THE SOPHOMORE RA EXPERIENCE: AN EXAMINATION OF JOB SATISFACTION, TURNOVER INTENTIONS, AND RA SELF-EFFICACY

By

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ABSTRACT

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The purpose of this national, quantitative study was to (1) provide psychometrics for the ACUHO-I/EBI RA Survey, a joint project between between Educational Benchmarking, Inc (EBI) and The Association of College and University Housing Officers – International (ACUHO-I), and (2) explore the sophomore resident assistant (RA) experience. This study used a pre-existing, database compiled with the results of the ACUHO-I/EBI RA Survey distributed to residence life staff during the fall semester of 2004 and the spring semester of 2005. The sample included completed surveys from 1,443 sophomore RAs representing 61 institutions from the District of Columbia and 28 states.

While the RA Survey continues to be used extensively for benchmarking and assessment purposes at institutions nationally, no evidence of construct validity measures is readily available. This study examines the psychometrics, construct validity and reliability, of the RA Survey when administered to a sophomore RA sample. Analysis included inter-item correlations, confirmatory factor analysis, and Cronbach's Alpha reliability measure.

The results of this study provide researchers and administrators evidence of reliability, validity, and information about item characteristics for the RA Survey when used with sophomore RAs. The 10-factor structure is deemed appropriate for the sophomore RA sample based on acceptable values for RMSEA, CFI, TLI, WRMR, and factor loading and serves as

evidence of construct validity. Cronbach's alpha reliability coefficients ranging from 0.84 to 0.95 indicated internal consistency for the 10-factors. Results also demonstrated incidences of multicollinearity. Implications highlight the need for practitioner expectation and usage of psychometric evidence prior to the utilization of assessment instruments.

Sophomore RAs exist at a point where the sophomore experience and the RA position intersect. Sophomore students contend with specific struggles and challenges unique to their class standing. Resident assistant positions are demanding, hardly an ideal environment for sophomore students already under stress. This study addressed the associations between specific factors attributed to the sophomore student (gender, expectations, and GPA), resident assistant position factors (role of the hall director, training, and work/life conditions) and outcomes (job satisfaction, turnover intention, and RA self-efficacy). Sophomore RA experience analysis included mean group differences via multivariate analysis of variance (MANOVA) and univariate analysis of variance (ANOVA) for gender, academic performance, and turnover intention and correlations between expectations, role of the hall director, training, work/life conditions, job satisfaction, and RA self-efficacy.

Results found sophomore RAs satisfied with all aspects of their RA position, demonstrated acceptable to high academic performance, and are committed to their RA positions given most will return to their RA positions. The study offers a confirmed presence of sophomores hired in RA positions and a confirmed sophomore RA attrition rate (return to the RA position for a second year). The study also provides a sophomore RA experience factor relationship structure. Furthermore, the implications suggest that the RA position may serve as an unintentional Sophomore Year Experience (SYE) program for sophomores hired as RAs.

Sandra Marie Brandt * February 26, 1954 – December 8, 2010
Charles Arthur Brandt * April 3, 1953 – February 21, 2012

Valuing education was instilled in me by my parents.

My parents taught me that education was essential and more than just the final product. The value came in the process; exploring the unknown through trial-and-error was respected. My parents cultivated a home where making mistakes was accepted and trying something new was a daily occurrence. Creativity was an expectation. My mother was a master of creativity. She excelled at crocheting, painting, and making the most fantastic Halloween costumes. She was always able to find a solution using a new and innovative application of an old item. My father could fix just about anything. What he did not know how to fix, he learned how to from reading a book or by simply taking it apart. From cars to plumbing and even the occasional potato cannon, he could figure it out. I am humbled by their imagination and resourcefulness and wish I had more opportunities to learn with them. They will remain a true inspiration. I am forever grateful to them for raising me to be an inquisitive, critical-thinking, problem-solver. I will always be thankful to them for their unconditional love and support. Above all, they let me be an original. I miss them more than I could ever put into words. Gone, but never forgotten…

