UNIVERSITY OF CALIFORNIA

Los Angeles

Service Work of Underrepresented Faculty

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Education

by

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ABSTRACT OF THE DISSERTATION

Service Work of Underrepresented Minority Faculty

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Despite decades of faculty diversification efforts among institutions of higher education, many colleges and universities still struggle to achieve and maintain adequate representation of faculty of color. The years from 2000 to 2018 have brought forward many higher education diversification initiatives focused specifically on improving job satisfaction and lowering stress levels among the under-represented minority (URM) faculty population as a means to increase their retention. Although research on URM faculty retention has repeatedly revealed disproportionate service work between URM and non-URM faculty, I aimed to examine the extent to which service work varies according to faculty race, as well as the connection between this service work and retention-related outcomes.

Utilizing data from the Faculty Survey of the Higher Education Research Institute (HERI), I first sought to reveal racial disparities in faculty service work through descriptive analysis specifically related to mentoring, advising, committee work, and community service.

After operationalizing faculty service work through factor analysis, I performed a series of regression analyses to determine any possible connection between service and career outcomes, including job satisfaction, career-related stress, and career intentions, controlling for demographics, institutional factors, and other experiences related to teaching and research.

Several important findings were revealed through this study. First, URM faculty did report spending more time than non-URM faculty on service-related work such as advising, committee representation, and community service. Further, within the sample of full-time faculty used for this study, an increase in service work was shown to relate to increased career-related stress, lower job satisfaction, and higher intention to leave an academic position and/or institution. Both mentoring and salary showed to be significant covariates, mitigating impacts on career-related stress and job satisfaction. Further analysis should be conducted to determine whether the relationship between service and retention-related outcomes can be extended to the URM faculty population at large.

Ultimately, these findings demonstrate a need for institutions to better monitor and assess the service workload being performed by faculty, particularly by faculty of color. Findings further serve as an impetus for leaders in higher education to consider service work as a possible hindrance to the wellbeing of URM faculty.

The dissertation of Holly Elizabeth Hare is approved.

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DEDICATION

To Sean – thank you for always believing in me, even when I had a hard time believing in myself.

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Chapter 1

Despite decades of effort to improve racial disparity in our nation's workforce, the disadvantage of individuals of color continues to manifest in the persistent documented achievement gap between individuals of color and their White peers. Racial inequality is particularly salient in professions that require advanced education (Colby & Ortman, 2014). Academia represents one such sector, particularly with respect to the professoriate, suffering from severe underrepresentation among racial and ethnic minorities (J. Moreno, Smith, Clayton-Pedersen, Parker, & Hiroyuki-Teraguchi, 2006; Perna, 2003; Smith, Tovar, & García, 2012). Black and Latino/a men and women make up only 10% of the nation's faculty (National Science Foundation, 2014). The U.S. Department of Education, National Center for Education Statistics, (2017) shows that Black/African Americans comprise 5.5% of the nation's full-time faculty in degree-granting postsecondary institutions while Hispanics and American Indian/Alaska Natives make up only 4.4% and 0.4%, respectively, of all full-time faculty appointments as of 2015. The proportion of under-represented minority (URM) faculty is also unevenly distributed across institution types, disciplines, and position type, as 58% of Black faculty were employed by Historically Black Colleges and Universities (HBCUs) in 2009 (Smith et al., 2012), and Hispanic faculty are more likely to hold non-tenure/part time faculty positions than full-time and/or tenured positions (Perna, 2003).

Colleges and universities have generally made slow progress toward improving the racial diversification among faculty throughout the last several decades. The U.S. Department of Education (2017) cited a meager 2.2% increase among faculty appointments held by women of color between 1995 and 2011. The Higher Education Research Institute (HERI) of the University of California, Los Angeles outlined only a 1.3 and 2.5 percentage point increase

between 2001-2002 and 2013-2014 in African American/Black and Latino/a faculty, respectively (Eagan et al., 2014). As student demographics in many U.S. colleges and universities have shifted toward a more racially diverse student body (Eagan et al., 2016), colleges and universities have prioritized diversifying the composition of their faculty through recruitment and retention initiatives (Daley, Wingard & Reznik, 2006; Follins, Paler, & Nanin, 2015; Piercy, Giddings, & Allen, 2005) with the purpose of providing URM faculty role models to the increased number of URM students. Experts have highlighted a need for administrators to reevaluate current hiring practices, a central component of successful URM faculty recruitment, stating that certain changes may directly influence the racial composition of candidate pools. For instance, they suggest taking a more proactive, continuous approach to recruiting talented URM faculty rather than recruiting to fill a particular open position (Bilimoria & Buch, 2010). Many institutions have advertised open positions in publications targeting the underrepresented populations within academia (Taylor, Apprey, Hill, McGrann, & Jianping, 2010) with clear references to the campus commitment to diversity in posted job descriptions (Smith, Turner, Osei-Kofi, & Richards, 2004) to increase the URM candidate pool.

Campuses are also refining the process by which search committees are appointed and trained, as the traditional format and composition of those committees have not been successful in placing URM faculty into positions (Smith et al., 2004). Efforts have been made to provide increased training to committee members (Bilimoria & Buch, 2010) to address the implicit bias that men and women hold when making hiring decisions (Moody, 2004). Although improved recruitment and hiring practices are necessary to increase new hires of URM faculty, faculty diversification cannot be improved without a focus on URM faculty retention policies and practices.

Indeed, research shows that new URM hires often replace departing URM faculty, and therefore do not contribute to growth in the URM faculty population at large (J. Moreno et al., 2006). URM faculty cite a number of negative factors that weigh on their decisions to remain at or leave an institution or the industry altogether. Experiencing a negative racial climate (Jayakumar, Howard, Allen, & Han, 2009) and feelings of isolation (McCray, 2011) may directly or indirectly influence URM faculty's decision to stay at their campus via reduced job satisfaction or increased stress levels. Systemic racial inequality likely also plays a role not only in terms of the processes by which faculty are awarded tenure and/or promotion but also within workplace roles and responsibilities. Studies have shown that URM faculty experience a disproportionate service workload to their non-URM peers (Griffin, 2012; Hall & Stevenson, 2007; Hirschfield & Joseph, 2011; Schwartz, 2012). These responsibilities—which may consist of advising, mentoring, and participation on committees and task forces—are performed regularly by URM faculty but are not necessarily valued or rewarded by the greater institution in which they work. Compounded by other stressful work-related factors, the burden associated with service work may negatively relate to URM faculty's job satisfaction.

Although research has expanded current understanding of the unique challenges facing URM faculty in the academy, little focus has been given to the extent of service work performed by URM faculty and the potential impact of that work in terms of career trajectories. Drawing from the 2016-17 Faculty Survey administration conducted by HERI (2017), this study strove to identify the extent to which service work varies by faculty members' race or ethnicity and examine whether service work responsibilities correlate significantly with faculty members' job satisfaction and job-related stress. Of particular interest is whether the strengths of any

correlation between service work and satisfaction or stress varies by faculty members' race or ethnicity.

Findings may provide insight into whether disparities exist between the service workload of URM faculty and their White and Asian American peers, thus enabling administrators to evaluate and/or address potential inequalities in workload through campus or departmental reward systems. Further, findings may reveal particular strategies campuses and departments can use to either support or alleviate the service burden encountered by particular groups of faculty.

The Importance of Faculty Diversity

For decades, experts have documented the valuable, unique perspectives and teaching skills that faculty of color bring into the teaching profession (Smith, 1989). URM faculty members are more likely than their non-URM peers to facilitate high impact activities such as collaborative learning and group work in the classroom (Umbach, 2006). URM faculty are also more likely than their White peers to promote cultural competency in the classroom (Opp, 2010): a key, but often lacking component of fostering diversity and inclusion on college campuses due to the anxiety many faculty feel when discussing issues of race and culture (Young & Ramirez, 2017).

More recent research has shown that White faculty with non-White faculty peers are more likely to pursue interactions, such as advising and mentoring, with URM students (Gleditsch & Berg, 2017). Indeed, faculty diversification is an essential component of the success of students of color. URM students are most likely to succeed when given opportunities to interact with faculty and/or staff with whom they can identify personally (Barker, 2011; Hagedorn, Chi, Cepeda, & McLain, 2007; Opp, 2010; Thomas, Willis, & Davis, 2007; Witzkin,

Yager, Parker, & Duran, 2006). Unfortunately, these opportunities are rare, given the overall racial demographic of faculty in most college and university settings.

The lack of URM faculty is particularly problematic among STEM disciplines, as efforts to recruit and retain URM students in STEM majors struggle to overcome the gap for all URM students, but particularly for URM students in STEM fields where diversity is most lacking (Rask & Bailey, 2002; Seymour & Hewitt, 1997). The issue of URM student success in STEM is one of the most pressing in higher education; student enrollments have changed to reflect the shifting demographic of our nation's population, and government agencies and researchers are increasingly concerned about higher education's ability to produce a STEM workforce capable of remaining globally competitive (American Association for the Advancement of Science [AAAS], 2011; National Academy of Sciences, National Academy of Engineering, & Institute of Medicine, 2007). Therefore, factors associated with the attainment and retention of URM faculty must be investigated thoroughly.

Recruitment without Retention: A critical Case of Black Faculty Unrest

Litigation, articles in the popular press concerning campus climate, and, increasingly, student protests have contributed to an intensified focus among higher education leaders and researchers on identifying, designing, and implementing policies aimed at retaining a more racially diverse faculty. Campus climate has been shown to influence URM faculty job satisfaction and turnover, particularly among African American and Latino/a faculty (Jayakumar et al., 2009). The low representation of URM faculty has directly affected campus diversity climates by prompting concern and often outrage among campus communities regarding the lack of adequate representation of URM academic professionals. In some cases, these concerns have led to formal investigations and reports, validating the extent to which discrimination continues

to occur in the academic setting (C. Moreno, Jackson-Triche, Nash, Rice, & Suzuki, 2013). Further, high ranking media outlets have increasingly reported race-related discrimination at prominent higher education institutions across the country, some involving lawsuits filed on behalf of minority faculty members alleging denial of professional opportunities on the basis of their race. More than ever, colleges and universities are taking action to eliminate systemic racial inequality and increase the representation of faculty of color.

Although the conversation regarding faculty diversification is not new, researchers have only recently drawn attention to low URM faculty retention rates (J. Moreno et al., 2006). Compared to their White or Asian colleagues, URM faculty are more likely to experience feelings of isolation (McCray, 2011) and/or inadequacy (Patton & Catching, 2009) as a result of being one of only a few faculty members of color at the workplace. Perceptions of institutional and departmental racial climates tend to correlate with job satisfaction among Black and Latino/a faculty (Jayakumar et al., 2009), as faculty report feeling less satisfied when working in departments or campuses that have a more hostile racial climate. URM faculty are more likely to experience microaggressions (Patton & Catching, 2009), problematic student attitudes toward members of other races and cultures (Stanley, 2006), and bullying by colleagues in positions of power (Lester, 2009) compared to their White or Asian counterparts. These factors represent just a handful of the myriad experiences potentially influencing the desire of an individual to continue in their faculty position. Overall job satisfaction tends to be a particularly salient issue among URM faculty with respect to the decision to remain in their current position (Cropsey et al., 2008; Palepu, Carr, Friedman, Ash, & Moskowitz, 2000).

In addition to the influence of negative campus climates on faculty's persistence decisions, limited opportunities for professional growth may also contribute to the early

departure of URM in terms of promotional prospects and social capital (Hyers, Syphan, Cochran, & Brown, 2012). Systemic inequalities such as these are frequently misunderstood or denied by those who are not directly experiencing oppression. Although many campuses offer a variety of trainings and workshops on topics such as implicit bias and racial oppression, individuals who are most unaware of their implicit bias are least likely to participate in these diversity-related educational opportunities (Diggs, Garrison-Wade, Estrada, & Galindo, 2009). Thus, the prospects of truly addressing inequality are often poor.

Inequality of opportunity can also work in the reverse direction, especially when considering the responsibilities and efforts that often receive little recognition within traditional institutional reward structures. Defined as responsibilities outside of research and teaching, service responsibilities are often required but are not always considered by administrators throughout the tenure process (Baez, 2000). Faculty of color perform a disproportionate amount of service work (Griffin, 2012; Hall & Stevenson, 2007; Schwartz, 2012). Many times, URM faculty are expected to serve as representatives in diversity initiatives to demonstrate an institutional commitment to inclusion (Diggs et al., 2009; Patton & Catching, 2009). This issue is particularly problematic at predominantly White institutions (PWIs) that lack racial and gender diversity, where the few existing faculty of color are responsible for mentoring the URM student population (Harley, 2008; Lugo-Lugo, 2012; Whittaker & Montgomery, 2014) but are also continuously tapped to represent their race in service and committee activities (Wingfield, 2013) that prevent them from committing time to research, teaching, and other activities that institutions value in terms of conferring tenure and promotions (Zambrana et al., 2016). Individuals who are asked to participate in these functions are merely serving as symbols of

diversity for institutions that do not demonstrate a commitment to inclusion through actual practice.

Research has repeatedly demonstrated a need for closer examination of the various unique challenges facing URMs in the professoriate. Studies have revealed the importance of efforts to increase representation of URMs in faculty positions, but they have also revealed factors that may be impeding efforts that already exist. Systemic inequalities, such as disproportionate service workloads, continue to exist within many practices of higher education. As our nation's institutions of higher education strive to diversify the academy, it becomes crucial to gather data regarding the extent of this inequality.

Study Rationale

With the current deficit of URM faculty in higher education, students are missing out on the breadth of knowledge and talent that these individuals might bring to the classroom (Opp, 2010; Umbach, 2006). Further, diversity among the professoriate is essential to the success of URM students, especially within STEM disciplines. Although institutions of higher education are aiming to improve diversification in the professoriate through more inclusive hiring practices, equal focus must be given to addressing the reasons for URM faculty departures across the nation's colleges and universities. Myriad complex factors may be contributing to the low URM faculty retention rate. Disproportionate service workload is a recurring theme in qualitative research regarding the experience of URM faculty (Baez, 2000; Diggs et al., 2009; Griffin, 2012; Schwartz, 2012; Wingfield, 2013; Zambrana et al., 2016); however, the body of work lacks a strong quantitative examination of this phenomenon. An investigation into whether faculty service workload obligations correlate with overall job satisfaction, stress level, and career decisions will provide empirical evidence to better explain the low retention rates of URM

faculty. Minimally, this study strove to inform ongoing discussions about the kinds of strategies institutions can leverage to retain more of their URM faculty as well as highlight any inequalities with respect to variation in faculty's service obligations across racial and ethnic identity groups.

Research Design

This study used descriptive and inferential statistical approaches using data from the 2016-2017 HERI Faculty Survey (Higher Education Research Institute [HERI], 2017). HERI administers the Faculty Survey every 3 years at institutions that choose to participate in the survey. Campuses self-select into the survey to learn more about the experiences and perceptions of their faculty as well as to benchmark faculty teaching and research activities against peer institutions. The instrument provides actionable information related to pedagogy, faculty goals and expectations, job satisfaction, and responsibilities.

Research Questions

This study explored issues identified by the following questions:

1. Does faculty service work vary by race/ethnicity with respect to faculty's investment of time and the nature of responsibilities?
    a. If so, which groups spend more time fulfilling service obligations?
    b. In what ways does the nature of service obligations vary (e.g., advising student groups, committee meetings, mentoring)?
2. Controlling for demographics, professional characteristics, and experiences related to teaching and research, does service workload significantly correlate with faculty's job satisfaction, job-related stress, or their intentions to leave their current institution for another campus in the near future?

a. Does faculty racial/ethnic identity moderate the relationship between service workload and each outcome?
b. Does faculty's sex moderate the relationship between service workload and each outcome?

