at the level of changing policy, they are well-suited with their experiences, multi-disciplinary backgrounds, and positions to mobilize at Deaux's (2006) micro, meso, and macro levels. Indeed, counteracting the negative rhetoric against undocumented immigrants and undocumented students can have real impacts at the level of creating more inclusive policy to resolve the need for DACA student and all Dreamers to embody the ideal articulated so clearly articulated by a postdoc in this study: "everyone deserves the opportunity for higher education".

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CHAPTER 5 – HOW POSTDOCTORAL FELLOWS VIEW IMMIGRATION AND CAN SUPPORT UNDOCUMENTED STUDENTS ⁴

Summary

This study considers to what extent postdoctoral fellows support immigration and undocumented students using a convergent mixed methods design to combine quantitative and qualitative data, which can provide a fuller picture than using a single approach (Creswell & Plano Clark, 2018). Specifically, this study employs the results of: (1) a secondary analysis of the General social Survey to examine the relationship between attributes of being a postdoctoral fellow and views of immigration, with (2): individual one-on-one interviews with postdoctoral fellows regarding how postdocs can support undocumented students. Results are considered in relation to Deaux's (2006) model for the social psychological study of immigration and discussed with a consideration of the concept White allyship (Cabrera, 2012; Spanierman & Smith, 2017). Quantitative and qualitative results converged related to how postdoctoral fellows' attributes were associated with exhibiting support toward undocumented immigrants and undocumented students. However, findings diverged in that qualitative findings revealed higher levels of support than quantitative survey results. This analysis also considers implications for practice and future research.

Introduction

According to U.S. News, immigration has been a “signature issue” of Donald Trump for the 2016 and 2020 election campaigns (Hansen, 2019). Dubbed by the Southern Poverty Law Center (2016) as the “Trump Effect”, the negative impact on immigrants resulting from Trump's presidency has been apparent in K-12 schools (Southern Poverty Law Center, 2016) and within

⁴ This chapter is a draft of a manuscript that has yet to be submitted for publication.

institutions of higher education (Muñoz, Vigil, Jach, & Rodriguez-Gutierrez, 2018; Nienhusser & Oshio, 2019). Since only 18 states currently have in-state tuition for undocumented students (National Conference of State Legislatures, 2019), the context institutions of higher education experience regarding policies for undocumented students across the country are varied. Yet the American Association of University Professors (AAUP) has openly proclaimed the Sanctuary Campus Movement as a “call on campuses to provide a safe space for and adopt policies to protect students and other members of the campus community who are undocumented immigrants” (AAUP, n.d., para. 1). How institutions of higher education are educating and socializing its members on these issues matters for the future of our country’s citizens and undocumented immigrants alike, as education is a public good (Labaree, 1997). While higher education has examined the attitudes and attributes of students (Garibay, Herrera, Johnston-Guerrero, & Garcia, 2016; Herrera, Garibay, Garcia, & Johnston, 2013), faculty (Ishiwata & Muñoz, 2018; Salas, 2012), and staff (Cadenas, Cisneros, Todd, & Spanierman, 2018; Cisneros & Cadenas, 2017; Feranchak, 2007; Nienhusser, 2014, 2018) regarding their attitudes toward undocumented students’ pursuit of higher education, there is a gap in the literature when it comes to considering the opinions of postdoctoral fellows (postdocs). The present study examines the extent to which postdoctoral fellows support immigration and undocumented students using a convergent mixed methods design, an underutilized approach in the research on the topic.

Relevant Literature

Previous research has demonstrated that certain attributes are associated with greater support of undocumented immigrants and undocumented students, and many of these attributes comprise those of postdoctoral fellows. For instance, attending graduate school (Haubert & Fussell, 2006) has been associated with exhibiting greater support for undocumented immigrants.

Experiences postdoctoral fellows may have acquired through their years of education and training have also been associated with greater support for undocumented immigrants and/or undocumented students, including living in an area with a larger Latino population (Berg, 2009), living in a more urban environment (Caicedo, 2016), and having experiences with positive cross-racial interactions (Herrera et al., 2013). Other demographic factors have also been associated with greater levels of support, including identifying as a woman, a racial/ethnic minority, and being a non-native speaker of English (Garibay et al., 2016). Indeed, these demographic characteristics all increasingly describe postdoctoral fellows, as more than half of postdocs are women and more than half are from outside of the United States (McConnell, Westerman, Pierre, Heckler & Schwartz, 2018). Together, these factors make postdoctoral fellows a group worth examining when it comes to research regarding attitudes in the academy toward immigration and undocumented students.