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CHAPTER 1
INTRODUCTION

The economics of education have changed. Funding sources for institutions are more limited. With funding sources constrained, institutions must compete for what funds are available and, in doing so, are expected to provide proof of student performance with indicators such as persistence and graduation rates. Graduation rate as an indicator is often measured by first-time, first-year enrolled students who persist to graduation. With this emphasis on first-year students, student retention during the first-year became increasingly important. However, the increased focus on the retention of first-year students and persistence has not fully accounted for low graduation rates. In response, administrators and researchers broadened their investigation for additional factors to account for low graduation rates to include sophomore students. Investigation of the sophomore experience started in the early 90s and gained momentum with research that established a sound description of the characteristics of the sophomore year. Despite the attention on the sophomore experience over the last decade, research on the sophomore cohort has declined. With an established description of the sophomore experience, researchers can renew their interest in the sophomore student by exploring how the sophomore experience manifests itself when sophomore students take on unique, yet critical roles within the institutions, such as peer mentor positions.

Resident assistants (RA) are peer mentor positions employed in residence life departments across the nation. As sophomore students become a larger presence in this position, residence life departments have a responsibility to better understand this unique

population within their staff; a population recognized to account for a portion of university attrition rates. The current study explores the sophomore RA experience, the result of a sophomore student in an RA position, while using Astin's Input-Environment-Outcome (I-E-O) Assessment Model (Astin & antonio, 2012) as a framework by which to organize the factors.

This first chapter addresses the purpose of the current study, which explores the sophomore RA experience as it relates to job satisfaction, turnover intention, and RA self-efficacy. This chapter includes sections on the research problem, statement of significance, definition of terms, purpose and research questions. As context for the research problem, chapter one begins with a discussion on student attrition, the sophomore experience, engagement as peer mentors, resident assistants (RA), the sophomore RA and assessment in student affairs.

Student Attrition

Researchers and administrators have dedicated ample time, energy, and resources into reforming and reassessing the first year of college. The Carnegie Foundation for the Advancement of Teaching in 1987 published a report, *College: The Undergraduate Experience in America*, recommending the initiation of efforts to help first-year students succeed (Boyer, 1987). Efforts included changes in pre-enrollment and orientation programs as well as improved student support via academic advising, counseling, and faculty-student interaction. As the focus on the first-year intensified, improvements surfaced in wellness programs, student activities, and residential housing. The improvements and programs developed for this first-year population grew and became collectively known as First Year Experience (FYE) Programs, which have become standard practice on many college and university campuses. Assessing the

effectiveness of FYE Programs reveals improved student retention from first year to sophomore year (Fidler & Moore, 1996; Hotchkiss, Moore, & Potts, 2006; Jamelske, 2009; Schnell & Doetkott, 2003). With retention as an underlying goal, administrators were comfortable with FYE Program successes and anticipated an improved graduation rate (Lang, 2007; Schnell, Louis, & Doetkott, 2003). Administrators were left with the illusion that persistence to the second year meant that their students were "over the hump" of transitioning to college, and the retention problem was solved.

The "over the hump" mentality seems to be nothing more than a couple of myths; "the first myth is that 'the retention problem,' is primarily a problem of the first-year; and the second [myth] is that if we concentrate retention programming on the first-year, we will have adequately addressed the problem" (Gardner, Pattengale, & Schreiner, 2000, p. 90). Significant attrition rates have been reported both during and at the conclusion of the sophomore year with estimates of between 10% (Lipka, 2006) and 13% (Adelman, 2006) of the sophomore class leaving college. A survey of 65 private institutions associated with the Council of Christian Colleges and Universities (CCCU) revealed that only 25% of students left before their sophomore year while 41% left before their junior year, resulting in a 17% attrition rate from sophomore to junior year (Lipka, 2006). Similarly, of 1,208 newly admitted first-year students in the fall of 2005 at a public, urban, research university, 75% were retained to the second year, of those, only 76% were retained to the junior year, resulting in a 24% attrition rate (Smith, 2010). Further, the Consortium for Student Retention Data Exchange, with data from 440 four-year institutions, reported that while 81% of first-year students who enrolled in 2003 returned for their sophomore year, only 71% of those students were still enrolled as