Significance of Study

Diversification within the faculty ranks can contribute to enhanced cultural competency among students (Umbach, 2006) and can lead to increased diversity of thought and pedagogy in the classroom (Zambrana et al., 2015). By hiring and retaining more faculty of color, particularly those from underrepresented backgrounds, institutions can ensure that the growing numbers of URM students enrolling at U.S. colleges and universities have sufficient numbers of role models who offer a vivid illustration of the possibilities offered through experience (Collins & Kritsonis, 2006; Hagedorn et al., 2007; Opp, 2010). This is especially important in STEM disciplines where URM students are lacking the support of URM faculty (AAAS, 2011; National Academy of Sciences et al., 2007; Seymour & Hewitt, 1997). Currently, the disproportionately low number of URM faculty is overburdened by service and committee work that limit their ability to teach and research (Baez, 2000; Diggs et al., 2009; Griffin, 2012; Schwartz, 2012). An investigation into the extent and the impact of this service work on retention-related factors including job satisfaction, job related stress, and intentions to leave the job/profession will provide fodder for change in practice and policy to better support URM faculty as they progress through their careers.

Chapter 2 of this study will provide an overview of the literature relevant to service responsibilities among URM faculty. The chapter includes a brief discussion of the status of URM faculty diversification, an overview of the importance of increasing URM faculty

representation, and the challenges of retaining existent faculty of color. Finally, the chapter will present literature detailing the scope of URM faculty service work and the negative outcomes associated with those responsibilities, as well as the recent initiatives implemented by institutions of higher education as a means to increase faculty diversification on their respective campuses.

Chapter 3 presents an overview of the methods used for the study. It includes details regarding the dataset from the HERI Faculty Survey, a description of the key independent variable of interest—service work—and dependent variables: job satisfaction, work-related stress, and intent to leave. The chapter then discusses the survey items from which the key data were collected, in addition to the statistical methods used for analysis.

Chapter 4 discusses the findings of the analysis. It reports the method used to arrive at the final study data set. The chapter then describes descriptive analyses, including demographics and data related to service work and career outcome perceptions and intent among full-time faculty. The third section provides a series of linear and logistic regression equations demonstrating the relationship between service work and outcome variables, job satisfaction, career-related stress. and intention to leave. A summary of the findings concludes Chapter 4.

Chapter 5 presents the implications for policy and practice related to faculty retention across institutions of higher education. It also presents suggestions for future research that may deepen current understanding of service workload among faculty and how it plays into nation-wide concerns regarding the representation and retention of URM faculty at PWIs. Finally, an overview of ethical issues, methods for ensuring validity and reliability, and the study's limitations conclude the section.

Chapter 2

Decades after the Civil Rights Movement, minorities continue to be poorly represented in professions that require advanced degrees, including the education workforce. In 2012, minorities comprised only 23% of full-time elementary and secondary educators (Equal Employment Opportunity Commission, 2012), while accounting for 29% of the general U.S. population (Colby & Ortman, 2014). Much of the racial inequality that exists among the nation's faculty results from the low retention rates that campuses have with respect to URM faculty (J. Moreno et al., 2006). Although Black and Latino/a men and women continue to comprise only 10% of the nation's faculty (National Science Foundation, 2014), they share responsibility for a disproportionately high amount of the committee and service work performed by faculty across institutions of higher education (Diggs et al., 2009; Harley, 2008; Lugo-Lugo, 2012; Patton & Catching, 2009; Whittaker & Montgomery, 2014; Wingfield, 2013).

The purpose of this study was to investigate the impact of the service work of URM faculty on their job satisfaction, job-related stress, and/or intention to leave their current campus of employment. Specifically, this study explored the service requirement responsibilities of URM faculty and the influence of those responsibilities on their career intentions (i.e., stay or leave). This study defined URM as racial demographic groups that are underrepresented in education relative to their proportion in the general national population; these groups include faculty identifying as African American/Black, American Indian/Alaska Native, Mexican Americans/Chicano, Puerto Ricans, and Other Latino (National Science Foundation, 2014).

Overview of the Chapter

The lack of URM faculty in the academy has several negative consequences for institutions of higher education. This chapter begins with a quantification of the racial inequality

within the academy before moving into a discussion of the contributions URM faculty make with respect to their scholarly productivity. The next section reviews the importance of URM faculty in supporting success among URM students through advising, mentoring, and providing research opportunities. The review then turns to data that demonstrate low retention among URM faculty compared to non-URM faculty. The sections that follow focus on the issue of service to the institution and the academy and the extent to which expectations for and time spent fulfilling service obligations vary across racial and ethnic identities, including a review of the literature connecting this type of work to faculty's job satisfaction and overall stress. As the purpose of this study revolved around service requirements of URM faculty, this review presents research relevant to the URM faculty perceptions of service requirement responsibilities and their perceived effects. Finally, the review presents best practices and recommendations for increasing the retention of URM faculty as demonstrated by the nation's institutional leaders in diversity initiatives.

Diversifying the Faculty

Doctorate degrees are an essential component of becoming a faculty member at 4-year colleges and universities. Despite a 70% increase from the mid-1990s to the mid-2010s in the number of doctorate degrees awarded to African Americans and a more than doubling of the number of doctorate degrees granted to Hispanic and/or Latino recipients (National Science Foundation, 2014), these communities remain disproportionately underrepresented among faculty employed by U.S. colleges and universities. In 2014, Black and Latino/a men and women accounted for 6% and 4%, respectively, of the 1.5 million full-time and part time faculty appointments across degree-granting post-secondary institutions (U.S. Department of Education, National Center for Education Statistics, 2017).

Despite persistent inequitable representation by race within the academy, colleges and universities have made some progress toward diversifying faculty. Between 1993 and 2009, the number of Black faculty nationwide increased by 58%, positions held by Latino faculty more than doubled, growing by 132%. By contrast, in large part due to their larger base in 1993, the ranks of White faculty rose just 20% (Smith et al., 2012). In looking over a similar period of time, Schuster and Finkelstein (2006) similarly revealed a gradual increase among URMs in the professoriate from 5% in 1975 to approximately 15% in 1998. Between 1993 and 2003, the percentage of URM faculty at 4-year institutions increased from 6% to 8% (U.S. Department of Education, National Center for Education Statistics, 2017). The proportion of URM faculty in the 1970s was so low that, despite a doubling in representation over the past 2 decades, URM faculty remain sorely under-represented.

Women of color remain particularly under-represented among faculty positions, increasing in representation by only 2.2% between 1995 and 2011 (U.S. Department of Education, National Center for Education Statistics, 2017). Further, Curtis (2015) reported that among all postsecondary instructors in 2013, women of color accounted for only 3.1% to 12.0% of faculty within a particular discipline (Curtis, 2015; National Science Foundation, 2013). Even in disciplines where women are traditionally better represented than men, such as sociology and psychology, women of color represent only 12.0% and 11.8%, respectively, of all faculty appointments. Representation of African American women in full-time faculty positions remained stagnant between 1993 and 2013, shifting slightly from 6.6% to 6.9% (Finkelstein, Conley, & Schuster, 2016).

Faculty diversity also varies according to institution type. A disaggregation of data from the National Study of Postsecondary Faculty found that although URM faculty representation is

low throughout higher education, representation is lower at public 4-year institutions than at 2–year colleges, even after controlling for sex and human capital (i.e., experience and education) (Perna, 2003). Additionally, Black faculty are concentrated at HBCUs where they comprise 58% of all academic appointments, which makes their presence at PWIs all the more rare (Smith et al., 2012).

Some researchers caution that data referenced in reports on URM faculty representation may be misleading and even overly optimistic. A study by Finkelstein et al. (2016) conducted through the TIAA Institute provides insight into the current state of faculty diversification by analyzing data from the National Center for Higher Education Statistics' Integrated Postsecondary Education Data System from 1993, 2003, and 2013. The significance of this study lies in its use of new federally redefined racial and ethnic classifications, eliminating confusion between international and URM faculty. The authors state that data showing drastic increases in URM faculty include non-native born, international minorities, thus skewing the recognized state of diversity in higher education teaching positions. Further, although the authors report increases in URM faculty positions throughout the last 2 decades, the URM faculty population is more represented among non-tenure and/or part time faculty positions than their White peers, with 75% of URM faculty employed in either tenure-ineligible or part-time positions compared to 70% of White faculty. As faculty hiring trends have increasingly moved toward part-time positions and appointments off the tenure track, this five-percentage point difference between White and URM faculty in representation has remained the same throughout the last 20 years. Benefits associated with tenure are crucial to longevity within the teaching profession (Thompson, 2008).

As research demonstrates, some progress has been made in increasing diversity among the nation's faculty. However, the extent to which academia has been diversified varies according to institution type, and racial inequality persists among faculty position type.

Importance of Diverse Faculty

Recruiting and retaining a diverse faculty can help to build cultural competency among all students and provide an important source of support to facilitate the success among URM students. Opp (2010) documented the connection between the presence of faculty of color and program completion rates of students of color. Data from Opp's study show that among five measured variables, the percentage of faculty of color was most predictive of student success; as the representation of faculty of color as a proportion of all faculty increased, completion rates for students of color also increased. Similarly, a study by Hagedorn et al. (2007) found that the success of Latino students was positively correlated with Latino faculty representation on campus. The authors credited this finding to increased availability of role models for Latino students. An increase in representation of URM faculty expands opportunities for URM students to connect with successful adults of the same race and/or ethnicity through courses or faculty advising.

This connection is also valuable for URM graduate students, as demonstrated in Barker's (2011) study, which examined a program that paired doctoral students with faculty advisors. Participants in the program felt that same-race advising relationships enabled important discussions surrounding race-related issues. White faculty are unlikely to foster discussion of these issues due to discomfort and/or lack of awareness (Thomas et al., 2007). An evaluation of a similar mentoring program for graduate students in mental health services, the Minority Research Infrastructure Support Program (M-RISP), found that participants had an enhanced

experience when they were paired with mentors of the same ethnicity and/or race who had similar experiences as the participants (Waitzkin et al., 2006).

The presence of URM faculty members is crucial for the success of URM students, especially in STEM disciplines. For decades, national governmental agencies have pressed for a diversified workforce to remain globally competitive (AAAS, 2011; National Academy of Sciences et al., 2007). A longitudinal study by Seymour and Hewitt (1997) investigating why students leave STEM disciplines in college found that students of color are less likely to persist in an originally chosen STEM major in part due to the low representation of faculty of color. This finding demonstrates the importance of URM students seeing successful faculty of color as a means to personally identify with the possibility of a STEM-related career. Similarly, Rask and Bailey (2002) found that minority students were more likely to choose majors with strong representations of racial minority faculty members.

Faculty of color also have unique strengths and make important contributions to their institutions and disciplines. Compared to their White colleagues, faculty of color tend to use more student-centered pedagogical techniques, such as collaborative learning and group work, that are designed to engaged students in class (Umbach, 2006). Notably, each of these teaching practices has been found to increase student learning and engagement (Kuh, 2001; Pascarella & Terenzini, 2005). Faculty of color are also more likely than White faculty members to serve as diversity advocates (Park & Denson, 2013). This could be, in part, due to the anxiety that White faculty feel at the prospect of discussing issues of race (Sue, Torino, Capodilupo, Rivera, & Lin, 2010). Diversity and cultural knowledge are important components of a college education.

Diversity and inclusive teaching practices are essential, as the URM student population in higher education continues to increase. According to Colby and Ortman (2014), between 2014

and 2050, the Black and Hispanic population will increase by 42% and 115%, respectively. By 2025, the proportion of Black students enrolled in post-secondary degree granting institutions is expected to increase from 14.5% to 15.7% (U.S. Department of Education, National Center for Education Statistics, 2017). Hispanic students are expected to increase in representation from 16.6% to 19.4%. As the URM student population grows, the need for a diverse faculty increases.

Faculty Retention

Quantifying low URM faculty retention. Although initiatives have focused on increasing representation of minority faculty throughout the last several decades, attention has also turned to retaining those URM faculty already working in academia. Faculty retention issues have drawn the attention of researchers and education experts for decades, but data depicting the magnitude of the problem are scarce. Accurate, disaggregated data are not readily available within, much less among, institutions (J. Moreno et al., 2006). Individual campus researchers, such as the grant-supported University of San Diego Hispanic Center of Excellence (HCOE), sometimes track faculty career progression and note the low retention rates among the URM faculty population. J. Moreno et al.'s (2006) evaluation of 28 private institutions in California suggests that retention is significantly lower among URM faculty than among their White and Asian peers. In this study, an examination of hiring data from the participant institutions showed that three out of every five URM new hires took the place of another URM faculty member. The authors described the high turnover rate of URM faculty as a *revolving door* and emphasized the need for diversity initiatives to prioritize URM faculty retention above URM hiring. Ultimately, the lack of accurate and consistent data on faculty career progression throughout higher education institutions renders it difficult to define or address retention issues among URM faculty.

Job satisfaction, work-related stress, and intention to leave. Research has revealed a variety of intertwining institution, work-related, and personal factors that relate to faculty retention. Many of these factors contribute directly or indirectly to an individual's desire to leave his/her job and/or career due to negative impacts on his/her job satisfaction (Rosser, 2004), conceptualized by Hagedorn (1996) as the fulfillment one feels in regard to students, colleagues, and administrators. Faculty professional life directly impacts both morale and the intention of that individual to leave their employment (Johnsrud & Rosser, 2002). Less than half of faculty are satisfied with their pay and/or benefits (Magner, 1999), a problem directly correlated with the level of job satisfaction faculty feel at their institution (Carr, Gunn, Kaplan, Raj, & Freund, 2015; Cropsey et al., 2008; Hagedorn, 1996). Professional development factors, including monetary support for research-related travel and activities and sabbatical leave, are also important to the job satisfaction of faculty (Matier, 1990) and thus contribute to faculty retention (Rosser, 2004). Further, high levels of job-related stress from the rising time commitments and expectations of faculty continue to contribute to work-related stress of faculty (Hurtado, Eagan, Pryor, Whang, & Tran, 2012). This stress is exacerbated by the lack of recognition and influence faculty hold within an institution but is also associated with increased intentions to leave academia (Barnes, Agago, & Coombs, 1998), a factor consistently used as a proxy for actual turnover within the academic profession in lieu of frequently nonexistent faculty retention data (Bluedorn, 1982; Mobley, 1982; Rosser, 2004).

Job satisfaction and career intentions also vary according to faculty gender and race. Women in the academy face challenges unique to their gender, such as unequal compensation and rank, negative gender climate, and poor institutional support in regard to family responsibilities (Carr et al., 2015). Citing data from a survey completed by 166 faculty who

resigned from faculty positions, Cropsey et al. (2008) found that URM faculty are more likely to report career dissatisfaction and a desire to leave the institution. Similarly, data from surveys taken by 1,807 full-time salaried faculty at 24 U.S. medical schools reveal that URM faculty have lower career satisfaction scores than non-URM faculty, even after controlling for rank, compensation, department, and professional time allocation (Palepu et al., 2000). Feelings of isolation and marginalization leave many URM faculty at risk of low job satisfaction due to being one of only a few URM faculty within their institution or discipline. This is especially problematic at PWIs (McCray, 2011).

The job satisfaction of URM faculty is also frequently hindered by the difficulty they have in establishing an academic identity (Diggs et al., 2009), a problem related to the low representation of URM in the field. Patton and Catching (2009) stated that URM faculty are likely to wonder whether they were hired for their qualifications or as a token of diversity. Feeling isolated from other colleagues and a sense of insecurity regarding one's status as part of a unit likely undermine faculty's satisfaction with their position and may ultimately discourage them from wanting to remain at their current institution.

Research within the last several decades has pinpointed diversity climate, both institutional and departmental, as a catalyst of low URM faculty retention. Jayakumar et al. (2009) investigated factors that contribute to job satisfaction and retention among URM faculty, revealing that hostile racial climate was most detrimental to job satisfaction among Black and Latino faculty. Conversely, faculty who reported a welcoming racial climate were more likely to be satisfied with their jobs. Notably, although tenure was shown to influence job satisfaction and faculty intent to continue at the institution, tenure status did not mitigate the negative effects of a hostile racial environment. In other words, even among tenured faculty, experiencing a more

hostile racial climate on campus reduced professors' likelihood of choosing to remain at their current institution.