Postdocs constitute a diverse group, as reported by the U.S. National Postdoc Survey (McConnell et al., 2018). Incorporating data from over 7600 postdocs reemployed at more than 350 institutions, survey results demonstrated that residency status varied by gender, with men having a greater likelihood of reporting being a non-U.S. citizen (52% on a temporary visa, 42% U.S. citizens, 6% permanent residents) as compared to women (38% on a temporary visa, 56% U.S. Citizens, and 6% permanent residents). Salary reporting indicated that women were paid less than their male postdoc counterparts even when controlling for institutional type, marital status, being a parent, and majority/minority status. The median salary was \$43,750 and the mean salary was \$46,988 (McConnell et al., 2018). A total of 8.4% of respondents reported their primary field as psychology, the humanities, or social sciences, and the majority reported positions in STEM disciplines. Recent research has also found that only 45% of non-U.S.

citizens remain in the United States after completion of their fellowship in the United States as compared to 90% of postdoctoral fellows originally from the United States (Xu, Gilliam, Peddada, Buchold, & Collins, 2018).

Postdocs are also susceptible to discrimination based on gender, race, and/or citizenship status (Camacho, 2017; Camacho, Kukor, Lee, & Rosenberg, 2016; Camacho & Rhoads, 2015; Cantwell & Taylor, 2013). Research has suggested that principal investigators, who are predominantly White males, prefer postdocs who are also White males, and that the costs for visas for international postdocs are either complained about as expensive or deemed the responsibility of the postdoc (Camacho, 2017). This systematic bias persists even though postdocs without U.S. citizenship are the most productive when it comes to publications (Camacho, 2017; Camacho & Rhoads, 2015). Compensation and benefits have also been a long standing issue for postdoctoral fellows (Ruben, 2013). Along with institutions of higher education, federal funding agencies have been slow to make recommendations for a livable wage and basic benefits, such as health insurance, motivating postdocs in the University of California System to unionize (Camacho & Rhoads, 2015).

Theoretical Underpinnings

Hesse-Biber (2012) has posited that using a feminist approach to mixed methods research inclusive of women and oppressed groups can highlight voices and ways of thinking that have been devalued by dominant, patriarchal forms of knowledge. Put another way, the feminist approach of mixed methods research reflects on absent voices and acts toward raising voices. Hesse-Biber's (2012) approach thus gives voice to undocumented students, postdoctoral fellows, and supporting undocumented students in the academy. This transformative convergent mixed

methods study employs Hesse-Biber's (2012) approach in the examination of postdoctoral fellows' attitudes toward immigration and undocumented students' pursuit of higher education.

This study also employs Deaux's (2006) model for the social psychological study of immigration as a theoretical framework. Deaux's (2006) model accounts for individual factors and views at the micro level, social structures at large at the macro level, and group viewpoints at the meso level, where the macro and micro interact. This study is particularly interested in how the larger macro factors, such as the structure of the academy and current political context, combine with micro, individual factors to inform the meso level of attitudes toward immigrants and undocumented students' pursuit of higher education.

Concept of White Allyship

Cabrera (2012) called for White allyship in which Whites can become racial justice allies by working with People of Color (as opposed to for People of Color). Furthermore, recent research has posited that White allyship is an ongoing effort rather than a competence to be achieved (Spanierman & Smith, 2017). The literature has also issued calls to action both for how teachers can serve as allies of undocumented students within (Luu, Dodson, Andrade-Ayala, & Rodriguez, 2017), and how counselors can help students transition from secondary to post-secondary education (Storlie & Jach, 2012). Research has also recently demonstrated how People of Color engaged in racial justice activism have attributed their burnout to the attitudes and behaviors of White activists (Gorski & Erakat, 2019). These realities make it paramount for White people to partner with People of Color (Cabrera, 2012) and engage in their own self-work regarding Whiteness (Kendall, 2013).

As described by Spanierman and Smith (2017), White allyship is multi-faceted and an ongoing effort. White allyship can be defined as individuals who: demonstrate an understanding

of institutional racism and White privilege, continuously self-reflect, commit to promoting equity, act toward disrupting racism on both micro and macro levels, work with People of Color, and navigate resistance from other Whites (Spanierman & Smith, 2017, p. 608-609). Some research has demonstrated that experiences with oppression, such as White women's experiences with sexism and/or heterosexism helped individuals empathize with those experiencing racial oppression to a greater extent than White men (Case, 2012). According to Boushel (2000), such "experiential affinity" can be helpful to White allies. Yet Delgado (1996) warned that Whites may superficially identify with People of Color, which can have the consequence of false empathy. To be mindful of these pitfalls, Spanierman and Smith (2017) called for Whites to engage in using their own experiences to challenge systemic oppression.

