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FROM MENTORING TO MATTERING:

HOW PEER MENTORING CAN

HELP STUDENTS BELONG

A thesis

Presented to

The School of Social Sciences, Education & Business

Department of Higher Education and Student Development

Taylor University

Upland, Indiana

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Higher Education and Student Development

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by

David M. Adams

May 2017

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Higher Education and Student Development
Taylor University
Upland, Indiana

CERTIFICATE OF APPROVAL

MASTER'S THESIS

This is to certify that the Thesis of

David M. Adams

entitled

From Mentoring to Mattering: How Peer Mentoring Can Help Students Belong

has been approved by the Examining Committee for the thesis requirement for the

Master of Arts degree
in Higher Education and Student Development

May 2017

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Abstract

Mattering—defined as the "perception that, to some degree and in any of a variety of ways, we are a significant part of the world around us" (Elliott, Kao, & Grant, 2004, p. 339)—is a social-psychological concept that has recently gained traction in higher education. Understanding mattering, college educators believe, could offer new ways to involve students in campus communities, contributing to their well-being and academic success. The present study explored the link between mattering and participating in a mentoring program for first-year students, with emphasis on the experiences of students of color and international students. The study found participating in a mentoring program could have a positive impact on students' feelings of mattering. In addition, the study explored how students of color and international students perceived mattering relative to their white and domestic peers but found no significant differences between these students' feelings of mattering and their peers'. Exploring mattering more extensively and in other educational settings could yield new understanding of how to increase students' sense of belonging in college, which could contribute to student persistence and other positive developments.

Acknowledgements

"Normalize marginalizing experiences." At first, these words seemed counterintuitive to me. Why would I want to normalize anything that makes us, or our students, feel marginal? What Dr. Terrell Strayhorn meant, though, when he spoke these words at the 2016 Annual Meeting of NASPA, was normalizing marginalizing experiences is the work of student affairs educators, to help our students understand the nature of these experiences and how they are shared, often silently, by many. Together, students and college educators can work for inclusion and belonging—to help students know they matter. I fell in love with mattering that day at NASPA, and learning more about helping students belong in university communities has been the journey of my thesis. It was a journey filled with people who matter a great deal to me.

First, then, to Cohort IX—thanks for being a community of truth and love over the last two years. I can't imagine doing MAHE with any other group of people, and I'm changed for knowing each of you. To Jessie and Chad, thank you for your endless encouragement and constant challenge in this season of my life. Without you I would never have pursued mattering; I'm thankful you pushed me to make a hard decision, and, to me, you'll forever be So Much More Than An Org Audit Group.

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To my family—thanks for being with me throughout my Taylor experience, all six years of it, in fact. And to Danie, thanks for being a constant source of encouragement, faith, and love.

And finally, to my God and Savior who has gently walked alongside me these two years, a companion in times of joy and struggle—thank you for carrying me close as I have learned more about you, your world, your children and my place in your Kingdom.

Closing this chapter of my life feels like one of the hardest tasks I've ever faced. I'm grateful for MAHE and for the many voices who have spoken into me in this season. Even as I unwillingly leave Taylor and a place that has forever changed me, I'm thankful to have learned, in the quiet words of Parker Palmer, "that painful feelings," like the ones marking this transition, "are not signs of personal weakness, sources of shame, or irrelevant to the complex challenges of *knowing, working, and living*." Even more, I am thankful for a Father whose character is unchanging; to his glory, "As it was in the beginning, is now and ever shall be, world without end."

Table of Contents

List of Tables

Chapter 1

Introduction

The need to belong, to find one's "place" in a group or family, is fundamental to human well-being (Maslow, 1970, p. 43; see also Baumeister & Leary, 1995). The need to belong prompts individuals across ethnic backgrounds and of different ages and experiences to ask questions striking at the heart of community: "Are we part of things; do we belong; are we central or marginal? Do we make a difference; do others care about us and make us feel we matter?" (Schlossberg, 1989, p. 6). Summing up these questions, one can conclude all people share a need *to matter* (Rosenberg & McCullough, 1981).

To matter is to be the object of others' "concern, interest, or attention," in the words of Rosenberg and McCullough (1981, p. 165), who first defined mattering as a multidimensional social-psychological construct that has profound implications for motivation and mental and social well-being. At its core, however, mattering underlies connectedness and fosters the development of communities whose members feel important to and involved in the lives of others in the community (Schlossberg, 1989). Mattering's bearing on involvement led Schlossberg to consider and later demonstrate mattering's importance in higher education.

Mattering and College Students

Schlossberg (1989) knew university communities were places where clashing identities and perspectives created division, including along ethnic, age, gender, social

class, religious, and political lines. In light of Astin's (1984) seminal work demonstrating student involvement as crucial to engendering students' satisfaction with college, academic attainment, and persistence toward graduation, Schlossberg (1989) recognized the challenge of involving students in college was, at its core, one of empowering students to create community: "Involvement creates connections between students, faculty, and staff that allow individuals to believe in their own personal worth . . . . [and] awareness of mutual relatedness" (p. 6)

Further investigation of students' mattering in the university community confirmed what Schlossberg found regarding the significance of mattering in higher education. For example, Strayhorn estimated students' academic preparation and financial situations together account for 40% of their success in college, while their feelings of "belonging," a concept closely related to mattering, account for the remaining 60% (TEDx Talks, 2012). Further, Hoffman, Richmond, Morrow, and Salomone (2002) suggested the lack of consideration for students' belonging in student persistence models may explain the high variance in the models' ability to predict students' persistence/withdrawal decisions. College students themselves "stress the importance of social acceptance, support, community, connections, and respect to their own identity, wellbeing, and academic success" (Strayhorn, 2012a, p. 5). Yet, some students might be "vulnerable for feeling isolated or marginalized in college contexts" (TEDx Talks, 2012).

Given the importance of mattering on college students' success and the difficulty some students face in feeling they matter, college educators and administrators must examine, as Schlossberg (1989) concluded, programs and policies in terms of their tendency to engender feelings of mattering, or mattering's opposite, marginality (Berger,

1997). The "growing body of empirical evidence suggests … students' sense of belonging [plays] a role in shaping [their] motivation, general well-being, and, ultimately, achievement in school" (Anderman & Freeman, 2004, p. 58); thus, understanding which students may be likely to experience marginality and developing programs to foster mattering may help educators develop viable pathways to achieving involvement and encouraging supportive communities for college students. Although these programs may take on a variety of forms, one popular and economical choice in recent years has been peer mentoring programs; the present study focused on a peer mentoring program at a large, four-year, public, research-oriented university in the Midwest.

Purpose Statement

Mattering as a social-psychological construct is relatively well understood, but the factors influencing mattering, particularly in a university community, need further research (Strayhorn, 2012a). The present study examined a mentoring program for first-year business/management students at a large, four-year, public, research-oriented university in the Midwest due to its capacity to affect students' feelings of mattering. The researcher sought to find whether students' participation in the mentoring program results in stronger feelings of mattering relative to students who do not participate in the program. At the same time, the study examined participants' mattering in the context of other factors impacting mattering, particularly racial identity and international student status. Gathering data on how students from diverse backgrounds experience mattering adds to a growing pool of research in this area (e.g., France, 2011) and help university personnel understand which students might be vulnerable to experiencing marginality.

Research Questions

Three primary questions guided the researcher to accomplish the above purposes. (In the questions below, "Mean mattering score" refers to student scores on the Unified Measure of University Mattering-15, described later in the study; see Appendix A.)

Question 1. Is there a difference between the mean mattering scores of second-year business/management students who participated in a mentoring program as first-year students and students who did not participate? The first question was also used to compare the mean mattering scores of students of color and international students.

Question 1A. Among second-year business/management students of color (specifically those who described their ethnicity as American Indian or Alaska Native; Asian; Black or African-American; Native American or other Pacific Islander; or two or more races; or who described themselves as Hispanic or Latino or of Spanish origin), is there a difference between the mean mattering scores of students who participated in a mentoring program as first-year students and students who did not participate?

Question 1B. Among second-year business/management international students (specifically those who reported they were from a country other than the U.S. studying in the U.S. on a non-immigrant basis), is there a difference between the mean mattering scores of students who participated in a mentoring program as first-year students and students who did not participate?

Question 2. Among second-year business/management students, is there a difference between the mean mattering scores of students of color and white students?

Question 3. Among second-year business/management students, is there a difference between the mean mattering scores of international and domestic students?

Chapter 2

Review of the Literature

Although Rosenberg and McCullough (1981) first described mattering in their foundational study, the concept's popularity among researchers ebbed and flowed over the last 35 years. Recently, however, mattering experienced a resurgence in the social-science literature (Dixon Rayle, 2006). For college educators, "mattering to others still matters" as educators seek to build communities in which students experience mattering for the sake of their academic success and social and mental well-being (Dixon Rayle & Chung, 2007, p. 34).

The following literature review explores mattering as a psychosocial construct; what influences mattering for college students; the implications of mattering for college students; and peer mentoring programs' capacity to increase students' feelings of belonging.

Mattering: A Social-Psychological Construct

In the simplest terms, "mattering is defined as the perception that, to some degree and in any of a variety of ways, we are a significant part of the world around us" (Elliott, Kao, & Grant, 2004, p. 339; see also Elliott, Colangelo, & Gelles, 2005; Rosenberg & McCullough, 1981; Schlossberg, 1989).