Institutions' commitment to diversity, taking action to demonstrate that commitment, and faculty's fear of encountering racial conflict collectively affect faculty's sense of belonging to an institution (Coleman & Stevenson, 2013). Faculty at PWIs report negative racial climate, hallmarked by peer stereotypes and resistance to having diversity-related conversations (Stanley, 2006). Poor racial climate is also a problem for women of color in community college settings, where women experience race-related bullying, particularly by faculty in power positions, such as departmental chairs (Lester, 2009). Similarly, Patton and Catching (2009) stated that African American faculty consistently experience microaggressions from faculty peers. Findings from Stanley (2006) also demonstrate a theme of problematic student attitudes toward faculty of color in PWIs. Similarly, African American faculty commonly encounter racially biased students who feel that URM faculty are less qualified to teach than non-URM faculty (Patton & Catching, 2009).

Although racial bias of individuals within the educational community is a significant issue associated with negative outcomes among URM faculty, systemic bias may also hinder URM faculty's career advancement in the academy. Discrimination in the academy has been linked directly to negative outcomes, including increased job-related stress and declined research productivity among Black, Latino, and American Indian faculty (Eagan & Garvey, 2016). A study by Hyers et al. (2012) illustrated this racial disparity in terms of professional development opportunities for faculty. This study compared the consistency and quality of faculty interactions of URM faculty to non-URM faculty through analyzing weekly diary entries of 30 tenure-track junior faculty. Findings reveal that non-URM faculty report significantly more interactions with

higher status colleagues than URM faculty. The authors quantify the disparity as a difference, on average, of 13 interactions per faculty member each 10-week term and warn that institutions should acknowledge and address the subtle privilege disparities within the tenure process.

Although studies have repeatedly revealed a correlation between institutional diversity climate and URM faculty retention, research has also shown that institutions may lack insight into their own biases and lack of knowledge surrounding systemic racism. Coleman and Stevenson (2013) explained that Black faculty are less likely than their White peers to believe their institution is capable of managing racial conflict. A pre-and post-survey distributed through a diversity and equity workshop presented to chemistry department chairs and sponsored by the National Science Foundation, the U.S. Department of Energy, and the National Institutes of Health revealed a lack of awareness of challenges facing URM faculty (Greene, Lewis, Richmond, & Stockard, 2011). The post-intervention survey revealed that participants were only able to acknowledge obstacles impeding URM faculty career progress, such as subtle department bias and limited access to high caliber students. Further, participants stated that the workshop increased the likelihood that they would hire URM faculty. Other research has found that non-URM faculty who participate in race-related educational opportunities are often already aware of the challenges faced by URMs, and that those who are in need of further education do not participate (Diggs et al., 2009). Diggs et al. (2009) further concluded that opportunities for race-related education, such as professional development workshops, are too brief and surface-level, and limit more necessary and meaningful conversations about important issues. The data highlight the need for further, more comprehensive research on inequality within the education system.

Service Responsibilities of URM Faculty

Faculty of color spend a disproportionate amount of time fulfilling service obligations compared to their White colleagues in the form of mentoring roles, advising, and organizational sponsoring designated to faculty of color (Martinez, Chang, & Welton, 2016). This service expectation, sometimes referred to as *identity taxation*, is the subject of Hirschfield and Joseph's 2011 study, which explored the ways in which faculty social identities impact their university experience. Data from a sample of 66 interviews conducted with a racial and gender diverse group of faculty from a predominantly White public university describe the magnitude of these sometimes-unreasonable expectations. For instance, common experiences range from being expected to serve as a knowledge base for all diversity-related issues to being asked to serve as a support person to individuals from marginalized groups, even if they themselves do not belong to those groups. URM faculty are also frequently utilized throughout institutional hiring processes to help attract outside faculty of color by providing tours and hosting them for coffee, some recruits of which are outside their own academic disciplines (Martinez et al., 2016). Patton and Catching (2009) noted the tendency of PWIs to unfairly expect URM faculty to be present when institutions host prospective diverse students as a means for the institution to portray itself as racially inclusive.

Disproportionate expectations based upon race may also influence the amount of support URMs provide to enrolled students outside of the classroom. Chang, Welton, Martinez, and Cortez (2013) outlined campus responsibilities common among female URM faculty that include mentoring students of color, sponsoring cultural/ethnically based sororities and leading networking organizations for other racially underrepresented female faculty, acknowledging that although the responsibilities are not requested of White faculty, they are nonetheless part of the

"'role' they agree to play" (p. 110). Reybold (2014) stated that African American faculty are approached more often than their peers to serve on dissertation committees for doctoral students, particularly when the dissertation topic involves race. URM faculty are also more likely to engage in individual interactions with students, such as advising and mentoring, than their non-URM colleagues (Griffin & Redding, 2011).

Researchers debate whether racially disproportionate workload negatively impacts URM in terms of their performance. Johnson, Kuykendall, and Nelson Laird (2005) demonstrated that although the time spent on service work is greater among African American and Latino/a faculty than their White and Asian American peers, the inequality does not correlate to limited time spent on research and teaching among URM academics. Alternatively, other research examining identity taxation specific to African American faculty showed that although the time spent on these service responsibilities is comparable between African American men and women in the professoriate, the outcomes associated with *Black tax* vary among the sexes: African American men are more likely to report difficulties obtaining tenure and promotion as a result of service, in contrast to African American women who are more likely to report resultant work-related stress (Griffin, Bennett, & Harris, 2011).

Research demonstrates the strong possibility of inequitable scope of service work performed by URM faculty, along with possible effects of this work on work-related stress and job satisfaction, even if only by documenting the experiences and perceptions of those performing the work. These studies highlight a need to further investigate the extent to which service work is inequitably distributed across faculty racial and cultural demographics.

Negative Outcomes Associated with Service Work of URM Faculty

Some studies have documented the professional and personal burdens of service work responsibilities placed on URM faculty. URM academics have been shown to value service work highly, as it enables them to help their ethnic and cultural communities (Baez, 2000; Tierney & Bensimon, 1996). Many also attribute their professional growth and emotional support to the social networks established by service work opportunities. However, these highlights are often juxtaposed with the negative outcomes associated with the time-intensive, stressful burden of service.

Stress related to service work is a notable concern for URM faculty, as research shows a clear connection between job-related stress and intention to leave (Barnes et al., 1998). African American men and women in the professoriate commonly associate committee work and meetings with increased work-related stress (Griffin et al., 2011). URM faculty report spending the majority of their time on service tasks (Baez, 2000), which likely exacerbates stress levels associated with being *tokenized*, or assigned tasks according to race (Chang et al., 2013; Turner, 2002). Baez (2002) also reported high service-work-related stress levels among URM faculty, noting that many understand the necessity of service work, but struggle to refuse assignments in order to prioritize research and other demands associated with obtaining tenure. Similarly, although undergraduate research programs are crucial in developing URM scientists and scholars, the time intensive work performed is sometimes emotionally and financially detrimental to the faculty involved in relationship to their own research and professional advancement (Schwartz, 2012).

Difficulty obtaining tenure is a theme found in the research to be related to the experiences of URM academics (Baez, 2000; Blackburn & Lawrence, 1995; Griffin et al., 2011;

Jarvis, 1991; Patton & Catching, 2009; Schwartz, 2012). Although service responsibilities are an essential component of faculty evaluations for promotion and tenure, these responsibilities—such as committee work, advising, and speaking engagements—are not valued consistently, as their relative importance in personnel actions often depends upon the overarching mission of the institution. When evaluating faculty for promotion and tenure consideration, research institutions in particular are more likely to prioritize research over service performed by a faculty member, regardless of how much time and effort is given to the service (Blackburn & Lawrence, 1995). As faculty commit to community service and supporting students individually, they have less time and energy to focus on teaching and research (Jarvis, 1991). Therefore, opportunities for advancement are likely limited by the excessive service demands placed on URM faculty (Baez, 2000).

Obligations related to service work may also affect the ability of URM faculty to feel included within the academic community, especially within PWIs where the few existent faculty of color are most frequently engaged in tasks related to diversity programming (Diggs et al., 2009). Hirschfield and Joseph (2012) reported that female faculty of color commonly feel valued only because of their gender and race, and not due to their scholarly contributions. Similarly, Hall and Stevenson (2007) explained the difficult nature of serving as a lone diversity educator in an institution in that the role further exacerbates feelings of isolation that minority educators likely already feel within a world of White colleagues.

These studies demonstrate a need for closer examination of the nature and scope of the service work performed by URM faculty, as well as the unintended consequences of this work on the emotional state and longevity of those performing the work. The documented experiences of faculty of color suggest that faculty's sense of identity taxation may become so burdensome that

it undermines their job satisfaction, induces job-related stress, and drives them to pursue alternate employment.

Institutional Initiatives to Improve Faculty Retention

Given the varied challenging interactions, increasing responsibilities, and declining levels of satisfaction among faculty, colleges and universities have taken action aimed at addressing these issues, occasionally with a particular focus on the experiences of URM faculty. Institutions making such efforts seemingly signal their commitment to diversity by acknowledging the concerns raised by their faculty of color, designing programs and policies responsive to those issues, and assessing the efficacy of the approach following implementation. The following sections highlight several of these initiatives and include empirical evidence, where available, that speaks to the extent of their success.

Funding initiatives. Funding is an essential component of successful diversification efforts aimed at promoting job satisfaction and retention among URM faculty (Daley et al., 2008; Whittaker & Montgomery, 2014). Institutions have documented appropriating funds to support existing URM faculty in a variety of ways such as to competitive salaries and start-up initiatives such as providing labs and equipment and teaching assistants (UC Santa Cruz; University of Colorado-Boulder), funding for faculty of color research projects (University of Colorado at Denver), and funding campaigns to support faculty and staff diversity (University of Rhode Island; Guenter-Schlesinger & Ojikutu, 2009).

Cluster-hiring. Cluster-hiring, the practice of hiring groups of faculty of color simultaneously, is commonly practiced among many institutions (e.g., University of California, Rutgers University, University of Michigan) to provide enhanced socialization and reduced isolation and marginalization among the URM faculty within the new cohort (Guenter-

Schlesinger & Ojikutu, 2009). Recent research shows that cluster-hiring increases job satisfaction and quality of work-life among URM faculty but also increases overall diversification of faculty diversity (Urban Universities for Health, 2015). Institutions such as the University of Chicago, University of Illinois, and North Carolina State University have also seen URM faculty retention improvements as a result of cluster, or cohort-based, hiring (Sgoutas-Emch, Baird, Myers, Camacho, & Lord, 2016).

Mentoring. Mentoring has emerged as one of the most commonly practiced and effective support programs to address stress levels, job satisfaction and retention among faculty of color (Guenter-Schlesinger & Ojikutu, 2009). Peer mentoring can allow URM faculty to discuss race-related challenges, such as microaggressions and marginalization, in a safe space with other URM faculty (Follins et al., 2015). Faculty of color report significant benefits as a result of mentorship with advanced URM academics with shared experiences. They state that those relationships help to develop a sense of belonging in the field, especially when the mentor is a member of the URM community (Zambrana et al., 2015). Zambrana et al. (2015) noted that URM faculty mentors are more likely than their White peers to have an implicit understanding of the role of race in the academy. Mentoring can also provide opportunities to clarify promotion and tenure protocol (Piercy et al., 2005), a known challenge faced by URM faculty who may lack social capital in the workplace that would help them to navigate administrative processes (Follins et al., 2015). Networking provided by many mentoring programs provides benefits such as co-authoring, collaborative research opportunities, and grant funding (Zambrana et al., 2015).

Some institutions have begun to document improvements in URM faculty job satisfaction (Zambrana et al., 2015) as well as increases in URM faculty retention (Daley et al., 2006) specifically as a result of peer mentoring. However, research shows that mentoring programs

must have certain characteristics in order to be effective, such as training and consistency among mentees (Zambrana et al., 2015). Zambrana et al. (2015) further stated that mentorship is likely to be less effective when it is obligatory according to university policy. They also suggested that the best kind of mentoring programs enable participants to engage with a variety of mentors with a diverse array of skills and strengths.

Many concerns regarding the job satisfaction, stress level, and retention of URM faculty may be addressed significantly through the implementation of mentoring programs. The positive outcomes associated with mentorship for the URM faculty community have prompted government agencies to fund URM faculty mentoring programs to support URM faculty in STEM disciplines across higher education institutions nationwide (Georgia Tech Research Institute, 2017).

Faculty Engagement

Higher education diversity experts state that faculty input and participation are crucial to the success of URM support initiatives (Guenter-Schlesinger & Ojikutu, 2009; Whittaker & Montgomery, 2014), explaining the importance of incorporating faculty into programming aimed at increasing URM faculty job satisfaction and retention. Campuses such as Virginia Tech University have demonstrated notable success in decreasing URM faculty turnover through the work of faculty committees that continuously discuss and take action to address issues that disadvantage the URM faculty community (Piercy et al., 2005). Focusing on known problem areas such as difficulty in obtaining tenure and high turnover, faculty committees have successfully increased URM faculty retention by resolving these issues in the form of comprehensive strategies that incorporate trainings and workshops for the URM faculty community (Daley et al., 2008; Follins et al., 2015).

Faculty are also crucial in building the campus community knowledge base surrounding issues of diversity through incorporating race-related topics into their research and teaching (Whittaker & Montgomery, 2014). The continued discussion of these topics across campus communities is important to diversity climate, which URM faculty continue to report as an issue across the country (HERI, 2014). In order to increase participation of faculty in efforts related to campus diversity climate, some institutions have incentivized faculty diversity contributions in research, teaching, and service through awards and credits toward promotion and tenure (i.e., University of California; Guenter-Schlesinger & Ojikutu, 2009).

Enhanced training for non-URM faculty on issues such as inherit bias and cultural sensitivity can also be helpful in creating a positive diversity climate on college and university campuses (Guenter-Schlesinger & Ojikutu, 2009). Some institutions incorporate workshops and other professional development opportunities for all faculty into their diversity strategic plans (e.g., California State University and University of Rhode Island), developing accountability measures for departments not in compliance with diversity goals (Piercy et al., 2005). These accountability measures are often monitored through effective data collection and record keeping.

Data and Assessment

As researchers repeatedly associate poor racial climate with negative outcomes among URM faculty, institutions with successful diversity initiatives monitor their institution's racial climate through surveys and other evaluation methods that can provide baseline data to administrators regarding potential diversity issues on their respective campus (Daley et al., 2006; Guenter-Schlesinger & Ojikutu, 2009). Consistent and accurate data tracking has also been shown to be effective in assessing diversity initiatives and maintaining accountability for

institutional commitment to diversity in higher education institutions across the country. Accurate and accessible data is a crux of effective URM retention initiatives; experts emphasize that in order to improve URM representation, institutions must first acknowledge the extent of the deficit (J. Moreno et al., 2006).

Conclusion

Although institutions of higher education have vocalized an intent to improve the representation of URM faculty in colleges and universities, research demonstrates difficulty in outlining the extent to which progress has been made. Further, although research hones in on factors significant in URM retention, only some of these factors are addressed by diversity programming practiced today. There remains a significant void of research pertaining to race-related service requirements and their effect on the career progression of URM faculty. This study strove to fill the void by investigating this relationship as a means to improve retention rates among URM faculty.

Chapter 3

Racial inequality persists throughout the national workforce, specifically in fields that require advanced education. The academy makes for a particularly racially imbalanced workplace, as the proportion of URM faculty lags well below their representation among the general population. Despite efforts to address the severe underrepresentation of Black, Latino, and Native American faculty teaching at U.S. colleges and universities, research indicates that most URM faculty new hires replace departing URM faculty (J. Moreno et al., 2006), which slows any progress toward achieving greater racial diversity among the faculty ranks. Lack of career progression, hostile institutional racial climates, and disproportionate service workloads represent just a few of many factors undermining job satisfaction, particularly among URM faculty.