Purpose

As the most highly trained group within the academic pipeline, postdoctoral fellows are increasing in number (Ferguson, Huang, Beckman, & Sinche, 2014) while tenure track positions are declining in the United States (Ruben, 2013). Estimates indicate there are more than 80,000 postdocs in the United States currently, and there was a 52% increase in the number of postdocs from 1998 to 2014 (Ferguson, Huang, Beckman, & Sinche, 2014). How the academy has (or has not) socialized this group matters for the future of the academy and beyond as postdoctoral fellows will become leaders inside and outside of academia. Furthermore, attributes associated with greater support of undocumented immigrants and undocumented students constitute attributes and experiences of many postdoctoral fellows. This study addresses a gap in the literature on attitudes regarding undocumented students' pursuit of higher education by examining the opinions of a group within the academy which has often been overlooked: postdoctoral fellows. While previous research on the topic of attitudes toward undocumented

immigrants and/or undocumented students has employed quantitative approaches (Cadenas et al., 2018; Cisneros & Cadenas, 2017; Diaz, Saenz, & Kwan, 2011; Feranchak, 2007; Garibay et al., 2016; Herrera et al., 2013) and qualitative approaches (Crawford & Arnold, 2016; Ishiwata & Muñoz, 2018; Jauregui & Slate, 2009; Nienhusser, 2014, 2018; Nienhusser & Espino, 2017; Parrish, 2015; Salas, 2012), few studies (e.g., Caicedo, 2016) have employed mixed methods. Thus using a convergent mixed methods design contributes to the existing literature on attitudes within the academy toward undocumented students by using an underutilized approach. The present analysis also responds to a call for future research to identify and act on strategies for supporting undocumented students' pursuit of higher education (Jach, 2019). This study responds to this call by considering how postdoctoral fellows view immigration and can support undocumented students' pursuit of higher education in their current and future roles. This study uses Deaux's (2006) model to consider results from a quantitative analysis of the General Social Survey (Smith, Davern, Freese, & Hout, 2018) combined with findings from individual one-on-one interviews with postdoctoral fellows regarding how they might support undocumented students.

Methods

This study sought to address the following overall research question: to what extent do postdoctoral fellows support immigration and undocumented students? To address this question, a transformative convergent design was employed. Creswell and Plano Clark (2018) consider a convergent design as "a mixed methods design in which the researcher collects and analyzes two separate data[sets]- quantitative and qualitative- and then merges the two for the purpose of comparing the results" (p. 447). The quantitative portion of the study considered the question: What is the relationship between attributes of being a postdoctoral fellows and views of

immigration? Analyses employed logistic regression as a secondary analysis of the General Social Survey (GSS) (Smith et al., 2018) to examine respondents' attributes potentially associated with views of immigration. Specifically, the study (Jach & Gloeckner, 2020) conducted a preliminary analysis of whether respondents' attributes, including holding a possible postdoctoral position, predicted agreement with the statement "America should exclude 'illegal' immigrants" and agreement with the statement "legal immigrants should have the same education as Americans". The qualitative portion of the study sought to address the question: How can postdoctoral fellows support undocumented students' pursuit of higher education in their current and future roles? In the study (Jach & Gupta, In progress), ten participants were recruited through the National Postdoctoral Association, and eligibility requirements included having completed a doctoral degree, current employment as a postdoctoral fellow, self-identifying as White, having citizenship in the United States, and agreeing that undocumented students should be supported in their pursuit of higher education. Mixed methods analysis involved comparing quantitative and qualitative results through a joint display to assess for converging and diverging results. Convergent and divergent findings are also considered through Deaux's (2006) model for the model for the social psychological study of immigration.

Quantitative Methods

This analysis included participants in the 2014 GSS who had responses to all demographic and dependent variables of interest. Independent variables included: age, sex, race, U.S. citizenship status, having a graduate degree, and employment in an occupation that could be a possible postdoctoral fellowship position. The U.S. census occupation codes do not include postdoctoral fellow as an occupation, even though postdoctoral fellows are recognized by federal entities such as the National Science Foundation and professional organizations such as the

National Postdoctoral Association. Thus, the analysis included occupation codes which could have included a possible postdoctoral position or position involving duties of a postdoctoral fellow. The largest sample available was used for each research question in order to meet the minimum requirement of 20 individuals per group when conducting logistic regression (Leech, & Barrett, & Morgan, 2015). Responses to the dependent variables of interest which indicated neither agreement nor disagreement were dropped. Analyses employed logistic regression to assess whether the predictor variables, which included age, sex, race, U.S. citizenship status, having a graduate degree, and having a possible postdoctoral fellowship occupation, predicted whether respondents agreed or disagreed with the statements: “American should exclude ‘illegal’ immigrants” and “Legal immigrants should have the same education as Americans”. For further details regarding variables, see Jach and Gloeckner (2020).

Qualitative Methods

Participants for the qualitative portion of the study were recruited via an email to the National Postdoctoral Association. The email contained a link to an online eligibility screening tool. Eligibility criteria included: having completed a doctoral degree, current employment as a postdoctoral fellow, self-identifying as White, having citizenship in the United States, and agreeing that undocumented students should be supported in their pursuit of higher education. Approximately 100 respondents met eligibility requirements, and these individuals received a follow-up email inviting them to sign up for an individual interview. A total of ten individual interviews were conducted via Zoom video conferencing. Participants received a \$50 amazon gift card via email for participating in an interview. All interviews were recorded, and all recordings were transcribed.