Mattering as a three- and then four-factor model. Rosenberg and McCullough (1981) initially described mattering in terms of a three-factor model, explaining one's

sense of mattering is linked to feeling that "(a) one is an object of [another's] attention, (b) that one is important to [others], and (c) that [others are] dependent on us" (pp. 1-2; see also Maslow's [1970] description of the "esteem needs," including "attention, importance, dignity, or appreciation" [p. 45]). The first of Rosenberg and McCullough's (1981) factors, attention, is the most basic form of mattering, that one is interesting to others. The second factor, importance, holds a stronger expression of mattering, namely, that others care "about what we want, think, and do, or [are] concerned with our fate" (p. 3). The third factor, dependence, is achieved when a person experiences dependence on others' behavior and experiences others' dependence on him or her.

Rosenberg and McCullough (1981) considered "ego-extension," that is, "that we reflect on or constitute a part of" other people (p. 3), a signifier of the second factor of mattering, importance. Later studies by Megan K. France (France & Finney, 2010; France, Finney, & Swerdzewski, 2010; France, 2011) found ego-extension to be a distinct fourth factor in the model, particularly with respect to her Unified Measure of University Mattering-15 (see Appendix A).

Mattering as motivation. Another critical element of Rosenberg and McCullough's (1981) understanding of mattering was mattering's powerful influence on human motivation and behavior. Their research suggested mattering had particular relevance to understanding social obligation and integration, exerting a shaping effect on social relationships and networks. Similarly, Maslow (1970) wrote, once the physiological and safety needs have been satisfied, an individual strives "with great intensity . . . to attain" his or her place in community to avoid the "pangs of loneliness, of ostracism, of rejection, or friendlessness, [or] of rootlessness (p. 43). Baumeister and

Leary (1995) echoed both views, concluding in their comprehensive review of the literature on belongingness, that "human beings are fundamentally motivated by a need to belong, that is, by a strong desire to form and maintain enduring interpersonal attachments" (p. 522).

From Baumeister and Leary's (1995) perspective, psychology as a discipline did not deny the motivational nature of belonging but underappreciated what they called "one of the most far-reaching and integrative constructs currently available to understand human nature" (p. 522). Critically, however, mattering's propensity to affect behavior does not depend on the accuracy of one's mattering-related feelings, and Rosenberg and McCullough (1981) stressed one's *perception* of mattering as enough to motivate behavior. Further, a person who feels he or she matters may possess a "network of supportive relationships" that "facilitates . . . motivation, self-reliance, and achievement" (Ryan, Stiller, & Lynch, 1994, p. 226).

Related concepts. In order to expand on the literature regarding mattering, this review also examines belonging and self-esteem as concepts related to mattering. Although the concepts may be considered distinct, they ought to be viewed as contributing factors both to one's sense of mattering and to the way mattering influences various aspects of one's experience (Elliott et al., 2004; Strayhorn, 2012a).

Strayhorn (2012a) described belonging in educational contexts as a consequence of mattering, namely, "students' perceived social support on campus, a feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the group (e.g., campus community) or others on the campus" (p. 3). Mattering satisfies the need to belong when one's relationships are

"marked by stability, affective concern, and continuation into the foreseeable future" (Baumeister & Leary, 1995, p. 500). Belonging, accompanied by feelings of mattering, counteracts the sense of isolation at least one study found is common among adults today (Clegg, 2006).

Self-esteem is also associated with mattering (Elliott et al., 2004; Rosenberg & McCullough, 1981). For example, Ryan et al. (1994) found reliance on others in the face of emotional concerns, which may be viewed as an aspect of the importance factor of mattering, connected to higher self-esteem. Self-esteem and mattering also linked to experiencing anxiety and stress (Dixon & Robinson Kurpius, 2008; Elliott et al., 2005). The key difference between self-esteem and mattering is mattering is an external form of validation, rooted in one's perception of what others think, whereas self-esteem is an internal form of validation (Tovar, Simon, & Lee, 2009).

What Influences Mattering?

If mattering is accepted as a key component of social and mental well-being, and, in educational contexts, of academic success and persistence, understanding factors contributing to one's perception of mattering proves important. Broadly, "having a sense of purpose for life and a sense of relatedness with others was strongly connected with perceived mattering" (Tovar et al., 2009, p. 156). Mattering's connection to one's purpose implies its impact on one's understanding of identity. As a result,

> mattering is an aspect of identity, in terms of relationships that result in validation from others to create a sense of certainty about identity. In other words, without that connection with others, there would be no sense of mattering, no complete sense of self, and no realized self-construct. (p. 155)

Thus, mattering connects to "the way we value ourselves and understand our place in the social order" (Elliott et al., 2005, p. 224). The relationships underlying one's sense of self, however, must be significant to positively affect one's sense of mattering. Baumeister and Leary (1995) found relationships must be marked both by frequency of interaction and a "bond of caring" to meet one's need for belonging fully —one without the other had, at best, middling effects.

Thus, one's perception of mattering rests largely on a complex and somewhat intangible network of relationships, and perceiving the specific factors that influence mattering often proves difficult. The following section discusses some of those factors with respect to higher education.

Factors contributing to mattering in higher education. A number of studies examined students' sense of mattering or belonging in higher education. Hoffman et al. (2002), for example, found sense of belonging was positively correlated with "valued involvement," which consisted of supportive peer interactions and the belief faculty were compassionate, both of which led to "greater interaction among peers around common challenges and stressors" (pp. 251-252). Hurtado and Carter (1997) found discussing course content with classmates, tutoring other students, and having a higher frequency of interaction with faculty members contributed positively to belonging, as did membership in clubs and organizations, athletic teams, and faith groups. Strayhorn (2012b) found a stronger sense of belonging correlated with being a domestic student (as opposed to an international student), living on campus, holding membership in social fraternities, having motivation to attend college to "discover new things," and deciding to use social media infrequently or not at all.

Strayhorn (2012a) summarized the essence of these studies in that peers play an important role in students' sense of belonging. More specifically, meaningful relationships help students fulfill their need for relatedness (France & Finney, 2010). Unfortunately, encouraging meaningful relationships and increasing students' mattering are challenging tasks from an institutional perspective. In particular, for a student to experience an increase in feelings of mattering requires significant others to make meaningful investments of time and resources in the student's life (Elliott et al., 2005). Faculty and staff can contribute to students' mattering by demonstrating "students are important to them" and "the institution depends on them, cares about them, and is truly concerned with their fate" (Cuyjet, 1998, pp. 69-70). The importance of higher education students' mattering on their well-being and success, then, is the focus of the next section.

Why Mattering Matters for College Students

"Students feel they matter when the university community is aware of them, when the community responds to their needs, and when students can contribute positively to the community" (France, 2011, p. 31). Mattering, sense of belonging, and related concepts are important because of their demonstrated impact on several aspects of the college student experience, including mental health, academic achievement, and persistence. For students vulnerable to feeling marginalized—such as transfer students, students of color, or first-year students—mattering's importance becomes magnified. The following sections review mattering's impact on important dimensions of student experience and how feelings of mattering differ among various populations of students.

Mental health. Rosenberg and McCullough (1981) understood mattering's propensity to affect "diverse aspects of mental health" (p. 9). Generally speaking,

Strayhorn (2012a) found, people perform better "in contexts where feelings of isolation and intimidation are removed and belongingness needs are satisfied" (p. 10). Baumeister and Leary (1995) found the effects of belonging on mental illness paralleled its impact on physical illness. They noted a correlation between belonging and a host of factors, such as psychopathology, admission to mental hospitals, eating disorders, crime, combat-related stress, suicide, and traditionally unethical behaviors (e.g., lying or cheating).

For college students, mattering's impact on stress emerges as perhaps the most significant aspect of its effect on mental health. For example, Baumeister and Leary (1995) found supportive relationships marked by feelings of mattering or belonging tend to diminish feelings of stress. Dixon and Robinson Kurpius (2008) examined mattering, stress, and depression and found increased feelings of mattering correlated with lower stress. They labeled mattering a potential "protective factor" against stress and feelings of depression (p. 420). Elliott et al. (2005) linked mattering, self-esteem, depression, and suicide ideation, concluding each variable contributed to the next in sequence. As a result, increased feelings of mattering could lead to reduced suicide ideation.

Academic success. Students' educational success "depends, in part, on the extent to which [educators] create environments—in the home, in the school, in the community—where [students] fit in and they belong," according to Strayhorn (TEDx Talks, 2012). In particular, feelings of marginality tend to "undermine academic performance," while feelings of mattering negatively correlate with academic stress (France & Finney, 2010; Walton & Cohen, 2007). Echoing studies previously conducted with younger students, Freeman, Anderman, and Jensen (2007) found belonging positively correlated with college students' motivational characteristics, such as sense of

efficacy for success in class and their perception of the value of assignments and class activities (see also Anderman & Freeman, 2004).

Persistence and retention. As noted in this chapter's introduction, Astin's (1984) theory of involvement provided an important foundation on which to understand students' persistence decisions. Schlossberg (1989) further connected students' involvement with their feelings of mattering. For first-year students in particular, experiencing feelings of mattering in their new community and social groups may contribute significantly to their transition into college, increasing their likelihood of persistence to the second year (Dixon Rayle & Chung, 2007). Dixon Rayle and Chung's work corresponded with Berger's (1997) earlier finding that a positive relationship between individuals' sense of community and their integration into the social system of college campuses led to increased intent to persist in college.