Various qualitative studies demonstrate that URM faculty perform a disproportionate amount of service work compared to their non-URM peers (Baez, 2000; Diggs et al., 2009; Griffin, 2012; Schwartz, 2012; Wingfield, 2013; Zambrana et al., 2016). However, the purpose of this study was to provide additional quantitative examinations of this inequity. This study aimed to fill the aforementioned gap by providing quantitative data to determine whether URM faculty service workload obligations correlate with overall job satisfaction, stress level, and career decisions. Further, the purpose of this study was to add to existent work related to faculty retention by providing evidence to support the effects of service workload on job satisfaction, stress level, and/or career decisions, which are factors known to influence faculty turnover (Bluedorn, 1982; Mobley, 1982; Rosser, 2004).

Research Questions

This study explored the following research questions:

1. Does faculty service work vary by race/ethnicity with respect to faculty's investment of time and the nature of responsibilities?
    a. If so, which groups spend more time fulfilling service obligations?
    b. In what ways does the nature of service obligations vary (e.g., advising student groups, committee meetings, mentoring)?
2. Controlling for demographics, professional characteristics, and experiences related to teaching and research, does service workload significantly correlate with faculty's job satisfaction, job-related stress, or their intentions to leave their current institution for another campus in the near future?
    a. Does faculty racial/ethnic identity moderate the relationship between service workload and each outcome?
    b. Does faculty's sex moderate the relationship between service workload and each outcome?

This study addressed these questions through a quantitative approach that leveraged inferential analyses applied to a national dataset of college and university faculty in the U.S. Using a series of linear and logistic regressions to control for background variables, I sought to determine an association between the quantity and nature of service work and faculty's job satisfaction, job-related stress, and intention to leave their current institution. Importantly, the analyses tested for interaction effects to determine whether any association between service work and the three outcomes varied by faculty's racial or ethnic identity. The inferential analyses were supplemented by descriptive statistics, including frequencies, crosstabulations, and analyses of variance to provide a more complete understanding of the patterns associated with faculty's service work and differences by faculty demographic and employment characteristics with

respect to job satisfaction, job-related stress, and intention to leave their current institution. The following sections provide additional details about the analytic sample used, the survey instrument, variables considered for analysis, analytic approach, and limitations of the design.

Data and Sample

This study utilized data from the 2016-2017 HERI Faculty Survey (HERI, 2017). The Faculty Survey is distributed every 3 years through HERI to self-selected institutional participants for the purpose of providing participant institutions with the ability to understand the experiences, engagements, and perceptions of their faculty and compare these measures to peer institutions. The instrument provides actionable information related to pedagogy, faculty goals and expectations, job satisfaction, and responsibilities that span the areas of research, teaching, and service. The 2016-17 administration yielded 20,693 full-time faculty employed by 153 of the 3,011 4-year colleges and universities in the U.S. (U.S. Department of Education, National Center for Education Statistics, 2017). These data, which include responses from private and public institutions throughout the country, is the most comprehensive and representative higher education faculty dataset available.

In 2015, full-time faculty comprised 67% of faculty positions at public 4-year institutions and 55% of faculty positions at private non-profit institutions, totaling 63% across all 4-year non-profit institutions (U.S. Department of Education, National Center for Education Statistics, 2017). As this study sought to produce findings generalizable across the majority of faculty who participate in service-related work, responses from all full-time male and female faculty were analyzed. Responses from graduate students/teaching assistants were excluded from analysis, as this study focused exclusively on faculty.

Variables

Detailed information on each measure is available in Appendix A. For the purposes of this study, constructs were defined in the following manner.

Job satisfaction. *Job satisfaction* refers to the level of contentedness reported by an individual in regard to specific aspects of his/her job. Participants provide responses regarding their fulfillment related to their level of autonomy, course assignments, working relationships with other faculty, and the ability and/or quality of colleagues and leadership. This variable was measured using the HERI construct of Job Satisfaction: Workplace. HERI constructs are generated according to Item Response Theory (IRT), which creates composite, latent measures based on several individual survey items (Kane, 2013). Responses correlated to the latent variable are each assigned a level of importance, or *weight* in identifying the existence of the latent variable. They are then categorized and measured together as a whole, or *construct*.

The Job Satisfaction: Workplace construct measures the extent to which faculty are satisfied with their working environment, including assessments of independence, working relationships, colleague competency, leadership, and course assignments. Environmental conditions are established as one of the key mediators by which job satisfaction of faculty can be assessed (Hagedorn, 2000).

Job-related stress. *Job-Related stress* refers to the negative adverse reaction individuals report in response to workplace factors, including work assignments, responsibilities, and other individuals in the workplace. This variable was measured using the HERI construct of Career Related Stress, also established using IRT.

The Career Related Stress construct measures the amount of stress faculty experience associated with their professional activities. Respondents indicated *extensive*, *somewhat*, or *not*

at all with regard to whether specific workplace factors are a source of stress. Each of the items measured represents an activity on which faculty spend time. Tensions between conflicting time commitments associated with the continuously growing list of expectations and responsibilities of faculty (Hurtado et al., 2012) lead to higher levels of stress and directly impact their intentions to leave (Barnes et al., 1998).

Intention to leave. *Intention to leave* refers to a faculty member's intention to leave his/her job, or the institution in which he/she worked within the last year. Intention to leave is a commonly used proxy for actual departure within the academic profession (Bluedorn, 1982; Mobley, 1982; Rosser, 2004). For the purposes of this study, the intention to leave variable was derived and operationalized based on participant responses to the HERI Faculty Survey question that asked participants to respond *yes* or *no* to whether they have considered leaving academe, or their respective institution, in the past year.

Service work. The literature on faculty workload references three common types of service responsibilities: advising, mentoring, and community service. Factor analysis was used to derive faculty's service work, and the following variables were considered for that factor:

- Hours spent weekly on advising
- Hours spent weekly on committee work and meetings
- Hours spent weekly on community or public service
- Extent to which he/she has mentored undergraduate students
- Extent to which he/she has mentored graduate students

These responses were operationalized using principle axis formatting with promax rotation. Table 3.1 shows the factor loading for the service work variable.

Table 3.1

Factor Loadings for Service Workload

Item Loading	# of Hours
Hours per week: Advising or counseling students	0.563
Hours per week: Committee work and meetings	0.396
Hours per week: Community or public service	0.295
Extent to which: Mentor undergraduate students	0.293
Extent to which: Mentor graduate students	0.266

Note. % of Variance = 30.630

The analyses controlled for several demographic and professional characteristics, including race (URM versus non-URM), sex (male versus female), and rank (professor, associate professor, assistant professor, lecturer, instructor). For the purpose of this study, URM included the following racial demographic groups that are frequently cited in literature: African American/Black, American Indian/Alaska Native, Mexican American/Chicano, Puerto Rican, and Other Latino.

This study focused on comparing the non-teaching, non-research workload of URM faculty to that of non-URM faculty. Responsibilities included in this non-teaching, non-research workload were advising and mentoring undergraduate students, committee and meeting work, and community service.

Analytic Approach

The dataset of the 2016-2017 HERI Faculty Survey was examined via descriptive and inferential analyses in Statistical Package for the Social Sciences (SPSS). Descriptive analyses were utilized to determine the type and frequency of non-teaching, non-research workload (independent variable) of URM faculty versus non-URM faculty. Linear regression analysis was used to determine the extent to which a relationship exists between the service work of faculty and outcomes of job satisfaction and work-related stress, and logistic regression was applied to

dichotomous outcome measure of intention to leave. Two separate logistic regression models were used to analyze the two outcomes related to intention to leave (e.g., considered leaving academe for another job/considered leaving this institution for another) so as to most effectively consider outside variables influencing the relationship between the service work and intention to leave, in both contexts. Logistic regression analysis is an appropriate method by which to determine the relationship between an independent variable and a dichotomous dependent variable (Creswell & Miller, 1997), such as intention to leave. All regression analyses controlled for the rich set of demographics, professional characteristics, and other time commitments as listed in the table of measures (Appendix A). I sought to achieve parsimony in the model by removing variables that did not contribute significantly to the model's ability to explain variation in the outcome measures provided that such modifications made appropriate theoretical and empirical sense.

I tested for interaction effects between service work and race (URM versus non-URM) to determine whether URM faculty outcomes of job satisfaction, career-related stress, and intention to leave are disproportionately related to their service work. With the main effects of race and service work in the model, I added an interaction term to represent the additional differences in career outcomes that URM faculty encounter based on their service obligations.

Ethical Issues

Participation in the HERI Faculty Survey is voluntary. As HERI maintains strict standards of confidentiality, I had no access to respondent identifying information. Because the data set was preexisting, I was not in contact with respondents, thus reducing risk to participants. Additionally, risk was further reduced by reporting all findings in the aggregate and masking any cells with small counts.

Reliability and Validity

This study drew from pre-existing data from the 2016-2017 HERI Faculty Survey. Questions used on this particular survey were previously used in nine prior versions of the instrument and have been revised by HERI affiliated researchers who are experts in faculty-related concerns (Eagan et al., 2014), which offers strong evidence as to the instrument's face validity. In order to eliminate the influence of outliers in the sample, only responses indicated by HERI as part of the normative sample were used for analysis. As evidenced by the number of latent measures HERI created from the dataset, the instrument and its corresponding data also had construct and predictive validity. Institutional classification variables were obtained through the valid and accurate Integrated Post-secondary Education System (IPEDS) of the National Center for Education Statistics (NCES), an often referenced and reliable source of higher education institutional data. The instrument is distributed throughout the academic year, dependent upon the enrollment of the participant institution, thus eliminating the possibility of survey timing threat (Creswell, 2005), wherein faculty may be more likely to report high levels of stress during peak busy times of the year. The sample size for URM full-time faculty (N = 819) is sufficiently large enough to make inferences regarding the general nationwide URM faculty population.

Omnibus statistical tests provided evidence regarding the strength or appropriateness of each analysis or model. Chi-square tests were run in order to test the validity of the descriptive statistics of frequencies, whereas an ANOVA was used to determine validity of means and standard deviations. An R-squared (coefficient of determination) was calculated to determine the strength of the linear regressions. A Goodness of Fit test was run to determine the

appropriateness of the logistic regression models between service and intention to leave institution, and between service and intention to leave academe.

Chapter 4

This study used data from the HERI's 2016-2017 Faculty Survey (HERI, 2017), an instrument college campuses can administer every 3 years to learn more about faculty's teaching, research, and service experiences; their perceptions of campus climate; and factors contributing to their stress and job satisfaction. HERI merged institutional data from the National Center for Education Statistics' IPEDS to provide additional information about variations in campus contexts among the institutions represented in the 2016-17 Faculty Survey. The initial dataset contained 26,104 full-time faculty across the nation. The dataset was then filtered to include only the normative full-time faculty subset[1]. This step was taken to ensure that the final dataset, when weighted, provided a realistic nationally representative estimate of the experiences and perceptions of full-time faculty working at 4-year nonprofit colleges and universities in the U.S. The normative dataset consisted of 20,693 responses from faculty representing 153 institutions.

The first section of the findings reports the method used to arrive at the final study data set. The second section describes descriptive analyses, including demographics and data related to service work and career outcome perceptions and intent among full-time faculty. The third section provides a series of linear and logistic regression equations demonstrating the relationship between service work and outcome variables, job satisfaction, career-related stress. and intention to leave.

[1] To be included in the normative sample, 4-year colleges needed to have collected data from at least 35% of their full-time faculty while universities needed to have at least 20% of their full-time faculty participate (Eagan et al., 2014).

Analytic Sample Considerations: Removing Cases Associated with Historically Black Colleges and Universities (HBCUs)

URM faculty report being overburdened by service work, particularly at PWIs. In order for findings to better reflect experiences of URM faculty at PWIs, the data were filtered to exclude responses of URM faculty working at HBCUs, where faculty of color are likely to have different experiences surrounding service work than their counterparts at PWIs (Harley, 2008; Lugo-Lugo, 2012; Whittaker & Montgomery, 2014). Table 4.1 describes the distribution of faculty by race group across HBCU/non-HBCU institutions.

Table 4.1

Faculty by Race Across HBCU and Non-HBCU Institutions in 2016-2017

Race	HBCU	Percent	Non-HBCU	Percent	TOTAL
American Indian	1	0.3%	25	0.2%	26
Asian or Pacific Islander	37	10.9%	888	5.8%	925
Black or African American	159	46.9%	402	2.6%	561
Hispanic	9	2.7%	392	2.6%	401
White	93	27.4%	12,702	82.8%	12,795
Other	1	4.4%	307	2.0%	322
Two or more race/ethnicity	25	7.4%	630	4.1%	655
TOTAL	339		15,346		15,685

In this particular sample, 28.3% of the Black and/or African American faculty respondents work at HBCUs. The inclusion of these responses in the analysis may have led to data regarding service work that is not representative of the general URM faculty population of interest. Table 4.2 shows that URM faculty—defined as respondents reporting American Indian, Black or African American, and Hispanic as their race group—more frequently report spending more time per week advising and counseling students at HBCUs compared to non-HBCU institutions.

Table 4.2

URM Faculty Advising and/or Counseling Hours per Week for HBCU and non-HBCU Institutions

Hours/week	HBCU	Percent	Non-HBCU	Percent	TOTAL
0	9	5.7%	58	7.3%	67
1-4	75	47.2%	454	56.8%	529
5-8	42	26.4%	186	23.3%	228
9-12	19	11.9%	54	6.8%	73
13-16	8	5.0%	23	2.9%	31
17-20	3	1.9%	3	0.4%	6
21+	3	1.9%	22	2.8%	25
TOTAL	159		800		959

The proportion of URM faculty at HBCUs who report spending more than 8 hours each week advising and/or counseling students (20.7%) exceeded the proportion of URM faculty at other types of campuses by nearly eight percentage points (12.9%). Similarly, URM faculty at HBCUs report spending more than 8 hours each week on committee work and/or meetings and community and/or public service work, which exceeds the proportion of URM faculty working at campuses not designated as HBCUs by two percentage points (19.0% versus 16.8%% for committee work; 8.2% versus 6.2% for community service).

Excluding faculty working within HBCUs, the final dataset included 15,346 faculty responses from various institution types; 82.8% of the sample consisted of White faculty. As shown previously in Table 4.1, Native American faculty made up 0.2% of the sample. Black or African American and Hispanic respondents each made up 2.6% of the sample of full-time faculty employed by campuses not designated as HBCUs. The final URM faculty analytic sample—including American Indians, Black or African Americans, and Hispanics—had 819 respondents, representing about 5% of the remaining full-time faculty.

To show distribution of faculty by race across university type, Table 4.3 includes a crosstabulation of faculty respondents by race group and Carnegie classification. The final data set represents a fairly even distribution across institutions of faculty by race group. The remainder of the chapter highlights results that disaggregate faculty into two groups: URMs and non-URMs. The URM group consists of American Indian, Black or African American, and Hispanic race group respondents. The non-URM group consists of Asian or Pacific Islander, White, other, and two or more race/ethnicity respondents.

Table 4.3

Percentage of Faculty by Race Across Carnegie Classification Institution Type[2]

Race	Research	Masters	Baccalaureate	Other	Total
American Indian	0.3%	0.1%	0.1%	0.0%	0.2%
Asian or Pacific Islander	6.7%	5.0%	5.6%	6.5%	5.8%
Black or African American	2.3%	2.5%	3.2%	3.5%	2.6%
Hispanic	3.0%	2.0%	2.8%	2.6%	2.6%
White	81.3%	84.7%	82.3%	80.0%	82.8%
Other	2.0%	2.2%	1.7%	2.6%	2.0%
Two or more race/ethnicity	4.5%	3.6%	4.2%	4.8%	4.1%

Results from Descriptive Analyses of Full-Time Faculty

Service work. The primary focus of this study was to examine differences in service workload between racial groups. Specifically, emphasis was given to racial differences in reported time spent on service work including advising, mentoring and community service. Table 4.4 includes frequencies of faculty responses to time spent on advising and/or counseling students.