Transcripts and notes regarding the interviews were reviewed using Charmaz's (2011) and Saldana's (2009) approaches to qualitative coding for social justice research. Transcripts were read and re-read. All interviews were initially coded, and then all instances of codes were re-reviewed. All coded interviews were reviewed with constant comparison toward nuancing and collapsing codes. In order to enhance trustworthiness, a study auditor provided a full audit of all coding. Based on the audit, all coded transcripts were re-reviewed to incorporate feedback. All codes were then compared to identify thematic elements. See Jach and Gupta (In progress) for a more detailed description of the qualitative study.

Integration of Data

For the convergent mixed methods design, quantitative and qualitative results were compared through a joint display. In addition, convergent and divergent findings were considered through the lens of Deaux's (2006) model for the social psychological study of immigration. As described by Creswell and Plano Clark (2018), quantitative and qualitative findings were considered to better address the study's overall research question regarding the extent to which postdoctoral fellows support immigration and undocumented students.

Positionality

I identify as a White, cisgender, heterosexual woman born in the United States with citizenship privilege. As the great-granddaughter of German Russian peasants who immigrated to the United States, I have benefitted from the previous generations who each attained a higher level of education than the previous generation. My personal interest in issues pertaining to undocumented students began with opportunities to collaborate on research efforts as a graduate student (Muñoz et al., 2018; Storlie & Jach, 2012). I continue to work toward acknowledging and understanding my White, cisgender, citizenship privilege as an aspiring scholar-practitioner.

As a mixed methods researcher, I value the tenet that the combination of qualitative and quantitative findings can better answer research questions (Creswell & Plano Clark, 2018). Specifically, I believe the mixed methods approach to the present study connected to Deaux's (2006) model for the social psychological study of immigration in that micro, meso, and macro factors can best be examined through the combination of a mixed methods approach. That is, interviewing individual postdocs helped to elucidate an in-depth understanding of how and why individuals developed their attitudes toward undocumented students. Meanwhile, analyzing a robust, generalizable data set demonstrated how attitudes at the meso level could be informed by macro policy contexts as well as individual demographic factors and experiences. Finally, my role as a full-time policy and planning analyst at a large, highly ranked research university makes me aware on routine basis how policy, or a lack thereof, has real impacts on the daily lives of those who are overlooked, including postdoctoral fellows and undocumented students.

Results

Results of the quantitative, qualitative, and mixed methods findings are displayed in Table 7.

Table 7.

Results of Quantitative, Qualitative, and Integrated Findings, with Consideration of Deaux's (2006) Model

Quantitative Findings	Major Qual Themes	Qualitative Interview Quotes	Mixed Methods Comparison	Deaux's Model
Logistic regression assessed whether the six predictor variables of age, sex, race, U.S. citizenship status, having a graduate degree, and having a possible postdoctoral fellowship occupation predicted whether "America should exclude 'illegal' immigrants". (N=1012) The sample was 76% White, 14% Black, and 10% Other Races. A total of 94% of the sample had U.S. citizenship, and 11% of the sample held a graduate degree. Only 2.2% of the sample (N=22) held a (possible) postdoctoral position.	Support of immigrants and undocumented students.			Macro
A total of 73% of the sample agreed with the statement, "America should exclude 'illegal' immigrants", while 27% disagreed.	Postdocs expressed awareness of negative rhetoric yet held divergent beliefs.	"As we progressed in the three years since then [the election of Trump], the hostility, it seems like it's only grown, in my eyes. I mean, not everyone is hostile towards what they say with regards to undocumented people. But it seems like there are a number of people who are hostile and they seem to say a lot. Part of the news media is always talking about what the president has just said about whatever, and if undocumented citizens comes up in a question he's asked or if he brings it up himself, it's universally a negative comment and often just ... Disturbingly often, it's racist or bigoted or just ... I feel embarrassed." (White male postdoc working in the East)	Divergent; postdocs who participated in the study viewed negative rhetoric against undocumented immigrants as racist.	Macro

When all six predictor variables were considered together, they significantly predicted whether a respondent agreed with the statement, “America should exclude ‘illegal’ immigrants”, $\chi^2 = 104.354$, $df = 5$, $N = 1012$, $p < 0.001$.	Postdocs were aware of negative rhetoric yet held supportive viewpoints.	"Most of what I'm seeing on Facebook is more of the anti-Trump and anti-send them back rhetoric as opposed to I do have some extended family and friends from whom I'm seeing the opposite of, 'Send them back, send them back. They don't deserve to be here. They're criminals.' Which to me makes no sense." (White female postdoc working in the South)	Convergent; postdocs who participated in the study supported undocumented immigrants despite awareness of hostility toward these individuals.	Meso
Not being a U.S. citizen, as compared to being a U.S. citizen, increased the odds that a respondent would disagree with “America should exclude ‘illegal’ immigrants’ by a factor of 7.959 ($p < 0.001$).	Citizenship privilege	“I actually don’t know any[one who is] undocumented, or they might be, and I just don’t know they’re undocumented.” (White male postdoc working in the South)	Convergent; citizenship privilege contributed to participants' immunity to awareness of issues of legal status.	Micro
The odds of disagreeing with the statement “America should exclude ‘illegal’ immigrants” became greater as age decreased by a factor of 0.982 ($p < 0.001$).	Personal and professional connections led to greater support toward undocumented immigrants and undocumented students.	"[M]y experience with undocumented people and with immigrants has borne out pretty well that these are people who have a lot of really positive traits that if they're willing to take such big risks to improve their lives, and improve the lives of their families, and try to better themselves. That's a pretty strong indicator of a character trait that is a great one that we want to encourage, and nourish, and that we want in our communities, and that is positive for society." (White female postdoc working in the South)	Divergent; a postdoc on her second career exhibited high levels of support for undocumented immigrants/students.	Micro
The odds of disagreeing with the statement “America should exclude ‘illegal’ immigrants” increased by a factor of 1.420 for individuals identifying as Black or another racial minority ($p = 0.002$).	White privilege and White immunity (Cabrera, 2018)	“Maybe I’m just white male supremacy over here and don’t get exposed to it [the topic of legal status] because people are scared to ask or bring it up.” (White male postdoc working in the South)	Convergent; White privilege contributed to participants' immunity to awareness of legal status issues.	Micro