Differences in mattering among particular groups of students. Students' feelings of belonging prove even more important when they are in environments unfamiliar or foreign to them, for in these environments they may be more likely to feel unsupported, unwelcome, or marginalized. Conversely, students who feel they belong more likely develop "expectancies of success, self-efficacy, task value, and task goal orientation" and experience academic achievement (Anderman & Freeman, 2004, p. 36). Understanding how different groups of students' feelings of belonging differ, then, is crucial to ensuring all students experience the benefits of belonging. Strayhorn's (2012a) review of belonging literature found college students' social identities, including gender and ethnicity, intersect and affect their sense of belonging. Schlossberg (1989) originally considered first-year students' transition into college as a period of vulnerability for them

with respect to marginality. The following subsections consider mattering among female students, students of color, transfer students, and first-year students, each of whom are well-represented in the literature. However, other student characteristics (e.g., family income or academic performance in high school) may have an impact on students' sense of belonging (Berger, 1997); the potential correlation between these characteristics and students' belonging warrants further study.

Female students. Gender is one of several identities Strayhorn (2012a) found contributed to students' sense of belonging. Research is divided, however, in terms of how gender contributes to students' mattering (Anderman & Freeman, 2004). Kodama (2002), for example, found female commuter students experienced lower degrees of mattering than their male peers. On the other hand, Dixon Rayle and Chung (2007) found female students experienced higher mattering, which they said held consistent with previous studies presenting mattering as more important to women than to men. In either case, examining mattering between male and female students is important, given the prevalence of depression and stress as major concerns for college women in particular (Dixon & Robinson Kurpius, 2008). Kodama (2002) also noted few studies tended to consider gender as an important part of college students' experience.

Students of color. Several studies correlated mattering, belonging, and related constructs with the experiences of students of color, and many of these studies focused specifically on Black or African-American students (Cuyjet, 1998; Johnson et al., 2007; Kodama, 2002; Strayhorn, 2012a, 2012b). In Cuyjet's (1998) study, for example, African-American students responded more negatively to questions about campus climate than did white students at a primarily white institution (PWI), leading Cuyjet to conclude

they may feel more marginalized in the institution. Additionally, Kodama (2002) investigated mattering among Asian-American students and found they also experienced marginality, contrary to what the "myth of the Model Minority" might suggest about their experience (p. 245).

For students of color as a whole, Cuyjet (1998) concluded, "institutionalized marginality is a more insidious problem in that it must be made tangible before any efforts can be taken to eradicate it" (p. 69). That said, "the sense of belonging perceived by students of color may well be a function of their minority status and lack of similar peers and adults within the community, rather than a result of their ethnicity per se" (Anderman & Freeman, 2004).

Transfer students. Several studies found students who transfer into a university more likely experience marginality than students who complete their degrees at one university (France, 2011; Kodama, 2002; Weiss, McElfresh, & Yang, 2006). Weiss et al. (2006), for example, noted transfer students may perceive a "gap between themselves and the 'normal' population, which can lead to feelings of isolation and depression" (p. 50), even if they constitute a significant proportion of the college's population. Transfer students may also fail to identify with a particular group, increasing their feelings of marginality. Kodama (2002) also found transfer students are difficult to describe as a homogeneous group, given the diversity of students who choose to transfer universities; thus, creating policies or programs to reduce transfer students' marginality proves difficult.

First-year students. According to Schlossberg (1989), every transition creates the potential for people to experience marginality: "People in transition often feel marginal

and that they do not matter," and they are plagued by the question, "Do I belong in this new place?" First-year students' transitional challenges are well documented, particularly with regard to the loss of supportive relationships from high school and the increased academic pressure faced in college (Dixon Rayle & Chung, 2007; Freeman et al., 2007). Many students, in light of the loss of support they feel in college, turn to their new peers for affirmation they matter (Kodama, 2002).

Peer Mentoring and its Connection to Students' Mattering

Given the well-established benefits of students' experiencing belonging or mattering in university communities, administrators have considered a variety of policies and programs that can foster belonging or mattering. Research into summer bridge programs and participation in campus clubs and organizations, for example, demonstrated "students who are more involved in college life also tend to feel a stronger connection with others on campus than those who are involved less, or not at all" (Strayhorn, 2012a, p. 107). Additionally, the effect of students' relationships with teachers and peers on their sense of belonging, the relative importance of each of these relationships, and the relative differences among the belonging needs of different groups of students merit further exploration (Anderman & Freeman, 2004).

University mentoring programs, and peer mentoring programs in particular, have become increasingly viewed as a means of fostering students' relationships with supportive peers in order to increase their sense of belonging. The following sections provide an overview of peer mentoring; the benefits of mentoring relationships, with particular focus on mentoring's capacity to increase students' sense of belonging and on these programs' impact on first-year students and students of color; the drawbacks and

risks of mentoring relationships; and considerations for future mentoring research and programs.

Overview of peer mentoring. As a component of higher education, mentoring was first formally explored in 1911 (Crisp & Cruz, 2009). Given "the value of mentoring has long been accepted in the literature as well as in practice" (p. 525), institutions nationwide have established mentoring programs as an economical means of increasing student engagement. Peer mentoring, in which student mentors are paired with one or more student mentees (as opposed to traditional mentoring, in which faculty or staff serve as mentors) has also emerged as increasingly popular (Budge, 2006).

Although a variety of definitions and structures for mentoring relationships exist and are discussed later, three universal features of mentoring in higher educational settings include mentoring relationships' focus on the growth and accomplishment of individuals through multiple forms of assistance; broad forms of support, such as professional and career development, role modeling, and psychological support; and the personal and reciprocal nature of mentoring relationships (Crisp & Cruz, 2009).

The benefits of peer mentoring relationships. Participation in peer mentoring programs links to a variety of benefits, many echoing the benefits of increased student engagement generally (Yomtov, Plunkett, Efrat, & Garcia Marin, 2015). Specifically, participating in mentoring programs can mitigate the negative effects of stress, increase students' sense of belonging and identity within the university, provide access to information on campus resources, increase academic success, create social connections, foster academic and subject-area skill development, and increase retention (Glaser, Hall, & Halperin, 2006; see also Colvin & Ashman, 2010; Crisp & Cruz, 2009; Ward, Thomas,

& Disch, 2010; Yomtov et al., 2015). Mentoring literature also indicates the benefits of increased self-esteem and academic efficacy, satisfaction with academic programs, perseverance, and overall achievement (Budge, 2006). Peer mentoring programs in particular offer psychosocial support more readily than traditional mentoring, with the development of mentor-mentee and mentee-mentee relationships a common result of peer mentoring programs (Holt & Lopez, 2014; Vallone & Ensher, 2000).

Peer mentoring and students' sense of belonging. The development of trusting relationships between mentors and mentees, even outside the formal bounds of the mentoring program, increases students' feelings of connectedness and identification with the university (Chester, Burton, Xenos, & Elgar, 2013; Colvin & Ashman, 2010). The increased mattering peer-mentored students experience contributes to the positive effects described above, and peer-mentored students "should be more likely to persist and graduate because they reported feeling more integrated to the university than non-mentored students" (Yomtov et al., 2015, p. 14). One study described mentors as a "connecting link," helping students get involved with their campus and education (Colvin & Ashman, 2010, p. 125). For first-year students, students of color, and other vulnerable students, the benefits of connection hold even more importance.

Peer mentoring and belongingness among first-year students. Peer mentoring first-year students can help them adapt successfully to their new learning environment and community, increase their feelings of connectedness, provide them emotional support, contribute to their decision to persist to the second year, and help them make social contacts (Chester et al., 2013; Glaser et al., 2006; Yomtov et al., 2015). In one study, about 60% of participants in a mandatory mentoring program reported the program

helped them feel like belonged, suggesting "proactive interventions in the first semester of the first year can be part of a package that enhances important aspects of learning and engagement" (Chester et al., 2013, p. 35). In another study focused on academic achievement, peer-mentored students with high anxiety performed comparably to other peer-mentored students with low anxiety, while non-peer-mentored students with high anxiety performed significantly worse than their low-anxiety counterparts, suggesting mentoring relieved some of the negative effects of high anxiety (Rodger & Tremblay, 2003). (However, an earlier study among graduate students found no stress-relieving effects of a peer mentoring program [Vallone & Ensher, 2000].)

One study described peer mentoring's ability to affect intentions and attitudes in the short term as relatively straightforward. However, the study also noted these attitudes do not necessarily contribute to students' persistence to graduation and that additional interventions to help students maintain new attitudes and intentions may be needed (Sanchez, Bauer, & Paronto, 2006). Another study cautioned that some mentors experienced difficulty in establishing relationships with their mentees, limiting the benefits of peer mentoring for some mentees (Holt & Lopez, 2014).