[2] Research includes: 15-Research Universities (very high research activity), 16-Research University (high research activity), 17-Doctoral/Research University; Masters includes: 18-Masters Colleges and Universities (larger programs), 19-Masters Colleges and Universities (medium programs), 20-Masters Colleges and Universities (smaller programs); Baccalaureate includes: 21-Baccalaureate Colleges – Arts & Sciences, 22-Baccalaureate Colleges – Diverse Fields; Other includes: 26-Other health and professional schools, 30-Schools of arts, music and design

In examining faculty responses regarding hours per week spent on advising, URM faculty more frequently report more hours spent advising and counseling than non-URM faculty. The Chi-square test statistic of 45.614 ($p < 0.00$) was significant, indicating that reported differences between URM and non-URM faculty varied significantly across the groups. A key difference in distribution was found between faculty reporting 0-4 hours and 17+ hours of advising and/or counseling. Whereas 64.0% of URM faculty report spending four hours or less on advising and/or counseling, slightly more (66.2%) of their non-URM peers report this same level of time expenditure. At the other end of the spectrum, the proportion of URM faculty who report spending 17 or more hours each week advising and counseling students (3.2%) was nearly double the percentage for their non-URM colleagues (1.8%). Although the percentage-point differences are small, they clearly demonstrate a greater burden carried by URM faculty.

Table 4.4

Frequency of Advising and/or Counseling Hours per Week for URM and non-URM Faculty

	URM		Non-URM		Total	
Hours/week	*n*	%	*n*	%	*n*	%
0	58	7.3%	999	7.0%	1,057	7.0%
1-4	454	56.8%	8,447	59.2%	8,901	59.1%
5-8	186	23.3%	3,348	23.5%	3,534	23.5%
9-12	54	6.8%	888	6.2%	942	6.3%
13-16	23	2.9%	319	2.2%	342	2.3%
17-20	3	0.4%	158	1.1%	161	1.1%
21+	22	2.8%	100	0.7%	122	0.8%

Table 4.5 includes frequencies of faculty responses regarding time spent on committee work and/or meetings. In examining faculty responses, URM faculty more frequently reported spending more hours on committee work and meetings than non-URM faculty. The Chi-square test statistic of 13.828 (p-value of 0.01) was significant, indicating that reported differences between URM and non-URM faculty varied across the groups. Splitting the sample between

faculty who report spending less than or equal to the equivalent of one 8-hour workday and their colleagues who report spending more than one 8-hour workday day engaging in service as members of committees or by attending meetings, the results show that 16.8% of URM faculty spend more than 8 hours each week doing committee work and attending meetings, which slightly outpaces the same figure for non-URM faculty (14.9%). Above a 4-hour weekly commitment, URM faculty consistently report comparatively more time spent on committee work and meetings than non-URM faculty.

Table 4.5

Frequency of Committee/Meeting Hours per Week for URM and non-URM Faculty

	URM		Non-URM		Total	
Hours/week	*n*	%	*n*	%	*n*	%
0	71	9.0%	911	6.4%	982	6.6%
1-4	394	49.7%	7,760	54.8%	8,154	54.6%
5-8	195	24.6%	3,371	23.8%	3,566	23.9%
9-12	69	8.7%	1,159	8.2%	1,228	8.2%
13-16	33	4.2%	477	3.4%	510	3.4%
17-20	18	2.3%	248	1.8%	266	1.8%
21+	13	1.6%	224	1.6%	237	1.6%

Table 4.6 includes frequencies of faculty responses regarding time spent on community service. Faculty responses regarding hours per week spent on community service again revealed notably higher reported time commitments for URM faculty. The Chi-square test statistic was significant ($p < 0.03$), indicating that reported differences between URM and non-URM faculty varied across the groups. URM faculty tend to spend more time performing community service than their non-URM colleagues. Roughly one in six URM faculty members (17.1%) spends more than 4 hours each week serving his/her community; by contrast, 12.7% of non-URM faculty report being just as engaged. A different way to consider this phenomenon is to consider differences between the two groups among faculty who reported not spending any time giving

back to the community, as more than one-third (37.3%) of non-URM faculty reported no community service time compared to slightly less than one-third of URM faculty (32.9%).

Descriptive statistics were also run on variables regarding the extent to which respondents mentor students. Table 4.7 provides descriptive statistics, including means and standard deviations, for scale-based service variables. In regard to the extent to which faculty report having mentored undergraduate students, there was no statistically significant difference in means (*p*-value of 0.72). By contrast, on average, URM faculty reported mentoring significantly more graduate students compared to their non-URM colleagues ($p < 0.00$).

Table 4.6

Frequency of Community Service Hours per Week by Race Group

	URM		Non-URM		Total	
Hours/week	*n*	%	*n*	%	*n*	%
0	261	32.9%	5,333	37.1%	5,594	37.1%
1-4	397	50.0%	7,164	50.1%	7,561	50.1%
5-8	87	11.0%	1,259	8.9%	1,346	8.9%
9-12	28	3.5%	332	2.4%	360	2.4%
13-16	7	0.9%	89	0.6%	96	0.6%
17-20	5	0.6%	62	0.4%	67	0.4%
21+	9	1.1%	54	0.4%	63	0.4%

Table 4.7

Means and Standard Deviations for Student Mentoring Service Work

		Undergraduates		Graduates	
Race Group	Sample	Mean	Standard Deviation	Mean	Standard Deviation
URM	762	4.04	1.064	2.57	1.548
Non-URM	13,843	4.03	1.034	2.37	1.505
TOTAL	14,605	4.04	1.036	2.39	1.508

Career outcomes. To determine whether baseline associations or differences existed with regard to several key independent and dependent measures and respondents' race/ethnicity and service work, t-tests and cross-tabulations were conducted. These tests also served to provide

context for the regression analysis. Table 4.8 includes differences in means and standard deviations for job satisfaction by URM and non-URM race/ethnicity. The *p*-value was 0.07 for the test of difference in means between URM and non-URM faculty, indicating no significant difference in mean job satisfaction across group.

Table 4.8

Descriptive Statistics for Job Satisfaction by Race/Ethnicity

	Sample	Mean	Standard Deviation	Minimum	Maximum
URM	807	49.66	8.945	23.80	67.18
Non-URM	14,355	50.24	8.745	23.80	67.18
TOTAL	15,162	50.14	8.770	23.80	67.18

Table 4.9 includes differences in means and standard deviations for career-related stress. The *p*-value was 0.01 for the test of difference in means between URM and non-URM faculty, indicating that non-URM faculty report experiencing significantly greater stress due to work compared to their URM counterparts.

Table 4.9

Descriptive Statistics for Career-Related Stress by Race/Ethnicity

	Sample	Mean	Standard Deviation	Minimum	Maximum
URM	807	50.80	8.561	13.21	74.17
Non-URM	14,355	51.60	7.867	13.21	74.17
TOTAL	15,162	51.59	7.937	13.21	74.17

Table 4.10 shows URM and non-URM faculty responses on intent to leave academia. Roughly one-third of URM and one-third of non-URM reported having considered leaving academia in the coming years, and the Chi-square test was not statistically significant ($p < 0.63$). By contrast, more than half of URM faculty (51.7%) reported an intention to leave their current institution, which outpaces the same rate for non-URM faculty by 8.2 percentage points (43.5%). This difference is statistically significant ($p < 0.01$).

Table 4.10

Intent to Leave Academia and Institution by Race/Ethnicity

	Leave Academia		Leave Institution	
	n	%	*n*	%
URM	808	34.8%	808	51.7%
Non-URM	14,404	34.0%	14,362	43.5%

Table 4.11 shows job satisfaction across the different levels of reported service work. These data suggest the trend that greater advising and/or counseling time commitments lead to decreasing levels of job satisfaction. This trend also emerged for committee work, though the decline in job satisfaction ended when committee work reached 9-12 hours. Community service does not appear to have a strong directional relationship with job satisfaction.

Table 4.11

Job Satisfaction Across Service Work

	Advising/Counseling		Committee Work		Community Service	
Hours/Week	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
0	50.79	9.006	51.00	8.936	50.04	8.762
1-4	50.41	8.649	50.45	8.678	50.31	8.663
5-8	49.95	8.716	49.51	8.614	49.83	9.040
9-12	49.10	9.393	49.07	9.169	50.54	9.123
13-16	48.92	9.460	49.54	9.250	50.77	9.914
17-20	48.42	8.073	49.68	8.644	52.08	9.424
21+	47.91	9.492	50.68	9.728	47.59	11.39

Table 4.12 captures career-related stress across the different levels of reported service work. For the career-related stress outcome, committee work and advising/counseling showed strong trends. As committee work and advising/counseling time commitments increase from 0 to 9-12 hours, stress increases substantially. Not having any time commitment in an area means having a lot less stress. Spending more time on committees and in meetings seems to raise stress levels faster and higher than advising students. Once again, the connection between community

service work and career-related stress is not as apparent, which is not surprising. People often use service to the community to decompress and break away from the demands of their day-to-day duties.

Table 4.12

Career-Related Stress Across Service Work

	Advising/Counseling		Committee Work		Community Service	
Hours/Week	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
0	48.06	8.163	47.35	8.560	51.53	8.026
1-4	51.42	7.630	50.84	7.645	51.77	7.769
5-8	52.69	7.753	53.15	7.533	51.62	7.800
9-12	53.40	8.381	54.06	7.750	52.24	8.259
13-16	53.43	8.520	54.19	7.241	50.50	7.653
17-20	52.20	8.405	54.13	8.632	51.60	8.143
21+	52.46	10.23	54.19	7.722	51.59	9.451

Table 4.13 summarizes frequency of responses on intent to leave academia or institution across advising and/or counseling time commitment levels. As advising and/or counseling hours per week increase, the percentage of faculty responding yes to intention to leave questions also increases.

Table 4.13

Advising/Counseling and Career Intent Responses

	Leave Academia		Leave Institution	
Hours/Week	*n*	%	*n*	%
0	1,065	31.5%	1,061	40.9%
1-4	9,064	32.6%	9,037	42.8%
5-8	3,613	36.1%	3,589	46.0%
9-12	970	36.7%	964	49.6%
13-16	349	43.6%	350	51.4%
17-20	167	46.7%	167	49.7%
21+	123	41.5%	123	54.5%
TOTAL	15,351	34.1%	15,291	44.2%

Table 4.14 shows frequency of responses on intent to leave academe or institution across varying committee work hours per week. In the case of committee work, faculty responses on leaving academia do not change as committee work levels increase. However, faculty appear to be more likely to leave their institution as their committee workload increases.

Table 4.14

Committee Work and Career Intent Responses

	Leave Academia		Leave Institution	
Hours/Week	*n*	%	*n*	%
0	990	34.7%	992	42.3%
1-4	8,307	33.4%	8,306	41.6%
5-8	3,638	34.5%	3,628	46.1%
9-12	1,258	35.8%	1,256	48.7%
13-16	516	37.6%	516	52.7%
17-20	271	34.3%	270	47.8%
21+	241	32.4%	239	55.6%
TOTAL	15,221	34.1%	15,207	44.0%

Table 4.15 communicates frequency of responses on intent to leave academe or institution across varying community service commitment levels. As the community service time commitment increases to 13-16 hours per week, faculty more frequently respond yes regarding their intent to leave academia. Similarly, as community service time commitment reaches 17-20 hours per week, faculty indicate more frequently that they intend to leave their institutions.

Table 4.15

Community Service and Career Intent

	Leave Academia		Leave Institution	
Hours/Week	*n*	%	*n*	%
0	5,705	33.2%	5,687	43.8%
1-4	7,715	34.0%	7,682	44.1%
5-8	1,371	37.3%	1,363	44.5%
9-12	364	36.8%	363	47.7%
13-16	100	44.0%	99	48.5%

	Leave Academia		Leave Institution	
17-20	69	42.0%	68	52.9%
21+	63	39.7%	63	46.0%
TOTAL	5,258	34.2%	15,325	44.2%

Model variable descriptive statistics. The following tables contain a full accounting of all scale-based variable means, standard deviations and ranges, and categorical variable frequencies used in the regression models. Appendix A contains a description of categorical variable coding, including dummy variables and associated reference groups.

Table 4.16

Scale-based Model Variable Descriptive Statistics

Variable	Mean	Standard Deviation	Min	Max	Range
Service Workload	0.00	0.691	-1.77	4.34	6.12
Demographics					
Female	0.47	0.499	0	1	1
URM	0.05	0.225	0	1	1
Birth Year	32.66	11.468	1	83	82
Professional Characteristics					
Year of first academic appointment	16.91	11.485	1	71	70
Associate Professor	0.28	0.449	0	1	1
Assistant Professor	0.29	0.452	0	1	1
Lecturer/Instructor	0.14	0.342	0	1	1
Tenured	0.52	0.500	0	1	1
Tenure Track	0.21	0.409	0	1	1
Not Tenure Track	0.21	0.408	0	1	1
Salary	8.39	2.341	1	16	15
Teaching and Research Experiences					
Number of courses taught	3.76	1.469	1	11	10
Scheduled teaching hours	3.54	1.289	1	7	6
Hours preparing for teaching	4.11	1.653	1	7	6
Hours on research/scholarly activity	2.89	1.700	1	7	6
Mentored by professional in academia	3.37	1.265	1	5	4
Pedagogy	51.45	8.118	25.92	70.54	44.62
Productivity	51.96	9.071	36.47	79.39	42.92
Career Outcomes					
Job Satisfaction	50.14	8.769	23.80	67.18	43.38
Career-Related Stress	51.59	7.937	13.21	74.17	60.96
Intent to Leave Academe	1.34	0.474	1	2	1
Intent to Leave Institution	1.44	0.496	1	2	1

Satisfaction with Professional Work Environment

To characterize the relationship between service work and job satisfaction, a regression analysis was run using the service work variable constructed through factor analysis, as well as the HERI construct variable of job satisfaction. Table 4.17 includes the linear regression model outcomes controlling for demographics, professional characteristics, and experiences related to teaching and research. A series of multiple regression models was run with independent variables added in each successive model. Model 1 included service workload as the only predictor. Model 2 added demographic variables. Model 3 included additional control variables (professional characteristics and teaching and research characteristics). Finally, Model 4 included interactions between service workload and gender and between service workload and URM status.

Table 4.17

Predictors of Satisfaction with Professional Work Environment

	Model 1		Model 2		Model 3		Model 4	
Variable	*B*[3]	*SE*[4]	*B*	*SE*	*B*	*SE*	*B*	*SE*
Service Workload	-0.39	0.11**	-0.26	0.11**	-0.60	0.12**	-0.40	0.16**
Demographics								
Female			-1.54	0.15**	-1.49	0.16**	-1.49	0.16**
URM			-0.62	0.34	-0.75	0.34**	-0.75	0.34**
Birth Year			0.02	0.01**	0.01	0.01	0.02	0.01
Professional Characteristics								
Year of first academic appointment					-0.02	0.01	-0.02	0.01
Associate Professor					-0.77	0.22**	-0.76	0.22**
Assistant Professor					-0.60	0.38	-0.59	0.38
Lecturer/Instructor					-0.48	0.43	-0.48	0.43
Tenured					-0.63	0.37	-0.63	0.37
Tenure track					0.20	0.39	0.20	0.39
Not tenure track					0.35	0.38	0.34	0.38
Salary					0.69	0.05**	0.69	0.05**

[3] All reported coefficients are unstandardized

[4] $**p <= .01$; $*.01 > p <= .05$

	Model 1	Model 2	Model 3		Model 4	
Teaching and Research Experiences						
Number of courses taught			-0.07	0.07	-0.07	0.07
Scheduled teaching hours			-0.38	0.08**	-0.38	0.08**
Hours preparing for teaching			-0.18	0.05**	-0.18	0.05**
Hours on research/scholarly activity			-0.34	0.05**	-0.34	0.05**
Mentored by professional in academia			1.47	0.06**	1.47	0.06**
Pedagogy			-0.11	0.01	-0.12	0.01
Productivity			-0.09	0.01**	-0.09	0.01**
Service Workload Moderation						
Gender x Service Workload					-0.38	0.22
URM x Service Workload					0.06	0.43
Adjusted R-Square	0.00	0.01	0.09		0.09	

Looking only at service workload in relation to satisfaction with professional work environment, the service workload unstandardized coefficient of -0.39 is significant and the adjusted R^2 value is 0.00. These results indicate that, without controlling for other factors, it appears that faculty who have higher service workloads also tend to report lower levels of job satisfaction. However, service workload explains very little variance in satisfaction with professional work environment and, by itself, does not offer a strong model fit.