<p>Logistic regression was also conducted to assess whether the six predictor variables of age, sex, race, U.S. citizenship, having a graduate degree, and having a possible postdoctoral fellowship occupation predicted agreeing with the statement “legal immigrants should have the same education as Americans”. (N=1153)</p> <p>The sample was 75% White, 15% Black, and 10% Other Races. A total of 93% of the sample had U.S. citizenship, and 12% of the sample held a graduate degree. Only 2.3% of the sample (N=27) held a possible postdoctoral position.</p>	<p>Postdocs expressed a need for adult education regarding how to support undocumented students.</p>			Macro
<p>A total of 91% of the sample agreed with the statement, “legal immigrants should have the same education as Americans”, while 9% disagreed.</p>	<p>Postdocs valued education.</p>	<p>"I think that anyone should have a chance for higher education regardless of any status one way or the other. Along those lines, I want everyone to get an education. Obviously, getting a PhD, I value education tremendously. So, I want everyone to get as much education as they desire." (White male postdoc working in the Midwest)</p>	<p>Convergent and expansive; participants in the qualitative study expressed support of education regardless of individual status.</p>	Macro
<p>When all six predictor variables were considered together, they significantly predicted whether a respondent agreed that "legal immigrants should have the same education as Americans", $\chi^2 = 15.911$, $df = 6$, $N = 1153$, $p = 0.014$.</p>	"	<p>"I fully agree with anybody's right to obtain higher education. I think that it is a way forward for people who haven't received it before or for families who haven't received it. So, I think that undocumented immigrants should be eligible for higher education." (White female postdoc working in the East)</p>	<p>Convergent and expansive; participants in the qualitative study valued working toward higher education.</p>	Meso

Not being a U.S. citizen increased the odds of agreeing with the statement “legal immigrants should have the same education as Americans” by a factor of 9.234 ($p = .03$).	"	"I think particularly with students who arrived in United States before they were 18 years old and especially those students who had essentially no choice in the matter, to me they have every right to be pursuing higher education that anyone born in the United States would have." (White female postdoc working in the West)	Divergent; postdocs who were U.S. citizens expressed support of education regardless of legal status.	Micro
Having a graduate degree increased the odds of agreeing with the statement “legal immigrants should have the same education as Americans” by a factor of 2.354 ($p = .055$).	Postdocs identified strategies to support undocumented students' pursuit of higher education.	"We do need to have people of all different statuses in terms of residency, or where they're born in these fields in higher education to really change policy and research and practice." (White female postdoc working in the Midwest)	Convergent; postdocs expressed support of education to improve the field of higher education.	Micro

Quantitative Results

For the quantitative analyses, findings suggested that the six independent variables, including holding a possible postdoctoral position, predicted views of “illegal” immigration and whether “legal immigrants should have the same education as Americans”. Results also suggested that the odds of being more supportive of undocumented immigrants were higher for people of a lesser age, minorities, and for non-U.S. citizens. In addition, being a non-U.S. citizen and having a graduate degree each increased the odds that respondents would support immigrant education.

Qualitative Results

For the qualitative analyses, findings indicated postdoctoral fellows with a personal or professional connection to undocumented immigrants and/or students exhibited greater levels of support. Meanwhile, those lacking these connections exhibited greater levels of White immunity (Cabrera, 2017) and a corollary, citizenship immunity. While Whites may become defensive by the notion of White privilege because of the difficulties they may encounter in their life, Cabrera (2017) argued that White immunity focuses on the fact that “People of Color are precluded from equitable treatment” (p. 82), rendering Whites immune to this experience. Postdoctoral fellows expressed a need for adult education on the issue of supporting undocumented immigrants and students. Postdocs also articulated possible strategies for how to support undocumented students and how to serve as an ally for these students, suggesting postdocs have the power to counteract negative rhetoric.