Peer mentoring and belongingness among students of color. Participation in peer mentoring can lower barriers for students of color to feel they belong (Crisp & Cruz, 2009). In particular, mentoring helps by "facilitating relationships for students with someone who is experienced in navigating unfamiliar territory" (Wallace, Abel, & Ropers-Huilman, 2000, p. 88). One study found students of color experienced greater academic and social integration as a result of participating in a peer mentoring program (Ward et al., 2010). The same study found peer-mentored first-year African or African-

American students persisted at higher rates than their non-peer-mentored peers. Students of color, however, often need to be made aware of the availability and benefits of mentoring programs, as another study noted they seemed less likely to participate than their white peers (Budge, 2006).

Drawbacks and risks of peer mentoring programs. In addition to the positive effects of peer mentoring described in the literature, some studies also found risks and drawbacks worth considering. In particular, Christie (2014) examined a peer mentoring program's self-assessment through a critical lens and identified underlying assumptions about class, race, age, and gender that could make it difficult for female students, students of color, or other student populations to access the benefits of mentoring if these assumptions were not specifically addressed (see also Budge, 2006; Wallace et al., 2000). Further, the mentees' belief the mentoring program helped them adjust to university life "can be interpreted more critically as an instrument of governmentality through which the University inducts students into particular ways of thinking and being, such that they are more likely to succeed" (Christie, 2014, p. 961). Additionally, the hierarchical structure of a mentoring relationship can mean "help, power, and resources tend to flow in one direction, creating the possibility for misunderstanding or misuse of such power and resources" (Colvin & Ashman, 2010, p. 131).

The most common risk of peer mentoring programs, however, is the vulnerability to which mentors and mentees are subjected without established, appropriate boundaries in the mentoring relationship (Colvin & Ashman, 2010). As previously noted, "the heart of [mentoring's] success is thought to lie in the development of a trusting personal relationship," but the relationship could prove dangerous if mentees come to rely on

mentors for more than mentors can feasibly provide as nonprofessionals, particularly with respect to academic, emotional, or other forms of support (Christie, 2014, p. 962). Mentees' overdependence on their mentors can prove especially problematic when the formal mentoring program ends (Colvin & Ashman, 2010).

Considerations for future peer mentoring practice and research. Given the popularity of peer mentoring programs, the well-documented benefits of these programs for student mentees, and the complexities of relying on student mentors to deliver these benefits, additional research proves imperative. As noted at the beginning of this section, many definitions and structures for peer mentoring in higher education exist (in one study, Crisp and Cruz [2009] identified over 50.) Not surprisingly, mentors themselves often have difficulty defining their roles (Holt & Lopez, 2014).

As an illustration of this difficulty, several studies found male mentors tended to focus on academic or achievement goals in their mentee relationships, while female mentors focused on emotional or social support (Christie, 2014; Colvin & Ashman, 2010). Thus, defining mentors' roles, helping mentors themselves to define their roles, and developing an inclusive understanding of mentoring (e.g., across gender, sexuality, and ethnicity) ought to be some of the primary aims of future research (Budge, 2006; Colvin & Ashman, 2010; Holt & Lopez, 2014). On that front, Crisp and Cruz (2009) proposed a four-part conceptual framework to guide future mentoring research and practice, comprised of psychological and emotional support; support for goal-setting and choosing a career path; academic subject knowledge support; and role modeling. A later study by Holt and Lopez (2014) provided initial validation of Crisp and Cruz's proposal.

In summary, "reconceptualizing mentoring as a holistic process that includes the perspectives of many different individuals can assist mentoring programs in improving their effectiveness" (Budge, 2006, p. 84). Rather than dismissing mentoring, "research needs to pay attention to the relations of power and control that are inherent to the mentoring relationship, and to challenge the assumption that mentoring is a positive force that universities should promote in an uncritical fashion" (Christie, 2014, p. 964).

Summary

The educational and psychosocial literature over the last half-century affirm the need to matter—to believe one belongs in a community, makes a difference in others' lives, is the object of others' affection, and shares similar accomplishments and setbacks to others'—is a need all people experience. The literature on peer mentoring shows universities possess the ability to build programs to foster students' mattering.

Given college students' well-being may rest, in large part, on their perception of how much they matter to others, understanding how "institutional attributes, conditions, ethos, and practices influence college students' sense of belonging" may prove an important undertaking (Strayhorn, 2012a, pp. 13-14). In particular, vulnerable students—first-year students feeling lost in the midst of a major transition or students of color or international students feeling out of place in a new or foreign environment—may benefit from programs, like peer mentoring, that serve to facilitate their transition and adaptation to the university.

In light of these assertions concerning the value of peer mentoring, the present study compared the sense of mattering of second-year students who participated as first-year students in a peer mentoring program against that of students who did not, in order

to understand program's capacity for encouraging feelings of mattering. In addition, the study examined whether students of color or international students who participated in the program perceived mattering differently than their white or domestic peers.

Hypotheses

Given the variety of factors shown to affect college students' mattering and peer mentoring programs' capacity to increase mattering among their participants, the study's hypotheses were as follows (see Table 1).

Hypothesis 1. Second-year business/management students who participated in a mentoring program as first-year students will have a significantly higher mean mattering score than second-year business/management students who did not. The hypothesis also applied to students of color and international students, among whom mentoring program participants will have significantly higher mattering scores than nonparticipants.

Hypothesis 2. White second-year business/management students will have a significantly higher mean mattering score than second-year business/management students of color.

Hypothesis 3. Domestic second-year business/management students will have a significantly higher mean mattering score than international second-year business/management students.

Table 1

Hypotheses

Hypothesis	Prediction
1	H_0: There will be no significant difference between the mean mattering score of students who participated in a mentoring program and students who did not ($\mu_1=\mu_2$). H_A: Students who participated in a mentoring program will have a significantly higher mean mattering score than students who did not ($\mu_1>\mu_2$).
1a	H_0: Among students of color, there will be no significant difference between the mean mattering scores of students who participated in a mentoring program and students who did not ($\mu_3=\mu_4$). H_A: Among students of color, those who participated in a mentoring program will have a significantly higher mean mattering score than those who did not ($\mu_3>\mu_4$).
1b	H_0: Among international students, there will be no significant difference between the mean mattering scores of students who participated in a mentoring program and students who did not ($\mu_5=\mu_6$). H_A: Among international students, those who participated in a mentoring program will have a significantly higher mean mattering score than those who did not ($\mu_5>\mu_6$).
2	H_0: There will be no significant difference between the mean mattering scores of students of color and white students ($\mu_7=\mu_8$). H_A: White students will have a significantly higher mean mattering score than students of color ($\mu_7>\mu_8$).
3	H_0: There will be no significant difference between the mean mattering scores of international and domestic students ($\mu_9=\mu_{10}$). H_A: Domestic students will have a significantly higher mean mattering score than international students ($\mu_9>\mu_{10}$).

Note. Hypothesis numbers correspond to question numbers. H_0=Null hypothesis. H_A=Alternative hypothesis. μ_x=Population mean mattering score.

Chapter 3

Methodology

The researcher conducted the study at a large, four-year, public, research-oriented university in the Midwest. The total population consisted of 477 second-year undergraduate students enrolled in the school of management, of whom 172 (36.1%) participated in a peer mentoring program as first-year students. In order to explore whether the students who participated in the mentoring program demonstrated a stronger sense of mattering than students who did not and related differences in mattering between student populations, the researcher employed a quasi-experimental, two-group, posttest-only design. Creswell (2012) posited quasi-experimental designs as appropriate for research among already-existing groups in education. In the present study, the two groups were the experimental group, who participated in the mentoring program, and the control group, who did not participate in the mentoring program.

Access and Permissions

The researcher conducted this study in partnership with the director of the mentoring program, a student services employee in the school of management, and a faculty member in the school of management, the latter serving as the primary investigator for the purpose of the institution's Institutional Review Board process but who had no further involvement in the study. The director of the mentoring program provided the researcher with access to demographic information for second-year students

in the school of management. The director and faculty member each consented to partner with the researcher on this study, and the director assisted the researcher in collecting data. Before beginning the data collection, the researcher obtained Institutional Research Board approval from Taylor University and the university under study.

The researcher also obtained permission to use the Unified Measure of University Mattering-15 (UMUM-15) from Megan K. France, the instrument's creator (France, 2011; see Appendix B). Recent studies used the scale to measure mattering across varying student populations for use in institutional assessment (e.g., Penn, 2016).

Instrument

The researcher used UMUM-15 (see Appendix A) to measure mattering among the participants. France (2011) developed UMUM-15 as a revision to previous mattering scales (Revised University Mattering Scale, France & Finney, 2010; General Mattering scale, Elliott et al., 2004). France found previous mattering scales did not differentially describe the four dimensions of mattering (awareness, importance, dependence, and ego-extension) or the construct of mattering overall. UMUM-15 measures mattering as a single construct and consists of 15 statements participants rate on a six-point Likert-type scale (e.g., "The people of the [university] community pay attention to me," France, 2011, p. 131; see Appendix A). UMUM-15 scores responses between 1 and 6, with 1 representing "Low University Mattering" and 6 representing "High University Mattering" (p. 126). France's study established the validity and reliability of the instrument as a measure of university mattering.

Validity. France's (2011) development of the UMUM-15 began with Elliott et al.'s (2004) General Mattering scale, which consisted of 24 items mapped to Rosenberg

and McCullough's (1981) three-factor model of mattering (awareness, importance, and dependence). Elliott et al. (2004) found the scale demonstrated content validity (alignment with Rosenberg and McCullough's [1981] theory), construct validity (usefulness in measuring mattering factors), and discriminant validity (avoidance of measuring other constructs).