When adding faculty demographics—defined as gender, URM or non-URM race/ethnicity, and birth year—to the model, the service workload coefficient lowered to -0.26 and remained statistically significant. Female faculty members feel significantly less satisfied with their jobs than their male counterparts. Part of the reason faculty who spend more time doing service work feel less satisfied is due to the fact that female and URM faculty generally are the ones engaged in more hours of service. The service workload relationship with job satisfaction becomes weaker when accounting for characteristics of individuals responsible for doing more service work. However, the adjusted R^2 value is 0.01, and controlling for demographics does not yield an improved model fit.

After controlling for professional characteristics and teaching and research experience, in addition to demographics, the magnitude of the coefficient associated with service workload jumped, representing a more negative association compared to the previous model (-0.71). Salary is particularly important to the relationship between service workload and job satisfaction. The service workload coefficient changed from -0.26 to -0.49 when adding only this variable, indicating that faculty will remain satisfied as long as compensation is commensurate with service workload. Adding faculty mentorship yielded a strong positive connection to workplace satisfaction (coefficient of 1.47) and further changed the service workload coefficient from -0.49 to -0.81. Faculty who receive mentorship from colleagues and/or peers appear to find greater satisfaction in their work.

In addition to female faculty members in relation to their male counterparts, URM faculty relative to non-URM faculty appear less satisfied overall with their professional work environment (-0.75 coefficient). URM female faculty members have the lowest job satisfaction, holding other factors equal.

The 0.09 adjusted R^2 value indicates that the total model accounts for 9% of the variation in faculty's workplace satisfaction. More than 90% of the differences in workplace satisfaction among faculty remain unexplained by the model. When testing the interaction between service workload and gender and service workload and race/ethnicity, no coefficients were significant. The results do not indicate differential associations between service work and job satisfaction across gender and race.

Career-Related Stress

To determine a relationship between service work and career-related stress, a regression analysis was run using the service work variable and the HERI construct of career-related stress.

Table 4.18 includes the linear regression model outcomes. Again, multiple regression models were run with service workload, demographics, and then all controls, to show the influence on the service workload variable as the different controls were introduced. Looking at service workload in relation to career-related stress, the service workload coefficient of 1.96 is significant and the adjusted R^2 value is 0.03. These results indicate that faculty experience more intense career-related stress as service workload increases. However, service workload by itself explains minimal variance in career-related stress and does not offer a strong model fit.

When adding faculty demographics including gender, race/ethnicity, and birth year to the model, the service workload coefficient increased slightly to 2.04 and remained significant. Female faculty reported significantly higher levels of career-related stress (1.38 coefficient) than male faculty members. Corresponding to the descriptive analyses shown previously, URM faculty appear to have less career-related stress (-1.08 coefficient) compared to non-URM faculty, suggesting that URM faculty members may not find some of their service work as burdensome or stressful. Overall, controlling for demographics increases the explained variance in career-related stress by six percentage points.

Controlling for professional characteristics and teaching and research experience, in addition to demographics, decreased the service workload coefficient to 1.59. Academic rank and tenure status are particularly important to the relationship between service work and career-related stress. The service workload coefficient decreased from 2.04 to 1.76 when academic rank and tenure status controls were added to the model, suggesting that service work contributes to stress in part because more of it falls to tenured and senior faculty, who tend to be more stressed. Higher-ranking faculty experience more career-related stress than lower ranking faculty. Similarly, tenured and tenure track faculty feel more stress relative to non-tenure

track/no tenure system faculty. Salary plays a significant but small role in decreasing career-related stress, holding other factors constant. In terms of feeling stress, a faculty member's career track matters more than compensation.

Table 4.18

Predictors of Career-Related Stress

	Model 1		Model 2		Model 3		Model 4	
Variable	*B*[5]	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Service Workload	1.96	0.09**	2.04	0.21**	1.59	0.10**	1.54	0.10**
Demographics								
Female			1.38	0.13**	1.64	0.13**	1.64	0.13**
URM			-1.08	0.29**	-0.97	0.29**	-0.97	0.29**
Birth Year			-0.15	0.06**	-0.15	0.01**	-0.15	0.01**
Professional Characteristics								
Year of first academic appointment					-0.01	0.01	-0.01	0.01
Associate Professor					0.53	0.19**	0.53	0.19**
Assistant Professor					-0.25	0.33	-0.25	0.33
Lecturer/Instructor					-1.60	0.38**	-1.59	0.37**
Tenured					1.64	0.32**	1.64	0.32**
Tenure track					1.45	0.34**	1.45	0.34**
Not tenure track					-0.89	0.33**	-0.90	0.33**
Salary					-0.12	0.04**	-0.12	0.04**
Teaching and Research Experiences								
Number of courses taught					0.16	0.06**	0.16	0.06**
Scheduled teaching hours					0.21	0.07**	0.21	0.07**
Hours preparing for teaching					0.62	0.04**	0.62	0.04**
Hours on research/scholarly activity					0.10	0.05**	0.10	0.05**
Mentored by professional in academia					-0.41	0.05**	-0.41	0.05**
Pedagogy					0.03	0.01**	0.03	0.01**
Productivity					0.09	0.01**	0.09	0.01**
Service Workload Moderation								
Gender x Service Workload							0.13	0.19
URM x Service Workload							-0.17	0.37
Adjusted R-Square	0.03		0.09		0.15		0.15	

Teaching and faculty mentorship are also significant control factors in the relationship between service work and career-related stress. Faculty who spend more time teaching and

[5] All reported coefficients are unstandardized.

preparing for teaching also tend to report experiencing greater stress. When these teaching measures re introduced into the model, the decrease in the coefficient between service work and stress suggests that faculty who spend more time engaged in service work also spend more time teaching and preparing to teach, all of which seem to elevate their stress levels. Faculty mentorship has a significant coefficient of -0.41, and adding this variable to the model increases the service workload coefficient from 1.53 to 1.59. Faculty who receive mentorship from colleagues and/or peers appear to feel less career-related stress, holding other factors constant.

The 0.15 adjusted R^2 of this model shows incremental model fit improvement due to the addition of the control factors, and the model explains 15% of the variance in career-related stress. However, more than 80% of the differences between faculty service workload and career-related stress remain unexplained by the model. When testing the interaction between service workload and gender and service workload and race/ethnicity, no coefficient was significant. The results do not indicate differential associations between service work and stress across race/ethnicity and gender.

Intent to Leave Academia

In order to determine a relationship between service work and intent to leave academe, a logistic regression analysis was run using the service work variable and the binary intention to leave career variable. Table 4.19 shows the logistic regression model of service work and intention to leave career, including the control variables.

Considering service workload in relation to intent to leave career, the service workload odds ratio of 1.10 is significant. The baseline regression is significant and its prediction percentage is 50%, indicating that there is a significant relationship between increasing intent to leave a career as a faculty member and increased service workload.

Table 4.19

Predictors of Intent to Leave Academia

	Model 1		Model 2		Model 3		Model 4	
Variable	*B*[6]	*Exp (B)*	*B*	*Exp(B)*	*B*	*Exp(B)*	*B*	*Exp(B)*
Service Workload	0.10	1.10**	0.13	1.13**	0.19	1.21**	0.17	1.19**
Demographics								
Female			0.17	1.19**	0.05	1.05	0.05	1.05
URM			0.12	1.01	-0.01	0.99	-0.01	0.99
Birth Year			-0.03	1.15**	-0.02	0.98**	-0.02	0.98**
Professional Characteristics								
Year of first academic appointment					-0.01	0.99**	-0.01	0.99**
Associate Professor					0.04	1.04	0.04	1.04
Assistant Professor					-0.10	0.90	-0.10	0.90
Lecturer/Instructor					-0.25	0.78**	-0.25	0.78**
Tenured					0.10	1.10	0.10	1.10
Tenure track					-0.11	0.90	-0.11	0.90
Not tenure track					0.33	1.39**	0.33	1.39**
Salary					-0.12	0.89**	-0.12	0.89**
Teaching and Research Experiences								
Number of courses taught					0.03	1.03	0.03	1.03
Scheduled teaching hours					0.02	1.02	0.02	1.02
Hours preparing for teaching					0.03	1.03**	0.03	1.03**
Hours on research/scholarly activity					-0.01	0.99	-0.01	0.99
Mentored by professional in academia					-0.23	0.80**	-0.23	0.80**
Pedagogy					0.01	1.01**	0.01	1.01**
Productivity					0.00	1.00	0.00	1.00
Service Workload Moderation								
Gender x Service Workload							0.05	1.05
URM x Service Workload							-0.06	0.95
-2 Log likelihood	18387.844		16982.391		15374.425		15373.441	
Homer and Lemeshow Significance	0.02		0.00		0.12		0.43	
Percentage Correctly Predicted	49.8%		55.5%		60.8%		60.7%	

Adding faculty demographics to the model increases the service workload odds ratio to 1.13 and remains significant. Women's odds of intending to leave academia are 1.05 times those of men, though the relationship is not statistically significant. Race and age do not play a practically significant role in career intent.

[6] Reported coefficients are unstandardized.

Controlling for professional characteristics and teaching and research experience, in addition to demographics, the service workload odds ratio increased to 1.21 and is significant. Faculty whose overall service workload is one standard deviation above the mean are 1.21 times as likely to intend to leave academia as faculty who have average service work commitments when controlling for demographics, professional characteristics, and teaching and research experience.

Professional characteristics are important control factors in intent to leave a career in academia. Non-tenure track faculty have higher odds of intending to leave higher education than tenured and tenure-track faculty. Faculty who earn higher salaries have a lower likelihood of leaving the profession.

Teaching and mentorship experiences also influence career intent and the connection between service workload and career intent. More time spent preparing to teach and teaching increases the likelihood of leaving the profession. Faculty who report receiving mentorship from another faculty member have significantly lower odds of intending to leave academia.

Overall prediction percentage of the full model is 61%. The non-significant Homer and Lemeshow Chi-square statistic indicates that we cannot reject the null hypothesis that the model adequately fits the data, suggesting this final model may be acceptable at explaining factors related to faculty's intention to leave academia. When testing the interaction between service workload and gender and service workload and race/ethnicity, no coefficients were significant. The results do not indicate differential associations between service work and intent to leave a career in academia across race/ethnicity and gender.

Intent to Leave Institution

In order to determine a relationship between service work and intent to leave institution, a logistic regression analysis was run using the service work variable and the binomial intention to leave the institution. Table 4.20 shows the logistic regression model of service work and intention to leave institution, including control and interaction variables.

Table 4.20

Predictors of Intent to Leave Institution

	Model 1		Model 2		Model 3		Model 4	
Variable	*B*	*Exp (B)*	*B*	*Exp(B)*	*B*	*Exp(B)*	*B*	*Exp(B)*
Service Workload	0.17	1.19**	0.20	1.22**	0.20	1.22**	0.16	1.18**
Demographics								
Female			-0.43	0.96	-0.06	0.95	-0.06	0.95
URM			0.28	1.32**	0.27	1.31**	0.27	1.32**
Birth Year			-0.04	0.96**	-0.04	0.96**	-0.04	0.96**
Professional Characteristics								
Year of first academic appointment					-0.01	0.99**	-0.01	0.99**
Associate Professor					-0.03	0.97	-0.03	0.97
Assistant Professor					-0.27	0.76**	-0.27	0.76**
Lecturer/Instructor					-0.39	0.68**	-0.39	0.68**
Tenured					0.03	1.03	0.03	1.03
Tenure track					-0.29	0.75**	-0.29	0.75**
Not tenure track					0.09	1.10	0.09	1.10
Salary					-0.10	0.90**	-0.10	0.90**
Teaching and Research Experiences								
Number of courses taught					0.06	1.06**	0.06	1.06**
Scheduled teaching hours					0.04	1.04	0.04	1.04
Hours preparing for teaching					-0.03	0.97*	-0.03	0.97*
Hours on research/scholarly activity					0.08	1.09**	0.08	1.09**
Mentored by professional in academia					-0.18	0.84**	-0.18	0.84**
Pedagogy					0.02	1.01**	0.02	1.01**
Productivity					0.02	1.02**	0.02	1.02**
Service Workload Moderation								
Gender x Service Workload							0.08	1.09
URM x Service Workload							-0.05	0.95
-2 Log likelihood	19523.567		17852.275		16340.587		16338.232	
Homer and Lemeshow Significance	0.02		0.00		0.04		0.04	
Percentage Corrected Predicted	52.4%		58.6%		60.8%		60.8%	

Considering service workload in relation to intent to leave the institution, the service workload odds ratio of 1.19 is significant. The initial regression's prediction percentage is 52%,

suggesting that faculty with heavier service burdens also have significantly greater odds of intending to leave their institution.

Adding faculty demographics to the model slightly increased the service workload odds ratio to 1.22, increasing the model prediction percentage to 59% and remaining significant. Although faculty gender does not significantly influence intent to leave an institution, URM faculty have a significantly higher likelihood of intending to leave their institution than non-URM peers. Considering faculty race in addition to service workload substantially increased model fit. However, when testing the interaction between service workload and gender and service workload and race/ethnicity, no coefficients were significant. The results do not indicate differential associations between service work and intent to leave an institution across race/ethnicity and gender.

After controlling for professional characteristics and teaching and research experiences, in addition to demographics, the service workload odds ratio remained 1.22, whereas the model prediction percentage increased modestly to 61%. Higher academic rank and salary and being on tenure track all lead to a lower likelihood of faculty of leaving an institution. Receiving mentorship from a colleague decreases the odds of leaving the institution. Although these professional and mentorship factors are significant, being a URM faculty member is the single most meaningful factor influencing the relationship between service workload and intent to leave an institution.

When testing the interaction between service workload and gender and service workload and race/ethnicity, no coefficients were found to be significant. Gender and race do not moderate the relationship between service workload and intent to leave a career in academia.

Summary of Analysis

The intent of the regression analysis was to determine the nature of the relationship between service workload and career outcomes, controlling for key demographic factors, particularly gender and race, as well as professional characteristics and teaching/research experiences. For each career outcome, service work creates a burden for faculty. Spending more time doing service work corresponds with reduced job satisfaction, elevated work-related stress levels, and increased odds of intending to leave one's current institution or even academia altogether. Conversely, receiving mentorship from a fellow faculty member relates positively to career outcomes. Faculty members reporting greater peer mentoring say that they are more satisfied, less stressed, and less likely to leave their institution or the field. Female faculty members experience notably less career satisfaction and more career-related stress relative to their male counterparts, although ultimately these outcomes do not appear to increase their likelihood of leaving their institutions or careers. URM faculty are less satisfied with their jobs and more likely to leave their institutions than their non-URM peers, although they also report less career-related stress. These outcomes may indicate a lack of professional fulfillment across URM faculty. Higher academic rank and a path to tenure impose more stress on faculty, as increased professional demands come with greater status. However, these faculty are less likely to leave academia and their institution than their lower ranking and non-tenured peers. Not surprisingly, higher salary connects to greater job satisfaction, somewhat less stress, and a lower likelihood of leaving one's position, even while tolerating more service work. Greater teaching time commitments impose more stress on faculty and push them to leave the field, though more time spent on research, teaching style, and scholarly productivity do not further influence this effect. Lastly, although the aforementioned relationships were significant within the models, the

overall models left a great deal of variance in career outcomes unexplained. Although these results are compelling within the context of this study's research questions, other important factors not included in this study may help to explain the full story of career outcomes.

Chapter 5

The findings presented by this study lead to several conclusions, but also provide material for additional research based upon the limitations encountered through this research. In this chapter, I present the implications for policy and practice related to faculty retention across institutions of higher education. I also present suggestions for future research that may deepen current understanding of service workload among faculty and how it plays into nation-wide concerns regarding the representation and retention of URM faculty at PWIs.