Integrated Results

As displayed in Table 7, quantitative and qualitative findings both diverged and converged. While most respondents to the GSS agreed with the statement, “America should

exclude ‘illegal’ immigrants”, findings from the qualitative interviews diverged indicating that postdocs viewed negative rhetoric against undocumented immigrants as racist. These findings connect to the macro level of Deaux’s (2006) model for the social psychological study of immigration due to overall systematic factors informing views. For the GSS analysis, the six factors significantly predicted respondents’ agreement with the statement “America should exclude ‘illegal’ immigrants”, and results from the interviews diverged in that postdocs expressed support for undocumented immigrants despite their awareness of hostility toward these individuals. These findings connect to the meso level of Deaux’s (2006) model due to individual awareness of group viewpoints. Just as being a non-U.S. citizen increased the odds of disagreeing with the statement “America should exclude ‘illegal’ immigrants” among GSS respondents, postdocs in the interviews holding U.S. citizenship privilege exhibited citizenship immunity and a lack of awareness of issues relating to legal status, indicating convergence of results. The individual attributes of citizenship or legal status, race/ethnicity, and age each invoked the micro level of Deaux’s (2006) model, as displayed in Table 7. Specifically, while decreasing age predicted greater disagreement with the statement “America should exclude ‘illegal’ immigrants” in the quantitative analyses, a non-traditionally aged postdoc on her second career diverged with these results because she exhibited high levels of support for undocumented immigrants and students due to personal and professional connections. And just as minorities were more likely to disagree with the statement “America should exclude ‘illegal’ immigrants”, qualitative findings converged because White privilege contributed to qualitative participants’ immunity to awareness of legal status issues.

For the quantitative analysis of agreement with the statement “legal immigrants should have the same education as Americans”, the majority of GSS respondents agreed with the

statement. Qualitative findings converged and expanded on this finding because postdocs expressed support of education regardless of individuals' legal status. These overall views invoke the macro level of Deaux's (2006) model. Similarly, just as the six demographic factors significantly predicted agreement with the statement "legal immigrants should have the same education as Americans", results from interviewed postdocs converged and expanded on this finding because they exhibited high levels of support for education for people from all backgrounds. These results corresponded with the meso level of Deaux's (2006) model because of the interaction between the overall macro systems of education with individual views regarding those systems. While not being a U.S. citizen increased the odds of agreeing with the statement "legal immigrants should have the same education as Americans", qualitative findings diverged in that all ten of the postdocs who participated in interviews expressed support of undocumented students' pursuit of higher education, as this was also a delimitation and a requirement for interview participation. Just as having a graduate degree increased the odds that respondents would agree with the statement that "legal immigrants should have the same education as Americans", postdocs in the qualitative interviews expressed support of education as a means to improve the entire field of higher education. Both legal status and holding a graduate degree can be defined as attributes of unique individuals, thus connecting to Deaux's (2006) model at the micro level.

Limitations

This study involved several limitations. First, the quantitative analyses used an existing data set to examine majority views of immigration. A dependent variable of interest in the quantitative analysis also employed dehumanizing language: the term "illegal" immigrants (Negrón-Gonzales, 2013). This terminology may have biased responses to the survey item

within the GSS, and this same bias may have been invoked in the item “legal immigrants should have the same education as Americans”. The education item also did not distinguish between K-12 education federally protected for all minors by *Plyler v. Doe*, 1982 and higher education (which some states have deemed illegal). The 2014 administration of the GSS is timely in that it collected data after the implementation of DACA but occurred prior the election of Trump in 2016. In other words, the findings may not necessarily generalize to present day views. The quantitative analysis also created a variable to define a possible postdoctoral position since the census does not delineate postdocs as an occupation code.

The qualitative interviews and integration of results also involved limitations. To enhance trustworthiness, participants were offered the opportunity to review a copy of their transcript and remove anything they did not want included in the study. Nine out of ten participants agreed to review their transcript and removed any information of their choosing. Of those, only one participant made a change to the transcript. Put another way, the qualitative analyses were limited to what participants chose to share and keep in the transcript. Findings from the qualitative interviews also may not represent postdoctoral fellows who constitute the membership of the National Postdoctoral Association due to the nature of personal interviews with individuals. The integrated results were also limited by the fact that two different samples were used for the quantitative and qualitative components of the study. Finally, the integration of results was conducted from the standpoint of the researcher’s positionality.

Discussion

This transformative convergent designed study integrated results from quantitative analyses of the General Social Survey (GSS) with the results of individual on-on-one interviews with postdoctoral fellows through the lens of Deaux’s (2006) model for the psychological study

of immigration. Analyzing GSS data with logistic regression suggested that respondents' attributes, including holding a possible postdoctoral position, predicted whether respondents agreed that "America should exclude "illegal" immigrants", and whether "legal immigrants should have the same education as Americans". Results also suggested that the odds of being more supportive of undocumented immigrants were higher for minorities and for non-U.S. citizens. In addition, being a non-U.S. citizen and having a graduate degree each increased the odds that respondents would support immigrant education. Findings from the ten qualitative interviews with postdoctoral fellows indicated that those with a personal or professional connection to undocumented immigrants and/or students exhibited greater levels of support. Conversely, those lacking these connections exhibited greater levels of White immunity (Cabrera, 2017) and citizenship immunity, or the ability to go about life without concerning themselves with issues pertaining to legal status. In addition, postdoctoral fellows expressed a need for adult education on the issue of supporting undocumented immigrants and students. They also identified strategies for how to support undocumented students and how to serve as an ally for these students, suggesting postdocs have the power to counteract negative rhetoric.