France and Finney (2010) adapted the General Mattering scale for use in a university community and named the new scale the University Mattering Scale (UMS). They found a four-factor model of mattering—in which they added ego-extension as a distinct factor—better fit the data than the three-factor model employed by Elliott et al. (2004). France and Finney (2010) added 10 items to the scale to reflect the four factors and named the resulting 34-item scale the Revised University Mattering Scale (RUMS).

France's (2011) study tested the RUMS with four distinct samples and found several items demonstrated localized misfit between the model and the instrument as well as items deemed factorially complex, that is, they loaded strongly both to specific mattering factors (e.g., importance) and to the university mattering construct overall. France removed these items, resulting in the 15-item UMUM-15, which "covers the breadth of the university mattering construct by retaining items from each of the four mattering facets" (p. 101).

Reliability. France (2011) found UMUM-15 "has strong psychometric properties that replicated across four independent samples. . . . As a result, the UMUM-15 supports a unified view of mattering" (p. 107). UMUM-15 had "acceptable reliability" across the four samples, "indicating that university mattering accounts for more variance in the items than random measurement error" (p. 99). However, France noted her study

examined mattering with respect to transfer students in particular and recommended future studies establish reliability of the scale with other populations.

Procedures

The first step in the study was to create an online survey using SurveyMonkey software. The survey consisted of the following: informed consent information (see Appendix C); demographic questions, including questions for participants to self-report their racial identity, whether they were international students, and whether they participated in the mentoring program (see Appendix D); the UMUM-15, tailored to the studied university (see Appendix A); and the opportunity for students to voluntarily submit their email addresses for purpose of entering an incentive drawing.

Next, the researcher created email invitations for students to participate in the study (see Appendix E), which included information about mattering and the study's purpose and offered various incentive drawings for participating in the study. The director of the mentoring program then emailed the first invitation to participate in the study to all second-year students in the school of management in December 2016; the director sent multiple follow-up invitations in January 2017. Participation was also solicited through a school newsletter.

The researcher stopped accepting new survey responses on February 3, 2017. After closing the survey, the researcher downloaded complete responses (in which participants answered all questions), removed duplicate responses (retaining the earliest of responses provided), and removed identifying information from the responses (i.e., email addresses and informed consent electronic signatures). The researcher then aggregated responses by demographic factors (i.e., racial identity and international

student status) and the experimental factor (participation in the mentoring program). The researcher stored survey data on a password-protected hard drive and cloud-based storage service. All participants who completed the survey consented electronically to participating in the study.

Participants

In total, 200 students responded to the survey; however, 29 survey responses were incomplete or duplicate responses, all of which were removed. The remaining 171 respondents provided complete data, from a population of 477 second-year school of management students (35.8% total response rate). There were two groups in the population of second-year management students: an experimental group consisting of the 172 students who participated in the mentoring program as first-year students and a control group consisting of the 305 students who did not participate in the mentoring program. Within the experimental group, 68 respondents provided complete data (39.5% response rate); within the control population, 103 respondents provided complete data (33.8% response rate).

Demographics. There were 62 students of color who completed the survey (36.2% of all respondents), similar to the proportion of students of color enrolled in the university (34.4%) but lower than the proportion enrolled in the school of management (45.4%). Additionally, one student did not report her or his racial identity. There were 29 international students who completed the survey (17.0% of all respondents), similar to the proportion of international students enrolled in the university (17.1%) but a much lower proportion of international students than the proportion enrolled in the school of management (31.1%).

Data Analysis

The researcher hypothesized differences between the mean mattering scores of five pairs of independent groups (namely, mentoring program participants and nonparticipants; mentoring program participants and nonparticipants among students of color; mentoring program participants and nonparticipants among international students; students of color and white students; and international and domestic students). These attributes represented the independent variables for the study: participation in the peer mentoring program, racial identity, and international student status. The groups' mean mattering scores on UMUM-15 (of 1 to 6) represented the dependent variable.

To test the study's hypotheses, the researcher compared the mean mattering scores of each pair of the groups above by conducting independent *t*-tests at the 0.05 significance level using SPSS Statistics. Because the dependent variable was measured on a continuous scale, the independent variables each comprised two categorical groups, and no relationship existed between the groups with respect to participation in the mentoring program, independent *t*-tests were appropriate to test these hypotheses ("Independent t-test using SPSS Statistics," n.d.).

In addition, prior to conducting each *t*-test, the mattering scores of each test group (i.e., mentoring program participants and nonparticipants; students of color and white students; and international students and domestic students) were checked using SPSS Statistics and found to have homogeneity of variance and be approximately normally distributed, meeting two of the assumptions for *t*-test validity ("Independent t-test using SPSS Statistics," n.d.). However, the researcher found one significant outlier in the data, violating one of the assumptions required for *t*-test validity (one control group member

had a 1.80 mattering score, 3.6 standard deviations below the mean of 4.38 and 0.99 standard deviation below the next furthest score from the mean). To resolve this violation, *t*-tests and descriptive statistics in which the outlying score would have been included were run twice, once including and once excluding the outlying score.

Finally, the researcher analyzed data for individual responses to each item on the measure in SPSS Statistics to test UMUM-15's reliability. The scale was found to be sufficiently reliable (Cronbach's α=.85). Previous studies using UMUM-15, with larger sample sizes, found Cronbach's α to be higher (.92 to .94 in Penn [2016]).

Summary

The present study compared mattering scores among students who did and did not participate in a mentoring program to understand whether the program affects students' sense of mattering. Analysis of demographic factors (specifically, racial identity and international student status) in terms of participants' mattering scores also provided valuable insight into the combination of factors affecting mattering, adding to the growing body of data regarding how students of color and international students perceive mattering. The university at which the study took place received information that contributed to the assessment of the mentoring program and could serve to improve the program in the future. The following chapters present and discuss the findings of the study with particular focus on the mentoring program's capacity to increase mattering among the program's participants.

Chapter 4

Results

The following sections address each of the three hypotheses and two sub-hypotheses, noting whether the null or alternate hypotheses were accepted for each pair of test groups (e.g., mentoring program participants and nonparticipants). The results include descriptive statistics for each group's mean mattering score and whether a statistically significant difference emerged between groups' mean mattering scores based on the independent *t*-tests conducted.

Mattering Scores of Mentoring Program Participants and Nonparticipants

Hypothesis 1 (H_A) stated mentoring program participants would have a significantly higher mean mattering score than mentoring program nonparticipants and the same would hold true among subgroups consisting of students of color and international students (1 H_A: $\mu_1>\mu_2$; 1a H_A: $\mu_3>\mu_4$; 1b H_A: $\mu_5>\mu_6$; see Table 1). Independent *t*-tests including all students showed mentoring program participants had a significantly higher mean mattering score than nonparticipants, both when excluding and including the outlying score (p=.015 and p=.010, respectively; see Table 2). Therefore, participation in the mentoring program may correlate with a higher mean mattering score, and the alternate hypothesis was accepted (1 H_A: $\mu_1>\mu_2$; see Table 1).

On the other hand, independent *t*-tests including only responses from students of color and only responses from international students showed no significant differences

between the mean mattering scores of mentoring program participants and nonparticipants within these groups (among students of color, p=.268 and p=.179, excluding and including the outlying score, respectively; among international students, p=.913; see Table 2). Therefore, participation in the mentoring program may not correlate with these students' mattering scores, and the null hypotheses were accepted (1a H_0: $\mu_3=\mu_4$; 1b H_0: $\mu_5=\mu_6$; see Table 1).

Table 2

Independent T-Tests of Mattering Scores of Mentoring Program Participants and Nonparticipants, Including Subgroup Analyses

	Mattering Score				
Test Group	Participants Mean (n) (SD)	Nonparticipants Mean (n) (SD)	t	df	p
All students (excluding outlier)	4.66 (68) (.65)	4.40 (102) (.67)	2.453	168	.015*
All students (including outlier)	4.66 (68) (.65)	4.38 (103) (.71)	2.594	169	.010*
Students of color (excluding outlier)	4.55 (23) (.69)	4.37 (38) (.56)	1.117	59	.268
Students of color (including outlier)	4.55 (23) (.69)	4.30 (39) (.69)	1.360	60	.179
International students	4.36 (11) (.74)	4.38 (18) (.44)	-.110	27	.913

Note. SD=Standard deviation. *p<.05.

Mattering Scores of Students of Color and White Students

Hypothesis 2 (H_A) stated white students would have a significantly higher mean mattering score than students of color, irrespective of participation in the mentoring

program (2 H_A: $\mu_7>\mu_8$; see Table 1). Independent *t*-tests showed no significant difference between the mean mattering scores of white students and students of color—excluding one participant who did not report his or her racial identity—whether excluding or including the outlying score (*p*=.286 and *p*=.159, respectively; see Table 3). Therefore, no correlation may exist between students' racial identity and their mattering scores, and the null hypothesis was accepted (2 H_0: $\mu_7=\mu_8$; see Table 1).

Table 3

Independent T-Tests of Mattering Scores of White Students and Students of Color

	Mattering Score				
Test Group	White Students Mean (n) (SD)	Students of Color Mean (n) (SD)	t	df	p
All students (excluding outlier)	4.55 (108) (.70)	4.44 (61) (.61)	1.070	167	.286
All students (including outlier)	4.55 (108) (.70)	4.40 (62) (.69)	1.416	168	.159

Note. SD=Standard deviation.