Service Work – Institutional Implications and Recommendations for Future Research

A primary focus of this study was to determine whether faculty service workload varies among race groups. Utilizing the HERI Faculty Survey, I ran descriptive statistics on the responses related to the service most frequently cited in the literature: mentoring, advising, committee participation, and community service. The descriptive analysis revealed that there do seem to be racial differences in responses regarding time spent on different types of service. Specifically, URM faculty report spending slightly more hours per week doing each of the aforementioned service work than their non-URM peers. This finding provides additional quantitative evidence that confirms data collected qualitatively regarding racial inequality with respect to service work performed by faculty (Baez, 2000; Chang et al., 2013; Griffin, 2012; Martinez et al., 2016).

Advising and mentoring. This study highlights the need for higher education institutions to closely examine advising practices among their professoriate. Although data from this study show some racial disproportion between URM and non-URM in terms of time spent on advising, which is in line with current research (Griffin & Redding, 2011), it does not reveal why the disproportionate advising workload exists. Findings from this study could suggest that

URM faculty simply spend more time with their assigned advisees than their non-URM peers. It is possible that URM faculty feel compelled or even get assigned to advise and mentor, either formally or informally, increasing numbers of racially diverse students on campus. Studies have shown that URM faculty report being more likely to seek out student mentoring opportunities than non-URM faculty (Chang et al., 2013; Martinez et al., 2016; Patton & Catching, 2009; Reybold, 2014). Given that faculty diversity with respect to race/ethnicity has not kept pace with significant growth in student racial diversity, fewer faculty of color are available to advise and mentor growing numbers of students of color. Future research should focus on advising assignments and practices of URM faculty versus non-URM faculty.

Findings from this study could not corroborate prior research suggesting racially disproportionate mentoring workloads, as no racial differences were revealed in response to mentoring questions. This is perhaps due to the limitation of the HERI Faculty Survey questions regarding mentoring, which were not centered upon time spent mentoring—such as the questions regarding advising, committee work and community service—but rather were Likert scale questions inquiring about the extent to which faculty are likely to mentor students. Future research should specifically examine time commitment spent on mentoring.

Committee work and meetings. URM faculty frequently report being recruited to assist with committee work and/or other diversity-related events at their respective institutions (Chang et al., 2013; Martinez et al., 2016; Patton & Catching, 2009; Reybold, 2014). Data from this study reflected a similar picture in that URM faculty report spending slightly more hours per week on committee work and meetings than non-URM faculty. Institutions of higher education enlist the help of faculty of color to serve on hiring committees, student recruitment events, etc. to demonstrate a commitment to diversity to potential students and job applicants. When

reaching out to faculty of color to serve in such capacities, administrators, faculty, and staff should be mindful that the few faculty of color in PWIs may be overextending themselves in comparison to their non-URM peers.

Defining and Measuring Faculty Service

The service work construct was operationalized using factor analysis utilizing the HERI Faculty Survey questions regarding the service most frequently cited in the literature. However, the concept of faculty service work is somewhat new in research related to the faculty experience. Because research on this topic is limited, the construct of service may not entirely reflect the nuance of non-teaching and non-research work being performed by faculty across the nation. Indeed, the clear conceptualization and definition of service is worthy of study in and of itself. Future research should first focus on defining and conceptualizing service work as a variable so that subsequent studies can then utilize that variable for more in-depth analysis of how service interacts with other faculty retention-related variables.

Recommendations for Future Faculty Retention Research

Job satisfaction (Carr et al., 2015; Cropsey et al., 2008; Hagedorn, 1996) and career-related stress (Hurtado et al., 2012) are factors known to lead to early faculty departure (Rosser, 2004). This study—which sought to examine a possible relationship between service work and job satisfaction, career-related stress, and career intentions—did demonstrate a significant relationship within the sample between service work and faculty career outcomes while controlling for demographics, professional characteristics, and teaching and research experiences. While the low *R*-squared values of each fully specified model indicate that little variance in the outcomes were explained by service work and the control factors, we cannot rule out the possibility of a relationship between service work and job satisfaction, job-related stress

and career intentions. Further research, perhaps utilizing a more directly measured or meaningful service work variable, should focus on solidifying whether a relationship exists between service and retention-related outcomes.

Racial and gender difference roles in the relationship between service and retention-related outcomes were a primary focus of this study. Although research has shown that job satisfaction, career-related stress, and career intentions vary according to gender and race (Diggs et al., 2009; Jayakumar et al., 2009), racial differences were not manifest in the findings of this study. Faculty race did appear to be a meaningful control in the linear regression for service work and job satisfaction, and again in the linear regression for service work and career-related stress. However, the meaningfulness of race in relation to the models was not clearly delineated between URM and non-URM race groups. Again, future research should focus on repeating analysis to determine racial and differences in the relationship between service and job satisfaction, career-related stress and career intentions.

This study did support prior research showing gender differences in job satisfaction, career-related stress, and intention to leave. Being female was associated with decreased job satisfaction and increased career-related stress. No significant gender differences emerged in the final models for intention to leave academia or intention to leave the current institution. Future research should further explore gender differences in service work and possible connections to retention.

Implications for Policy and Practice

Recommendations for diversity initiatives. Many diversity and inclusion practices at institutions across the country already focus on addressing a variety of issues that impact equality in the community. However, these existent initiatives do not seem to focus on workload

distribution among faculty. As findings from this study demonstrate, there does seem to be some discrepancy among race groups in terms of the amount of service work—including advising, committee work, and community service—performed by faculty on a weekly basis. This finding supports prior research that states that URM faculty report spending a disproportionate amount of work on service due to their race. Diversity initiatives within institutions of higher education might benefit from implementation of assessments and surveys to ascertain equity with respect to service work distribution. Further, institutional policies regulating the amount of work assigned to faculty may further assist campus administrators in limiting the occurrence of racially disproportionate workloads among their professoriate. Service workload must become a part of the conversation for faculty and administrators seeking to address any potential systemic inequality in their respective institutions.

Mentoring. Higher education initiatives often focus on mentoring, specifically as a means to support newly-hired URM faculty (Follins et al., 2015; Guenter-Schlesinger & Ojikutu, 2009; Zambrana et al., 2015). The regression analysis in this study took mentoring into consideration in the relationship between service work and outcomes by controlling for the extent to which faculty receive mentoring. Within this particular sample, mentoring did seem to alleviate some of negative association that service work has on job satisfaction, career-related stress, and career intentions. This study reinforces the importance of mentoring in URM faculty support initiatives. Faculty mentoring may be a useful tool to address identified service workload inequities, but it may also serve as a helpful preventative to support faculty who are at-risk for taking on a disproportionate amount of responsibility in the workplace, such as faculty of color. In time, implementation of formal mentoring programming may even increase retention and job satisfaction while also mitigating stress levels.

Limitations

Although a quantitative approach was deemed most suitable to determine possible relationships between measurable variables, the data did not yield the results capable to fully explain the nuances of the relationships. Perceptions of the focus population (i.e., URM faculty) regarding the effects of service work on their job satisfaction, stress level, and career intentions would provide a more in-depth understanding of any relationship that comes to light through this quantitative study. A sequential explanatory qualitative approach (Creswell & Plano Clark, 2007) could potentially provide a more detailed understanding of how and why service workload impacts the relationship between service responsibilities and career trajectories of URM faculty. The lack of a qualitative component is a limitation of this study.

Another limitation of the study lies within the inability to compare data regarding service responsibilities and retention rates. Although the dataset provides factors such as job satisfaction and intention to leave or stay in the professoriate—factors that research shows correlate with retention—it does not specifically provide retention data. This study is based upon the assumption that faculty's self-reported intentions to leave (or stay) are representative of their future behavior.

The pre-determined items included on the HERI Faculty Survey instrument are also a limitation of this study. Because the questions were not designed specifically for a study on faculty service work and its relationship to faculty's job satisfaction and departure decisions, some service work responsibilities may not have been taken into consideration. Given this shortcoming, important facets of faculty's service obligations to the institution may not be adequately captured by this study. Also, a wider range of response options would enable more detailed and robust data analysis.

Another limitation of this study is the sample size of the focus population of URM faculty. Although the HERI Faculty Survey dataset is the most comprehensive dataset available to provide information on faculty nationwide, a larger sample of URM faculty would provide opportunity for more nuanced disaggregation. As such, findings from this study will not provide data regarding differences between specific populations of URM faculty, such as Latino/a and/or African Americans, as it relates to the relationships between service workload and job satisfaction, career-related stress, and intent to leave. Finally, because this study utilized single-level statistical techniques to analyze data from faculty clustered within institutions, findings may introduce some, albeit marginal, bias in parameter estimates.

Conclusion

The purpose of this study was to add a quantitative component to the body of qualitative literature that discusses disproportionate service workload across URM and non-URM faculty. Notably, findings supported the assertion that URM faculty perform a larger quantity of service than their non-URM peers. This study provides an impetus for leaders in higher education to begin careful consideration of the work being performed by their faculty, especially across race groups. This is especially crucial in light of the literature that repeatedly shows that URM faculty feel called upon for diversity-related tasks, solely due to their own racial identity. Although the findings of this study are not clearly applicable to the greater URM population in our country's PWIs, they nevertheless provide fodder to consider the likelihood of service affecting retention. At a minimum, higher education leaders must begin to reconsider how they recruit diverse faculty to participate in committees and other institutional functions as a means to demonstrate a commitment to diversity, as it is increasingly possible that the burden of this work

outweighs the benefits if it impacts institutional diversity through negative association with faculty retention.

Appendix A:

Table of Measures

Variable	Coding Scheme
Job Satisfaction	Continuous Factor: 5-item scale composed of satisfaction with independence, working relationships, colleague competency, leadership, course assignments
Career Related Stress	Continuous Factor: 6-item scale composed of sources of stress including salary, retirement benefits, opportunity for scholarly pursuits, teaching load, job security, prospects for career advancement
Intention to Leave Considered leaving Academe Considered leaving institution	All dichotomous: 1 (yes), 2 (no)
Service Workload	Continuous Factor: 5-item scale composed of (1) hours per week spent advising, (2) serving on committees, and (3) doing community/public service; and extent to which faculty report mentoring (4) undergraduate students and (5) graduate students
Demographics Female URM Birth Year	 Dichotomous: 0 (male), 1 (female) Dichotomous: 0 (Asian, White, Other, Two or more races/ethnicities), 1 (American India, Black, Hispanic) Continuous: 83-item scale corresponding to 1998 or later to 1916 or earlier, by year
Professional Characteristics Year of first academic appointment Associate Professor Assistant Professor	 Continuous: 71-item scale corresponding to 2017 to 1947, by year Dichotomous: 0 (Professor, Assistant Professor, Lecturer, Instructor), 1 (Associate Professor)

Lecturer/Instructor	Dichotomous: 0 (Professor, Associate Professor, Lecturer, Instructor), 1 (Assistant Professor)
Tenured	Dichotomous: 0 (Professor, Associate Professor, Assistant Professor), 1 (Lecturer, Instructor
Tenure track	Dichotomous: 0 (Tenure track/not tenure track/no tenure system), 1 (Tenured)
Not tenure track	Dichotomous: 0 (Tenured/not tenure track/no tenure system), 1 (Tenure track)
Salary	Dichotomous: 0 (Tenured/tenure track/no tenure system), 1 (Not tenure track) Continuous: 16-item scale corresponding to less than $10,000 to $500,000 or higher, in varying increments
Teaching and Research Experiences	
Number of courses taught	Continuous: 11-item scale corresponding to 0 hours to 10 or more hours
Scheduled teaching hours	Continuous: 7-item scale corresponding to no hours to 21 or more hours
Hours spent preparing for teaching	Continuous: 7-item scale corresponding to no hours to 21 or more hours
Hours spent on research and scholarly activity	Continuous: 7-item scale corresponding to no hours to 21 or more hours

Been mentored by at least one professional in academia	Continuous: 5-item Likert scale representing 5=To a Very Large Extent, 4=To a Large Extent, 3=To Some Extent, 2=To a Small Extent, 1=Not at All
Student-centered pedagogy	Continuous Factor: 9-item scale composed of ways in which faculty incorporate student -centered activities into classroom practices. Student-centered activities include student presentations, student evaluations of one another, class discussions, cooperative learning, experiential learning, group projects, student-selected topics, reflective writing and/or using student inquiry to drive learning.
Scholarly productivity	Continuous Factor: 3-item scale composed of number of articles, volume chapters, or other professional writings published, or accepted to be published, by professional journals.

References

American Association for the Advancement of Science. (2011). Vision and change in undergraduate biology education: A call to action. Retrieved from http://visionandchange.org/files/2013/11/aaas-VISchange-web1113.pdf

Baez, B. (2000). Race-related service and faculty of color: Conceptualizing critical agency in academe. *Higher Education, 39*(3), 363-391. https://doi.org/10.1023/A:1003972214943

Barker, M. (2011). Racial context, currency, and connections: Black doctoral student and White faculty advisor perspectives on cross-race advising. *Innovative Education & Teaching International, 48*(4), 387-400. https://doi.org/10.1080/14703297.2011.617092

Barnes, L. L., Agago, M. O., & Coombs, W. T. (1998). Effects of job-related stress on faculty intention to leave academia. *Research in Higher Education*, *39*(4), 457-469. https://doi.org/10.1023/A:1018741404199

Blackburn, R., & Lawrence, J. (1995). *Faculty at work: Motivation, expectation, satisfaction.* Baltimore, MD: The Johns Hopkins University Press.

Bilimoria, D., & Buch, K. K. (2010). The search is on: Engendering faculty diversity through more effective search and recruitment. *Change: The Magazine of Higher Learning*, *42*(4), 27-32. https://doi.org/10.1080/00091383.2010.489022

Bluedorn, A. C. (1982). The theories of turnover: Causes, effects, and meaning. *Research in the Sociology of Organizations*, *1*(1), 75-128.

Carr, P. L., Gunn, C. M., Kaplan, S. A., Raj, A., & Freund, K. M. (2015). Inadequate progress for women in academic medicine: Findings from the National Faculty Study. *Journal of Women's Health*, *24*(3), 190-199. https://doi.org/10.1089/jwh.2014.4848

Chang, A., Welton, A. D., Martinez, M. A., & Cortez, L. (2013). Becoming academicians: An ethnographic analysis of the figured worlds of racially underrepresented female faculty. *Negro Educational Review*, *64*(1/4), 97-118.

Colby, S. L., & Ortman, J. M. (2014). *Projections of the size and composition of the U.S. population: 2014 to 2060, current population reports, P25-1143*, Washington, DC: U.S. Census Bureau.

Coleman, S., & Stevenson, H. C. (2013). The racial stress of membership: Development of the faculty inventory of racialized experiences in schools. *Psychology in the Schools, 50*(6), 548-566. https://doi.org/10.1002/pits.21693

Collins, C. J., & Kritsonis, W. A. (2006). National viewpoint: The importance of hiring a diverse faculty. *National Journal for Publishing and Mentoring Doctoral Student Research, 3*, 1-7. Retrieved from http://www.nationalforum.com

Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River, NJ: Pearson Education.

Creswell, J. W., & Miller, G. A. (1997). Research methodologies and the doctoral process. *New Directions for Higher Education, 1997*(99), 33–46. https://doi.org/10.1002/he.9903

Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage

Cropsey, K. L., Masho, S.W., Shiang, R., Sikka, V., Kornstein, S. G., & Hampton, C. L. (2008). Why do faculty leave? reasons for attrition of women and minority faculty from a medical school: Four-year results. *Journal of Women's Health, 17*(7), 1111-1118. https://doi.org/10.1089/jwh.2007.0582

Curtis, J. (2015, March). *The faculty pipeline in sociology and other STEM disciplines.* Paper presented at the Southern Sociological Society Annual Meeting, New Orleans, LA.

Daley, S. P., Palermo, A.-G., Nivet, M., Soto-Greene, M. L., Taylor, V. S., Butts, G. C., Kondwani, K. (2008). Diversity in academic medicine no. 6 successful programs in minority faculty development: Ingredients of success. *Mount Sinai Journal of Medicine, 75*(6), 533-551. https://doi.org/10.1002/msj.20084

Daley, S., Wingard, D. L., & Reznik, V. (2006). Improving the retention of underrepresented minority faculty in academic medicine. *Journal of the National Medical Association, 98*(9), 1435–1440.