Upon integrating the quantitative findings with the qualitative findings, the study yielded both convergent and divergent results, and connected to Deaux's (2006) model for the social psychological study of immigration. At the macro level, interviews with postdocs revealed divergent findings from the quantitative findings on the issue of excluding "illegal" immigrants. This is in part because participants were required to agree that undocumented students should be supported in their pursuit of higher education in order to participate in the qualitative data collection. Regarding education for immigrants, interviews with postdocs suggested convergent and expansive findings when compared to the quantitative results because interview participants

expressed support for education regardless of an individual's legal status. This is likely because postdoctoral fellows have exhibited a high personal level of commitment to education in their own lives and thus held this value for others.

Inclusion criteria for participating in the qualitative interviews may also have contributed to convergent and divergent findings at the meso and micro levels of Deaux's (2006) model. That is, including only White, U.S. citizens working full-time as postdoctoral fellows who agreed that undocumented students should be supported yielded in-depth findings but did not represent the population represented in the GSS. At Deaux's (2006) micro level, integrating quantitative and qualitative findings both diverged and converged. Specifically, U.S. citizenship privilege decreased the odds of disagreeing with exclusionary immigration policy and simultaneously contributed to postdocs' immunity from thinking about legal status. Similarly, identifying as White also decreased the odds of disagreeing with exclusionary immigration policy and simultaneously contributed to postdocs' White immunity (Cabrera, 2017). Quantitative and qualitative findings also converged at the micro level regarding education, with qualitative findings expanding upon the quantitative since postdocs also exhibited support for education regardless of legal status.

A number of these findings corroborate previous research on attributes associated with more support for undocumented immigrants and undocumented students. Being a racial minority as well as being a non-native English speaker have each been associated with greater support of undocumented students (Garibay et al., 2016). In addition, previous literature has suggested that higher levels of education are associated with more supportive views of undocumented immigrants (Berg, 2009; Haubert & Fussell, 2006; Kunovich, 2013). In this mixed methods study, both the quantitative and qualitative results from the present study

converged to suggest that having higher levels of education, such a graduate degree, was associated exhibiting greater levels of support.

Implications

This study contributes to previous literature on attitudes within the academy toward immigration and undocumented students' pursuit of higher education by examining the views of an overlooked group, postdoctoral fellows, using an underutilized methodological approach, mixed methods design. While previous research (Berg, 2009; Garibay et al., 2016; Haubert & Fussell, 2006; Kunovich, 2013) and the present study have suggested that micro level factors- such as being a woman, not having U.S. citizenship, identifying as a racial minority, and higher levels of education- are all associated with greater support of undocumented immigrants and undocumented students, the present study responds to the call for research to move toward action (Jach, 2019) to support undocumented students. In this study, participants contributed ideas as to how postdoctoral fellows might engage in actively supporting undocumented students' pursuit of higher education. Furthermore, integrating the quantitative and qualitative results from this study expands upon how majority identified individuals, including those who are White and hold U.S. citizenship status, make sense of supporting immigrants and undocumented students. The implications invoke the opportunity for postdoctoral fellows to work toward becoming allies of immigrants and undocumented students.

The tenets of White allyship as described by Spanierman and Smith (2017) can be applied to engaging postdoctoral fellows as allies of immigrants and undocumented students. As previously noted, Spanierman and Smith (2017) described White allyship is multi-faceted and an ongoing effort. Through their extensive training and education within the academy, postdocs have the potential to demonstrate an understanding of institutional racism and White privilege.

However, allyship requires the ongoing effort of needing to: self-reflect, commit to promoting equity, act toward disrupting oppressive systems on both micro and macro levels, work with immigrants and undocumented students, and navigate resistance from others (adapted from Spanierman & Smith, 2017, pp. 608-609). As described by one interviewee in this study: “Postdocs tend to be among one of our more diverse groups on campus given that we've come from all of these different institutions.” When considering Deaux’s (2006) model for the psychological study of immigration, this diversity of experience behooves not only individuals at the micro level but also institutions at the meso level and the system of higher education at the macro level to engage this highly trained group toward supporting immigrants and undocumented students’ pursuit of higher education. Another postdoc further elaborated, by stating: “(...)postdocs would be a good community to tap into to mobilize for some activism in that area.”

Future Research

Future research on the topic of postdoctoral fellows’ attitudes toward immigration and undocumented students’ pursuit of higher education can continue to contribute to Hesse-Biber’s (2012) notion of feminist mixed methods research by highlighting voices and ways of thinking that have been devalued by dominant, patriarchal forms of knowledge. Specifically, future surveys can include a postdoctoral fellowship as an occupation. In addition, qualitative interviews can delve into the tenets of White allyship outlined by Spanierman and Smith (2017). Together, this work will have the potential to contribute to combating the negative rhetoric encountered by undocumented students within the academy and outside of its walls.