Mattering Scores of International and Domestic Students

Hypothesis 3 (H_A) stated domestic students would have a significantly higher mean mattering score than international students, irrespective of participation in the mentoring program (3 H_A: $\mu_9>\mu_{10}$; see Table 1). Independent *t*-tests showed no significant difference between the mean mattering scores of international and domestic students, whether excluding or including the outlying score (*p*=.240 and *p*=.321, respectively; see Table 4). Therefore, no correlation may exist between students'

international status and their mattering scores, and the null hypothesis was accepted (3 H_0: $\mu_9=\mu_{10}$).

Table 4

Independent T-Tests of Mattering Scores of Domestic and International Students

	Mattering Score				
Test Group	Domestic Students Mean (n) (SD)	International Students Mean (n) (SD)	t	df	p
All students (excluding outlier)	4.53 (141) (.69)	4.37 (29) (.56)	1.179	168	.240
All students (including outlier)	4.51 (142) (.73)	4.37 (29) (.56)	.995	169	.321

Note. SD=Standard deviation.

Summary

Five independent *t*-tests at the 0.05 significance level were conducted in order to compare mean mattering scores within each of the five pairings of participant groups, excluding the outlying score from the samples in which it would have been included (that is, all samples except the test comparing mentoring program participants and nonparticipants among international students). Four additional independent *t*-tests were conducted including the outlying score in the samples where it was initially excluded.

The researcher found the mean mattering score of mentoring program participants proved statistically significantly higher than the mean score of nonparticipants, regardless of the outlying score's inclusion, suggesting the mentoring program had an impact on participants' feelings of mattering. On the other hand, the researcher found no statistically significant differences between the mean mattering scores of mentoring

program participants and nonparticipants among students of color or among international students, suggesting the mentoring program's impact on mattering was negligible for these students or that low response rates obscured any impact. Further, the researcher found no statistically significant differences between the mean mattering scores of students of color and white students or between international and domestic students, irrespective of participation in the mentoring program, suggesting low response rates may have obscured potential differences in feelings of mattering among students of color and international students. The final chapter of this study discusses potential explanations for these results, their implications, and the study's limitations.

Chapter 5

Discussion

Overall, the findings from the present study both confirmed and conflicted with the literature on mattering and belonging, as well as these constructs' connection to peer mentoring. The following sections consider the present study's results in the light of previously explored literature; note limitations and suggestions for future research; and consider how the study's findings may affect the practice of student affairs professionals, encouraging them to continue efforts to increase students' feelings of mattering.

How Participating in a Peer Mentoring Program Affects Mattering

Findings from the primary question in the study, whether mentoring program participants would have a higher mean mattering score than nonparticipants, confirm the literature on students' mattering and its connection to peer mentoring. Mentoring program participants had statistically significantly higher mean mattering scores than nonparticipants, suggesting the mentoring program made a positive impact on students' feelings of mattering. Previous studies examining the link between peer mentoring and students' sense of belonging, which is closely related to mattering, found peer mentoring helped students build trusting relationships, develop feelings of connectedness, and increase their identification with the university (Chester et al., 2013; Colvin & Ashman, 2010; Glaser et al., 2006; Holt & Lopez, 2014; Vallone & Ensher, 2000), each of which may positively affect students' mattering.

The literature on peer mentoring also suggested participation can help first-year students adapt successfully to their new communities and provide them with relational support (Chester et al., 2013; Glaser et al., 2006; Yomtov et al., 2015). The students in this study may have experienced similar benefits as first-year students, contributing to higher mattering scores among mentoring participants than nonparticipants. Additionally, the positive link between mattering and peer mentoring found in the present study echoed the broader literature on student involvement, and participating in the mentoring program may exemplify a form of involvement that increases students' connection with other students, increasing their feelings of belonging (Strayhorn, 2012a).

How participating in a peer mentoring program affects mattering among students of color and international students. Among students of color and international students, however, the present study found no statistically significant differences between the mean mattering scores of mentoring program participants and nonparticipants. The lack of difference between the mattering scores of mentoring program participants and nonparticipants among these students was surprising, given the literature suggesting students of color, especially, may experience an increased sense of belonging as a result of participating in a peer mentoring program (Crisp & Cruz, 2009; Wallace et al., 2000; Ward et al., 2010). Budge (2006) noted the importance of communicating with students of color regarding the availability and benefits of peer mentoring programs, which may have affected these students' experiences with the peer mentoring program in the present study. That the mean mattering score among students of color who participated in the mentoring program emerged higher than the

nonparticipants' mean score, though not statistically significant, suggests promise for the program's potential positive impact on these students.

The literature on international students' experiences with peer mentoring programs is more limited. Although many international students are also students of color, the lack of significant difference in the mean mattering scores of mentoring program participants and nonparticipants suggested their experiences in the program may differ from those of their domestic student peers. Investigating the experiences of both students of color and international students within peer mentoring programs is worthwhile, as discussed below in more detail.

How Students of Color and International Students Perceive Mattering

The lack of statistically significant differences between the mean mattering scores of students of color and white students and international and domestic students, respectively, was also surprising, given the apparent consensus in the literature suggesting students of color and international students face barriers to belonging their white and domestic peers do not (Anderman & Freeman, 2004; Cuyjet, 1998; Johnson et al., 2007; Kodama, 2002; Strayhorn, 2012a, 2012b). One possible explanation for the conflict between the present study's findings and existing literature was the low participation rate of students of color and international students relative to the proportions of these students enrolled in the school of management.

As previously noted, only 36.2% of survey respondents self-identified as students of color, though they make up 45.4% of the population of the school of management. The difference was even greater among international students: only 17.0% of survey respondents self-identified international students, though they make up 31.1% of the

population of the school of management. Students of color and international students with stronger feelings of mattering may also have been more likely to complete the survey, inflating the groups' mean mattering scores, while students who have weaker feelings of mattering may have been less likely to respond. The same potential sampling error could also explain the lack of significant difference between the mean mattering scores of mentoring participants and nonparticipants among students of color and international students. Higher participation rates and larger sample sizes might have yielded different findings on these questions.

Limitations

At least four limitations necessitate consideration in interpreting the results of the present study, as described in the following sections.

Study design. The quasi-experimental, posttest-only design employed in the present study limits the validity of the results due to the possibilities of participant maturation and the diffusion of treatment (Creswell, 2012). First, participants' mattering may have increased or decreased as a result of factors other than participation in the mentoring program during the year between the program and the study. Second, at the same time, any benefits the mentoring program participants received as a result of participating in the program may have passed to nonparticipants through their interaction with participants in academic and social settings, diluting the effect of the nonparticipants as a control group.

Participant selection. The second limitation is participant selection, since assignment to the experimental and control groups was based on participants' decision to participate or not to participate in the mentoring program (Creswell, 2012). Students

with higher mattering at the beginning of their university experiences may have been more likely to apply to participate in and be accepted to the mentoring program. In addition, as noted earlier, students with stronger feelings of mattering may have been more likely to complete the survey than those with weaker feelings of mattering, inflating the mean mattering scores found.

Generalizability and sample sizes. The third limitation comes in the lack of generalizability of the study. Although a sufficiently high response rate was achieved, the low participation rate of students of color and international students relative to the proportion of these students enrolled in the school of management limits generalizability to the school of management and to the institution as a whole. Further, since participants were chosen from within a single academic area (management) at one institution (a large, four-year, public, research-oriented university in the Midwest), the results of the study may not be generalizable to other student populations or at different types of institutions.

Implications of gender. The fourth limitation lies in the inability to analyze the data based on gender because gender was not included among the survey instrument's demographic questions. Although the present study did not identify analyzing the relationship between gender and participants' mattering as a goal, the ability to analyze the data based on gender would have been useful, given how previous studies came to conflicting conclusions regarding gender's impact on mattering (see Anderman & Freeman, 2004; Dixon Rayle & Chung, 2007; Kodama, 2002; Strayhorn, 2012a).

Suggestions for Future Research

Despite the limitations noted, the present study suggested avenues for future research that could expand its findings and indicate other areas of mattering to explore.

These suggestions are echoed in suggestions from the literature to continue investigating students' need to belong and how programs, like peer mentoring, impact mattering (Anderman & Freeman, 2004; Budge, 2006; Crisp & Cruz, 2009; Sanchez et al., 2006).

To begin, conducting a similar study using a pre-/posttest design with follow-up (e.g., after a semester or year) would increase the validity and generalizability of the results, especially since conducting a true experiment (with randomly selected experimental and control groups) is difficult in educational research. Conducting the study among a different group of students, using a different intervention (e.g., a program other than a peer mentoring program, such as residence life participation or faculty-student research) or at a different type of institution would provide additional data describing how these programs and practices affect students' mattering. Implementing a mixed-methods design—such as adding follow-up with participants through focus groups or interviews—would also provide insight regarding what aspects of these programs are impactful for students.