Diggs, G. A., Garrison-Wade, D. F., Estrada, D., & Galindo, R. (2009). Smiling faces and colored spaces: The experiences of faculty of color pursuing tenure in the academy. *Urban Review, 41*, 312-333. https://doi.org/10.1007/s11256-008-0113-y

Eagan, M. K., Jr., & Garvey, J. C. (2015). Stressing out: Connecting race, gender, and stress with faculty productivity. *The Journal of Higher Education, 86*(6), 923-954. https://doi.org/10.1353/jhe.2015.0034

Eagan, M. K., Stolzenberg E. B., Lozano J. B., Aragon M. C., Suchard M. R., & Hurtado S., (2014). *Undergraduate teaching faculty: The 2013–2014 HERI faculty survey.* Los Angeles, CA: The Higher Education Research Institute.

Eagan, M. K., Stolzenberg, E. B., Ramirez, J. J., Aragon, M. C., Suchard, M. R., & Rios-Aguilar, C. (2016). The American freshman: Fifty-year trends, 1966–2015. Retrieved from https://www.heri.ucla.edu/monographs/50YearTrendsMonograph2016.pdf

Equal Employment Opportunity Commission. (2012) U.S. summary data. Retrieved from https://www.eeoc.gov/eeoc/statistics/employment/jobpat-eeo5/upload/US_SUMMARY_E5_2012.PDF

Finkelstein, M., Conley, V. M., & Schuster, J. H., (2016, April). Taking the measure of faculty diversity. Retrieved from https://www.tiaainstitute.org/sites/default/files/presentations/2017-02/taking_the_measure_of_faculty_diversity.pdf

Follins, L. D., Paler, L. K., & Nanin, J. E. (2015). Creating and implementing a faculty interest group for historically underrepresented faculty. *Community College Journal Of Research And Practice, 39*(9), 839-851. https://doi.org/10.1080/10668926.2014.917595

Gleditsch, R. F., & Berg, J. A. (2017). Racial attitudes of university faculty members: Does interracial contact matter? *Humboldt Journal of Social Relations, 1*(39), 104-116.

Georgia Tech Research Institute. (2017). NSF supports new mentoring initiative for underrepresented minority faculty. Retrieved from https://gtri.gatech.edu/newsroom/nsf-supports-new-mentoring-initiative-underrepresented-minority-faculty

Griffin, K. A. (2012). Black professors managing mentorship: Implications of applying social exchange frameworks to analyses of student interactions and their influence on scholarly productivity. *Teachers College Record, 114*(5), 1-37.

Griffin, K. A., & Redding, R. J. (2011). Surveillance and sacrifice: Gender differences in the mentoring patterns of Black professors at predominantly White research universities. *American Educational Research Journal, 48,* 1032-1057. https://doi.org/10.3102/0002831211405025

Greene, J., Lewis, P. A., Richmond, G. L., & Stockard, J. (2011). Changing the chairs: Impact of workshop activities in assisting chemistry department chairs in achieving racial and ethnic diversity. *Journal of Chemical Education, 88*(6), 721-725. https://doi.org/10.1021/ed100526b

Griffin, K. A., Bennett, J. C., & Harris, J. (2011). Analyzing gender differences in Black faculty marginalization through a sequential mixed-methods design. *New Directions for Institutional Research, 2011*(151), 45-61. https://doi.org/10.1002/ir.398

Guenter-Schlesinger, S., & Ojikutu, K. (2009). *Best practices: Recruiting and retaining faculty and staff of color*. Bellingham, WA: Western Washington University.

Hagedorn, L. S. (1996). Wage equity and female faculty job satisfaction: The role of wage differentials in a job satisfaction causal model. *Research in Higher Education, 37,* 569-598. https://doi.org/10.1007/BF01724939

Hagedorn, L. S., Chi, W., Cepeda, R. M., & McLain, M. (2007). An investigation of critical mass: The role of Latino representation in the success of urban community college students. *Research in Higher Education, 48*(1), 73-91. https://doi.org/10.1007/s11162-006-9024-5

Hall, D. M., & Stevenson, H. C. (2007). Double jeopardy: Being African American and "doing diversity" in independent schools. *Teachers College Record, 109*(1), 1-23.

Harley, D. A. (2008). Maids of the academy: African American women faculty at predominantly White institutions. *Journal of African American Studies, 12,* 19-36. https://doi.org/10.1007/s12111-007-9030-5

Higher Education Research Institute. (2017). HERI faculty survey. Retrieved from https://heri.ucla.edu/heri-faculty-survey/

Hirschfield, L. E., & Joseph, T. D. (2012). "We need a woman, we need a Black woman:" Gender, race, and identity taxation in the academy. *Gender And Education, 24*(2), 213-227. https://doi.org/10.1080/09540253.2011.606208

Hurtado, S., Eagan, K., Pryor, J., Whang, H., & Tran, S. (2012). *The undergraduate teaching faculty survey: The 2010-11 HERI faculty survey*. Los Angeles, CA: Higher Education Research Institute at UCLA

Hyers, L. L., Syphan, J., Cochran, K., & Brown, T. (2012). Disparities in the professional development interactions of university faculty as a function of gender and ethnic underrepresentation. *Journal of Faculty Development, 26*(1), 18-28.

Jarvis, D. K. (1991). *Junior faculty development: A handbook*. New York, NY: The Modern Language Association of America.

Jayakumar, U. M., Howard, T. C., Allen, W. R., & Han, J. C. (2009). Racial privilege in the professoriate: An exploration of campus climate, retention, and satisfaction. *The Journal of Higher Education, 80*(5), 538-563. https://doi.org/10.1080/00221546.2009.11779031

Johnson, S., Kuykendall, J., & Nelson Laird, T. (2005, November). *An examination of workload of faculty of color by rank*. Paper presented at the annual meeting of the Association for the Study of Higher Education (ASHE), Philadelphia, PA.

Johnsrud, L. K., & Rosser, V. J. (2002). Faculty members' morale and their intention to leave. *Journal of Higher Education, 73*, 518–542. https://doi.org/10.1080/00221546.2002.11777162

Kane, M. T. (2013). Validating the interpretations and uses of test scores. *Journal of Educational Measurement, 50*, 1-73. https://doi.org/10.1111/jedm.12000

Kuh, G. D. (2001). Assessing what really matters to student learning: Inside the national survey of student engagement. *Change, 33*(3), 10–17, 66. https://doi.org/10.1080/00091380109601795

Lester, J. (2009). Not your child's playground: Workplace bullying among community college faculty. *Community College Journal of Research and Practice, 33*(5), 444-462. https://doi.org/10.1080/10668920902728394

Lugo-Lugo, C. R. (2012). A Prostitute, a Servant, and a Customer Service Representative: A Latina in Academia. In G. Gutierrez y Muhs, Y. F. Niemann, G. G. Gonzalez, & A. P. Harris (Eds.), *Presumed incompetent: The intersections of race and class for women in academia* (pp. 40-49). https://doi.org/10.2307/j.ctt4cgr3k.9

Magner, D. K. (1999). Battle over academic control pits faculty against governing board at George Mason U. *Chronicle of Higher Education*, *45*(41), A14-A16. Retrieved from https://eric.ed.gov/?id=EJ588041

Martinez, M. A., Chang, A., & Welton, A. D. (2017). Assistant professors of color confront the inequitable terrain of academia: A community cultural wealth perspective. *Race Ethnicity and Education*, *20*(5), 696-710. https://doi.org/10.1080/13613324.2016.1150826

Matier, M. W. (1990). Retaining faculty: A tale of two campuses. *Research in Higher Education, 31*, 39-60. https://doi.org/10.1007/BF00992556

McCray, E. D. (2011). Woman(ist)s' work: The experiences of Black women scholars in education at predominantly White institutions. In G. Jean-Marie & B. Lloyd-Jones (Eds.), *Women of color in higher education: Turbulent past, promising future* (pp. 99-125). https://doi.org/10.1108/S1479-3644(2011)0000009010

Mobley, W. H. (1982). *Employee turnover: Causes, consequences, and control*. Reading, MA: Addison-Wesley.

Moody, J. A. (2004). *Faculty diversity: Problems and solutions.* New York, NY: Routledge/Falmer.

Moreno, C., Jackson-Triche, M., Nash, G., Rice, C., & Suzuki, B. (2013). Independent investigative report on acts of bias and discrimination involving faculty at the University of California, Los Angeles. Retrieved from https://www.ucop.edu/moreno-report/external-review-team-report-10-15-13.pdf

Moreno, J. F., Smith, D. G., Clayton-Pedersen, A., Parker, S., & Hiroyuki-Teraguchi, D. (2006). *The revolving door for underrepresented minority faculty in higher education*. Claremont, CA: Association of American Colleges and Universities and Claremont Graduate University.

National Academy of Sciences, National Academy of Engineering, & Institute of Medicine. (2007). *Rising above the gathering storm: Energizing and employing America for a brighter economic future*. Washington, DC: The National Academies Press.

National Science Foundation. (2013). Survey of doctorate recipients 2013, data table 37. Retrieved from https://ncsesdata.nsf.gov/doctoratework/2013/html/SDR2013_DST37.html

National Science Foundation. (2014). Doctorate recipients from U.S universities. Retrieved from https://www.nsf.gov/statistics/2016/nsf16300/digest/nsf16300.pdf

Opp, R. (2002). Enhancing program completion rates among two-year college students of color. *Community College Journal of Research and Practice, 26*, 147-163. https://doi.org/10.1080/106689202753385483

Palepu, A., Carr, P. L., Friedman, R. H., Ash, A. S., & Moskowitz, M. A. (2000). Specialty choices, compensation, and career satisfaction of underrepresented minority faculty in academic medicine. *Academic Medicine, 75*(2), 157-160. https://doi.org/10.1097/00001888-200002000-00014

Park, J. P., & Denson, N. (2013). When race and class both matter: The relationship between socioeconomic diversity, racial diversity, and student reports of cross-class interaction. *Research In Higher Education, 54*(7), 725-745. doi:10.1007/s11162-013-9289-4

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research*. San Francisco, CA: Jossey-Bass.

Patton, L., & Catching, C. (2009). "Teaching while Black:" Narratives of African American student affairs faculty. *International Journal Of Qualitative Studies In Education, 22*(6), 713-728. https://doi.org/10.1080/09518390903333897

Perna, L. (2003). The status of women and minorities among community college faculty. *Research in Higher Education, 44*(2), 205-240. https://doi.org/10.1023/A:1022003812945

Piercy, F., Giddings, V., & Allen, K. (2005). Improving campus climate to support faculty diversity and retention: A pilot program for new faculty. *Innovative Higher Education, 30*(1), 53-66. https://doi.org/10.1007/s10755-005-3297-z

Rask. K. N., & Bailey, E. M. (2002), Are faculty role models? Evidence from major choice in an undergraduate institution, *The Journal of Economic Education, 33*(2), 99-124. https://doi.org/10.1080/00220480209596461

Reybold, L. E. (2014). The irony of ethics: (De)coding the lived experience of women and minority faculty. *International Journal of Higher Education, 3,* 92–105. https://doi.org/10.5430/ijhe.v3n2p92

Rosser, V. (2004). Faculty members' intentions to leave: A national study on their work-life and satisfaction. *Research in Higher Education, 45*(3), 285-309. https://doi.org/10.1023/B:RIHE.0000019591.74425.f1

Schuster, J., & Finkelstein, M. (2006). *The American faculty: The restructuring of academic work and careers*. Baltimore, MD: The Johns Hopkins University Press.

Schwartz, J. (2012). Faculty as undergraduate research mentors for students of color: Taking into account the costs. *Science Education, 96*(3), 527-542. https://doi.org/10.1002/sce.21004

Seymour, E., & Hewitt, N. M. (1997). *Talking about leaving: Why undergraduates leave the sciences*. Boulder, CO: Westview Press.

Sgoutas-Emch, S., Baird, L., Myers, P., Camacho, M., & Lord, S. (2016). We're not all White Men: Using a cohort/cluster approach to diversify STEM faculty hiring. *Thought & Action, 32*(1), 91-107.

Smith, D. G. (1989). *The challenge of diversity*. Washington, DC: George Washington University.

Smith, D. G., Tovar, E., & García, H. A. (2012), Where are they? A multilens examination of the distribution of full-time faculty by institutional type, race/ethnicity, gender, and citizenship. *New Directions for Institutional Research, 2012*, 5–26. https://doi.org/10.1002/ir.20019

Smith, D. G., Turner, C. S., Osei-Kofi, N., & Richards, S. (2004). Interrupting the usual: Successful strategies for hiring diverse faculty. *The Journal of Higher Education, 75*(2), 133-164. https://doi.org/10.1353/jhe.2004.0006

Stanley, C. A. (2006). Coloring the academic landscape: Faculty of color breaking the silence in predominantly White colleges and universities. *American Educational Research Journal*, *43*(4), 701–736. https://doi.org/10.3102/00028312043004701

Sue, D. W., Torino, G. C., Capodilupo, C. M., Rivera, D. P., & Lin, A. I. (2010). How White faculty perceive and react to difficult dialogues on race: Implications for education and training. *The Counseling Psychologist, 37*(8), 1090-1115.

Taylor, O. R., Apprey, C. B., Hill, G., McGrann, L., & Jianping, W. (2010). Diversifying the Faculty. *Peer Review*, *12*(3), 15-18.

Thomas, K. M., Willis, L. A., & Davis, J. (2007). Mentoring minority graduate students: Issues and strategies for institutions, faculty, and students. *Equal Opportunities International, 26*(3), 178–192. https://doi.org/10.1108/02610150710735471

Thompson, C. Q. (2008). Recruitment, retention, and mentoring faculty of color: The chronicle continues. *New Directions for Higher Education, 2008*(143), 47-54. https://doi.org/10.1002/he.312

Tierney, W. G., & Bensimon, E. M. (1996). *Promotion and tenure: Community and socialization in academe*. Albany, NY: State University of New York Press.

Turner, C. (2002). Women of color in academe. *Journal of Higher Education, 73,* 74–93. https://doi.org/10.1080/00221546.2002.11777131

Urban Universities for Health. (2015). *Faculty Cluster Hiring for Diversity and Institutional Climate*. Washington, DC.

U.S. Census Bureau. (2010). Quickfacts 2010. Retrieved from https://www.census.gov/quickfacts/

U.S. Department of Education, National Center for Education Statistics. (2017). *The condition of education 2017: Characteristics of postsecondary faculty (NCES 2017-144).* Washington, DC: Author.

Umbach, P. D. (2006). The contribution of faculty of color to undergraduate education. *Research in Higher Education, 47*(3), 317-345. https://doi.org/10.1007/s11162-005-9391-3

Waitzkin, H., Yager, J., Parker, T., & Duran, B. (2006). Mentoring partnerships for minority faculty and graduate students in mental health services research. *Academic Psychiatry: The Journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry*, *30*(3), 205–217. http://doi.org/10.1176/appi.ap.30.3.205

Whittaker, J. J., & Montgomery, B. M. (2014). Cultivating institutional transformation and sustainable STEM Diversity in higher education through integrative faculty development. *Innovative Higher Education, 39*(4), 263-275. https://doi.org/10.1007/s10755-013-9277-9

Wingfield, H. A. (2013). *No more invisible man: Race and gender in men's work*. Philadelphia, PA: Temple University Press.

Young, A., & Ramirez, M. (2017). I would teach it, but I don't know how: Faculty perceptions of cultural competency in the health sciences, a case study analysis. *Humboldt Journal of Social Relations, 1*(39), 90-103.

Zambrana, R. E., Ray, R., Espino, M. M., Castro, C., Cohen, B. D., & Eliason, J. (2015). "Don't leave us behind": The importance of mentoring for underrepresented minority faculty.

American Educational Research Journal, 52(1), 40–72. https://doi.org/10.3102/0002831214563063

Zambrana, R. E., Wingfield, A. H., Davila, B., Lapeyrouse, L. M., Hoagland, T., & Valdez, R. B. (2016). Blatant, subtle and insidious: URM faculty perceptions of discriminatory practices in predominantly White institutions. *Sociological Inquiry, 87*(2), 207-232. https://doi.org/10.1111/soin.12147