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APPENDIX A: INTERVIEW ELIGIBILITY SCREENING TOOL

The recruitment email sent to members of the National Postdoctoral Association included a link to the following eligibility screening tool for participation in a qualitative interview.

1. I currently work full-time as a postdoctoral fellow.
 - a. Yes
 - b. No
2. I have U.S. citizenship.
 - a. Yes
 - b. No
 - c. Prefer not to answer.
3. I identify as White/Caucasian.
 - a. Yes
 - b. No
 - c. Prefer not to answer.
4. Undocumented students are individuals pursuing higher education who do not have citizenship/legal status within the United States because they did not arrive with legal status or overstayed the limitations of their status.

I believe undocumented students should be supported in their pursuit of higher education.

- a. Agree
 - b. Disagree
 - c. Not sure
5. I would like to be contacted to participate in a one hour interview about supporting undocumented students in my current and future role.
 - a. Enter email address
 - b. No thank you

Note: Eligible participants will identify as working full-time as a postdoctoral fellow, having U.S. citizenship, identifying as White/Caucasian, agreeing that undocumented students should be supported in the pursuit of higher education, and providing their email address to be contacted to set up an interview.

APPENDIX B: KEY VARIABLE DETAILS

Table 8.

Key GSS Variables

GSS Variable	Definition	
EXCLDIMM: America should exclude 'illegal' immigrants.	5	"Strongly agree"
	4	"Agree"
	3	"Neither agree nor disagree"
	2	"Disagree"
	1	"Strongly disagree"
IMMEDUC: Legal immigrants should have the same education as Americans.	5	"Disagree strongly"
	4	"Disagree"
	3	"Neither agree nor disagree"
	2	"Agree"
	1	"Agree strongly"
DEGREE (highest earned by respondent, respondent's mother, respondent's father)	4	"Graduate"
	3	"Bachelor"
	2	"Junior college"
	1	"High school"
	0	"Lt high school"

Table 9.

Generated Items Based on GSS Variables

GSS Variable	Definition	
Graduate Degree: based on transposing degree variable	0	no graduate degree
	1	graduate degree
EXCLDIMM_binary: based on EXCLDIMM variable	0	Agree with statement
	1	Disagree with statement (neither agree or disagree dropped)
IMMEDUC_binary: based on IMMEDUC variable	0	Disagree with statement
	1	Agree with statement (neither agree or disagree dropped)

Possible postdoc: Postdoctoral-like
occupation codes (based on / OCC10)

2200	"Postsecondary teachers"
1965	"Miscellaneous life, physical, and social science technicians"
1950	"Social science research assistants"
1940	"Nuclear technicians"
1930	"Geological and petroleum technicians"
1920	"Chemical technicians"
1910	"Biological technicians"
1900	"Agricultural and food science technicians"
1860	"Miscellaneous social scientists and related workers"
1840	"Urban and regional planners"
1830	"Sociologists"
1820	"Psychologists"
1815	"Survey researchers"
1800	"Economists"
1760	"Physical scientists, all other"
1740	"Environmental scientists and geoscientists"
1720	"Chemists and materials scientists"
1710	"Atmospheric and space scientists"
1700	"Astronomers and physicists"
1660	"Life scientists, all other"
1650	"Medical scientists"
1640	"Conservation scientists and foresters"
1610	"Biological scientists"
1600	"Agricultural and food scientists"

APPENDIX C: INTERVIEW QUESTIONS

1. Tell me about your role as a postdoctoral fellow.
2. To what extent do you feel connected to the campus where you work, if at all?
3. When have you heard about the current political situation for undocumented students? Feel free to share anything you heard at the national/state/local/institutional level.
4. What have you heard, if anything, about the current rhetoric about undocumented students' pursuit of higher education?
5. Tell me about your views on:
 - a. undocumented students' pursuit of higher education.
 - b. undocumented students' access to in-state tuition.
6. Can you tell me about a time you or anyone you know acted in solidarity with undocumented students?
7. What would being an ally of undocumented students look like?
8. How does being White and a U.S. citizen influence your vision of what it means to be an ally?
9. What opportunities, if any, would help you support undocumented students or serve as an ally of undocumented students?
10. What opportunities, if any, would help postdoctoral fellows support undocumented students?
11. Some campuses have been part of a movement to have faculty, staff, and students participate in LGBTQ safe zone training, or making safe spaces for people who identify as lesbian, gay, bisexual, transgender, and/or queer. This training teaches attendees how to be allies for this community. A corollary for undocumented students is DreamZone training:

educating people about making safe spaces for undocumented students. How might postdoctoral fellows get engaged in an opportunity like DreamZone training?

12. What implications does this conversation have for your current and/or future work?
13. Is there anything else you would like to add?