As noted in the review of the literature and results, students of color, international students, first-year students, transfer students, and other student populations experience barriers to their sense of belonging or mattering that merit further exploration. One suggestion, based on the results of the present study, is to conduct focus group or individual interviews among students of color and international students, including those who participated in mentoring programs or other types of interventions and those who did not. Among participants, understanding what aspects of the programs increase mattering-vulnerable students' sense of belonging would prove beneficial; however, aspects of the programs might not seem effective for increasing these students' sense of belonging, and

further research could show which need adjustment or removal. Among nonparticipants, particularly with respect to voluntary programs, research could help program leaders and university administrators understand why these students choose not to participate in beneficial programs and how to communicate with or serve these students more effectively.

Finally, as noted previously, the impact of gender on mattering also merits further research. Kodama (2002) indicated few studies at that time considered gender as a salient element of college students' experience. Further, Strayhorn (2012a) described gender as one of several identities contributing to students' sense of belonging. Exploring gender as part of the research proposed above could help resolve the existing conflict in the literature regarding whether female students tend to feel they matter more or less than their male peers (Anderman & Freeman, 2004; Dixon Rayle & Chung, 2007; Kodama, 2002), which could have significant implications for female students' mental health (see Dixon & Robinson Kurpius, 2008).

Implications for Practice

The results of this study suggested the peer mentoring program had a positive impact on students' mattering overall and, at least for this reason, merits continuation. That said, practitioners should exercise caution in implementing similar programs within their own departments or institutions. Past studies found institutional context impacts the success of particular programs, and fostering commitment among key groups of students, faculty, and administrators is prerequisite to implementing successful programs (Clydesdale, 2015).

Given the importance of students' mattering and feelings of belonging on their well-being and academic success, university administrators and student affairs practitioners may consider making these constructs the central focus of programs and identifying increased mattering as an intended outcome of students' participation in these programs. Further, it merits repeating: College educators and staff must work to lower barriers to inclusion and mattering that vulnerable students, such as students of color and international students, face from the outset of their university experiences. In addition, educating all students on the importance of belonging and creating inclusive campus environments could help more students feel they matter to others and are important members of the community.

Conclusion

Strayhorn's (2012a) research showed university environments and practices have a demonstrable impact on students' sense of belonging. Belonging, in turn, affects almost every aspect of students' college experiences and contributes to their decisions to persist and, ultimately, successfully complete their degrees. Findings from the present study aligned with Strayhorn's research on how particular programs affect belonging and contribute to the literature on the benefits of peer mentoring programs, though the results proved inconclusive with respect to students of color and international students. These and other mattering-vulnerable students, in particular, deserve special attention as college educators and staff seek to create environments in which all students feel they belong.

To illustrate the challenge of mattering, however, the outlying case from this study—the participant with a mattering score far lower than any other—is worth mentioning. The student, who self-identified as a student of color and did not participate

in the mentoring program, had a mattering score of 1.8 out of 6, representing low university mattering. He or she "strongly disagreed" with statements like "The people of the [university] community pay attention to me" and "I know people in the [university] community are sincerely interested in me." Given how far removed this student's mattering score was from the other scores, it is possible the participant's responses do not reflect his or her true feelings of mattering.

Although it remains impossible to know what influenced the responses of the student described above, as long as any student at any institution feels he or she does not have a significant, valued presence within the university community, college educators and staff and fellow students ought to pay attention. For the sake of caring for all students' well-being and empowering them for the highest degree of success in college, everyone in the college community must labor to create environments where every student matters—where each student feels important to others, is the subject of others' attention, experiences others' dependence, and recognizes that his or her successes and failures are the successes and failures of all.

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Appendix A

The Unified Measure of University Mattering- 15 (UMUM-15)*

Please rate the following statements in terms of the degree to which they reflect your feelings toward the [university] community. As you consider your responses, think about your relationships with those in the [university] community as a whole, rather than your relationships with specific others, and try to include the entire [university] community, including students, faculty, administrators, and staff. Please answer as honestly as possible; not all students feel the same way or are expected to feel the same way.

1 Strongly disagree – 2 Disagree – 3 Disagree slightly – 4 Agree slightly – 5 Agree – 6 Strongly agree

---

1 (1**). The people of the [university] community pay attention to me.

2 (4**). My successes are a source of pride to the [university] community.

3 (10**). There are people of the [university] community who react to what happens to me in the same way they would if it happened to them.

4 (11**). When I have a problem, people of the [university] community usually don't want to hear about it.***

5 (13**). I know people in the [university] community are sincerely interested in me.

6 (14**). Often, the people of the [university] community trust me with things that are important.

7 (16**). There are people at [university] who give me advice when I need it.

8 (22**). There are people in the [university] community who would also experience my disappointment if I didn't reach my full potential.

9 (23**). No one in the [university] community depends on me.***

10 (24**). The people of the [university] community are usually aware of my presence.

11 (25**). People of the [university] community are invested in my life.

12 (29**). My contributions to [university] benefit the [university] community.

13 (31**). People of the [university] community care what happens to me.

14 (33**). People at [university] would be upset if I were mistreated.

15 (34**). If I were not a [university] student, the [university] community would suffer.

---

*UMUM-15 courtesy of Megan K. France (2011).
**Original numbering retained from RUMS for scoring purposes.
***Reverse-scored items.

Appendix B

Permission to use Unified Measure of University Mattering

From: Megan France <mfrance@scu.edu>
Subject: Re: Requesting permission to use Unified Measure of University Mattering
Date: September 19, 2016 at 2:21:26 PM EDT
To: "Adams, David 1" <david_adams1@taylor.edu>

Hi David,

Your thesis project sounds really interesting. It's great to hear about how you want to apply the UMUM to your work. You certainly can use the measure, please just cite appropriately.

Thanks so much and good luck with your research!

Megan

On Sat, Sep 17, 2016 at 6:55 PM, Adams, David 1 <david_adams1@taylor.edu> wrote:
Hello Megan:

My name is David Adams, and I'm a graduate student in higher education and student development at Taylor University. I am writing to request permission to use your Unified Measure of University Mattering-15 in research I am conducting as part of my thesis.

My research is exploring whether students' participation in a mentoring program changes their perceptions of mattering relative to students who did not participate in a mentoring program. In addition, I am examining demographic factors (e.g., minority or international student status) that may affect students' mattering. I heard about your instrument during a presentation at the annual meeting of NASPA (Student Affairs Professionals in Higher Education) describing how it was used to assess student mattering at North Dakota State University.

Please let me know if you would like any further details on my research. I am hopeful that using UMUM-15 will provide a well-supported measure of mattering as part of my study.

Thank you for your consideration.

Sincerely,

David Adams

David Adams
Calling and Career Office Graduate Assistant
Taylor University
Office: (765) 998-5382
Cell: (765) 337-4243

The information in this communication is intended solely for the individual or entity to whom it is addressed. It may contain confidential or legally privileged information. If you are not the intended recipient, any disclosure, copying, distribution or reliance on the contents of this information is strictly prohibited, and may be unlawful. If you have received this communication in error, please notify us immediately by responding to the sender of this email, and then delete it from your system. Taylor University is not liable for the inaccurate or improper transmission of the information contained in this communication or for any delay in its receipt.

--
Megan K. France, Ph. D.
Assistant Director of Assessment
Santa Clara University
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mfrance@scu.edu

Appendix C

Informed Consent Information

TAYLOR UNIVERSITY & MIDWESTERN* UNIVERSITY

INFORMED CONSENT

Exploring Mattering among Second-Year Students Who Participated in a Mentoring Program

You are invited to participate in a research study regarding the concept of university mattering. You were selected as a possible subject because you are a second-year student in the School of Management who may or may not have participated in the Mentoring Program in fall 2015. We ask that you read this form and ask any questions you many have before agreeing to be in the study.

The study is being conducted by David Adams, a student in the Master of Arts in Higher Education and Student Development program, Taylor University, and the director of the Leaders Academy, Midwestern University.

STUDY PURPOSE
The purpose of this study is to understand what factors contribute to students' understanding of their mattering in a university community. *Mattering* is defined as "the perception that, to some degree and in any of a variety of ways, we are a significant part of the world around us" (Elliott, Kao, & Grant, 2004). For students, mattering has been correlated with academic success, stress, and persistence in college. Thus, understanding what affects mattering may help colleges and universities to develop policies and programs that will increase students' feelings of mattering, contributing to other positive effects on their education.

NUMBER OF PEOPLE TAKING PART IN THE STUDY:
If you agree to participate, you will be one of approximately 300 subjects who will be participating in this research.

PROCEDURES FOR THE STUDY:
If you agree to be in the study, you will complete an online survey on the following pages. The survey consists of demographic questions, data from which the researcher will use for analysis, and an instrument to measure mattering called the Unified Measure of

University Mattering-15, which consists of 15 questions on a 6-point scale. Your participation will end when you complete the survey.

RISKS OF TAKING PART IN THE STUDY:
While participating in the study, possible risks include feeling emotional or social discomfort as a result of the survey, which asks you to consider your relationships in the Midwestern community. As the instrument notes, there are no right answers to the questions on the survey, and not all students feel the same way or are expected to feel the same way about their role in the university community.

If you feel discomfort as a result of taking the survey, you may stop the survey at any time. If you experience discomfort, you may wish to contact Midwestern Counseling and Psychological Services**.**

BENEFITS OF TAKING PART IN THE STUDY:

There are no direct benefits to taking part in this study. However, your participation will provide valuable data for understanding mattering among college students.

CONFIDENTIALITY

Efforts will be made to keep your personal information confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law. Your identity will be held in confidence in reports in which the study may be published, and no identifying information will be collected about you unless you provide it.

Organizations that may inspect and/or copy your research records for quality assurance and data analysis include groups such as the study investigator and his/her research associates, the Taylor University or Midwestern University Institutional Review Boards or their designees, and (as allowed by law) state or federal agencies, specifically the Office for Human Research Protections (OHRP) etc., who may need to access your research records.

COSTS

There is no cost to participate in this study.

PAYMENT/INCENTIVE

You will not receive payment for taking part in this study. However, you may be entered in a drawing to win one of ten (10) $5 Starbucks gift cards or up to four (4) $25 Amazon gift cards if you complete the survey and choose to provide your email address at the end of the survey.

COMPENSATION FOR INJURY

In the event of physical injury resulting from your participation in this research, necessary medical treatment will be provided to you and billed as part of your medical expenses. Costs not covered by your health care insurer will be your responsibility. Also, it is your responsibility to determine the extent of your health care coverage. There is no program in place for other monetary compensation for such injuries. If you are participating in research which is not conducted at a medical facility, you will be responsible for seeking medical care and for the expenses associated with any care received.

CONTACTS FOR QUESTIONS OR PROBLEMS

For questions about the study or a research-related injury, contact the researchers: David Adams at 765-998-5382 the director of the Leaders Academy. If you cannot reach the researcher during regular business hours, please email David Adams at david_adams1@taylor.edu the director of the Leaders Academy, and your message will be returned as soon as possible.

In the event of an emergency, call 911. In a mental health crisis, call 911 and ask for a Midwestern Police CIT Officer or call and ask to speak with Midwestern Counseling and Psychological Services (after business hours, dial 1).

If you have any questions regarding the nature of this research, your rights as a subject, or any other aspect of the research as it relates to your participation, you may also contact Taylor University's Institutional Review Board at IRB@taylor.edu or the Chair of the IRB, Susan Gavin, at 756-998-5188 or ssgavin@taylor.edu.

VOLUNTARY NATURE OF STUDY

Taking part in this study is voluntary. You may choose not to take part, or you may discontinue the survey once you have begun if you do not wish to complete it. Leaving the study will not result in any penalty or loss of benefits to which you are entitled. Your decision whether or not to participate in this study will not affect your current or future relationship with Midwestern, the School of Management, the Mentoring Program, or other programs or staff associated with .

SUBJECT'S CONSENT

If you are at least 18 years old and a second-year student in the School of Management, you are eligible to participate in this study. Please read the statements below. If you are not 18 or not a second-year student, please discontinue the study at this time.

If you would like to keep this informed consent information for your records, please save or print this screen now. To signify that you understand the informed consent information, give your agreement to participate in this study, and confirm that you are 18

or older, type your name in the box below. Your typed name serves as your signature for this informed consent form. Your name will not be associated with survey data.

In consideration of all of the above, I give my consent to participate in this research study.

Subject's Typed Name: _____

Printed Name of Researchers Obtaining Consent: David Adams & the director of the Leaders Academy

Date: October 1, 2016

*References to the institution's name have been replaced with "Midwestern." References to the name of the School of Management, the Mentoring Program, and the director of the Mentoring Program, as well as specific contact information for these and services at the institution, have been omitted to prevent identification of the institution.

Appendix D

Survey Description

The survey was delivered in electronic format via SurveyMonkey. The first page of the survey contained informed consent information. If participants did not provide consent by typing their name, they were unable to continue the survey.

Page two collected demographic information, as follows:

1. Are you Hispanic or Latino or of Spanish origin?
    a. Yes
    b. No
    c. Prefer not to answer
2. How would you describe yourself?
    a. American Indian or Alaska Native
    b. Asian
    c. Black or African American
    d. Native American or Other Pacific Islander
    e. White
    f. Two or more races
    g. Prefer not to answer
3. Are you an international student (i.e., a student from a country other than the U.S. studying in the U.S. on a non-immigrant basis)?
    a. Yes
    b. No
    c. Prefer not to answer
4. Did you participate in the Mentoring Program* as a first-year student in fall 2015?
    a. Yes
    b. No

Page three consisted of the instrument, the Unified Measure of University Mattering-15 (see Appendix A). Participants were able to respond to the questions on a 6-point scale, as described in the instrument.

Page four consisted of a description of the incentive and the opportunity to enter their university email address, if they wished to be entered in the incentive drawing.

Appendix E

Participant Invitation Emails

Participant Email #1

Dear Management* students,

You are invited to participate in a study regarding students' mattering in the Midwestern community. *Mattering* is defined "the perception that, to some degree and in any of a variety of ways, we are a significant part of the world around us" (Elliott, Kao, & Grant, 2004). In other words, mattering answers the questions, "Do we make a difference; do others care about us and make us feel we matter?" (Schlossberg, 1989).

For students, mattering has been correlated with academic success, stress, and persistence in college. Thus, understanding what affects mattering may help colleges and universities to develop policies and programs that will increase students' feelings of mattering.

If you are interested in participating in this research, you will complete a short survey that will take no more than 15 minutes to complete. The survey includes informed consent information and asks demographics questions for analysis. Then you will answer a series of questions (in "strongly disagree" to "strongly agree" format) designed to measure your perception of mattering in the university community.

Participants who complete the survey and provide their email address will be entered in a drawing to win one of ten $5 Starbucks gift cards.

To take the survey, simply visit: [hyperlink omitted].

If you have any questions about your participation, please email one of the researchers below:

- David Adams, a graduate student from Taylor University: david_adams1@taylor.edu
- Director of the Leaders Academy, Midwestern University

Thank you,

David Adams and director of the Leaders Academy

Participant Email #2

Dear Management students,

I hope your spring semester is off to a good start! Thanks to all of you who've participated so far in our study about students' mattering in the Midwestern community—your input will be valuable as we continue to explore mattering and its impact on students' education.

For those of you who haven't participated yet, here are three good reasons to do so today!

1) The research will help us understand *mattering* ("the perception that … we are a significant part of the world around us" (Elliott, Kao, & Grant, 2004)), which has been shown to improve students' well-being and academic success.
2) The research will help us learn how to increase mattering in students via programs and other initiatives in the School of Management.
3) It only takes about 15 minutes to complete—and you'll be entered to win one of ten $5 Starbucks gift cards if you do!

Interested? Just visit [hyperlink omitted] to complete the survey.

If you have any questions about your participation, please email one of the researchers below:

- David Adams, a graduate student from Taylor University: david_adams1@taylor.edu
- Director of the Leaders Academy, Midwestern University

Thanks again for your contribution to this research!

- David Adams and director of the Leaders Academy

Participant Email #3

Dear Management sophomores,

Thanks so much to the 70+ of you who have participated in our study about mattering and mentoring. Here's the survey link again if you'd still like to take it: [hyperlink omitted].

To maximize the survey's validity, we still need more of you to complete the survey. That's why we're going to offer even more chances to win a prize, just for helping us with this research! Here's what we're offering:

For each additional 50 participants who complete the survey between now and January 31, ***we'll add a $25 Amazon gift card to the drawing****, up to four gift cards!* (That's in addition to the ten $5 Starbucks cards we're already giving away.)

So, if you haven't taken the survey yet, do so today: [hyperlink omitted].

If you have done the survey, you're already entered to win—but you can increase the prizes by asking other Management sophomores to take it. Just remember: Only one survey response per person, and only Midwestern emails are valid for entry.

Thanks again for helping us with this research!

David Adams and director of the Leaders Academy

Participant Email #4

Dear Management sophomores,

Thanks to the 102 of you who have now taken the survey for our study of university mattering! **Just 18 more of you need to complete the survey to reach our first $25 Amazon gift card!**

Remember, for every 50 new responses, we'll add a $25 Amazon card to the giveaway. Take the survey here: [hyperlink omitted]. If you've already taken the survey, please encourage your friends who are Management sophomores.

Just remember: Only one survey response per person, and only Midwestern emails are valid for entry.

Thanks again for helping us with this research!

David Adams and director of the Leaders Academy

Participant Email #5

Dear Management sophomores,

You've reached the first $25 Amazon gift card! Thanks to the 151 of you who have now taken the survey. Just 19 more need to complete it to reach our ***second*** **$25 Amazon gift card.** Take the survey here: [hyperlink omitted].

We'll keep adding a $25 Amazon card to the giveaway for every 50 new responses up to 270. If you've already taken the survey, please encourage your friends who are Management sophomores! Just remember: Only one survey response per person, and only Midwestern emails are valid for entry.

Thanks again for helping us with this research!

David Adams and director of the Leaders Academy

Participant Email #6

Dear Management sophomores,

Thanks to the 183 of you who have now taken the survey—**you've reached the second $25 Amazon card!** To reach the third gift card, 37 more of you need to take the survey, but ***this is your final reminder!*** The survey will close Friday at 11:59 p.m. If you're still holding out, here's the link one more time: [hyperlink omitted].

If you've already taken the survey, please encourage your friends who are Management sophomores! Just remember: Only one survey response per person, and only Midwestern emails are valid for entry.

Thanks again for helping us with this research!

David Adams and director of the Leaders Academy

*References to the name of the School of Management, the Mentoring Program, and the University have been omitted or replaced.