juniors at their original institutions in fall 2005 (Lipka, 2006). Students starting in 2004 at four-year institutions showed a similar trend with 80% of first-year students returning as sophomores in 2005, with only 71% of these students still enrolled as juniors in 2006 (The Consortium for Student Retention Data Exchange, 2007). Sophomores are indeed leaving and "the academy's middle child, the sophomore, is beginning to earn the kinds of attention that has been trained on first-year students for decades" (Schaller, 2005, p. 17). With student persistence and retention as a driving force, there is a growing movement in higher education to reexamine the sophomore-year experience on college campuses (Gahagan & Hunter, 2006).

Efforts to better understand sophomore attrition rates have helped researchers discover different reasons why students leave after the first year as compared to leaving after the sophomore year. Reasons for leaving after the first year have included financial, academic, psychological, sociological, and/or cultural influences and challenges (DeBerard, Spielmans, & Julka, 2004; Ishitani, 2006; Paulsen & St. John, 2002; Reynolds & Weagley, 2003; Tinto, 1975, 1993; Zhang & RiCharde, 1998). Students leaving during or after their second year cited issues related to the school itself or discrepancies between the students' initial expectations and the schools ability to deliver and/or meet those expectations (Boivin, Beuthin, & Hauger, 1993; Boivin, Fountain, & Baylis, 2000). With growth in attrition between sophomore and junior year and the recognition that sophomores have a distinct set of reasons for leaving school, the sophomore year experience has become increasingly pertinent to those seeking to understand the causes of attrition.

Sophomore Experience

Sophomore students appear to share common struggles with each other, a

phenomenon once referred to as the sophomore slump. The experience of sophomore slump has been defined as a period of dissatisfaction, uncertainty and confusion (Feldman & Newcomb, 1969; Furr & Gannaway, 1982). These sophomores share common struggles that include establishing identity, desiring autonomy, achieving competence, and developing purpose that culminate in a period of developmental confusion (Flanagan, 1991; Lemons & Richmond, 1987). Additionally, sophomore students struggle to find answers to many other questions related to personal identity, future goals, and beliefs about politics and religion (Pattengale & Schreiner, 2000). Finally, sophomore students experience a disconnect between their personal need to explore social, moral, and interpersonal issues and the university's exclusive focus on academic needs (Lewallen, 1993).

Adding to the stress of college is the pressure to declare an area of study. Choosing a major is necessary to progress towards graduation, and institutions often require a declared major by junior year. Decisions regarding a major and career have been viewed as important to identity development as are decisions of lifestyle preferences and values (Furr & Gannaway, 1982; Lemons & Richmond, 1985). Yet a decision on a major is complicated by the curriculum. Increased requirements can make courses more rigorous and may take on a new level of difficulty for those sophomores now enrolled in classes they avoided during their first year (Henscheid, 2002). Furthermore, sophomores are typically meeting general education requirements and are not yet involved in coursework relating to their major. The lack of major coursework in their schedules creates a "'curricular dead space' that leaves students 'free-floating'" and lacking direction (Gaff, 2000, p. 48). In addition to these curricular struggles, sophomores are burdened with the stress of making a decision about their career while

realizing this is their life, not an abstract concept or the life of their parents or peers (Boivin, Fountain, Baylis, 2000). Given this, at times, frightening realization, there exists a need for strong, yet caring, advising relationships (Anderson & Schreiner, 2000). This need can be in direct opposition to the students' perception that they are (or must) make these life altering decisions about a major and a career without any guidance (Barr 2003; Bass-Green 2003).

Ironically, at a time when support is crucial, sophomores find that they are no longer supported by the university like they once were (Boivin, Fountain, & Baylis, 2000; Gahagan & Hunter, 2006; Pattengale & Schreiner, 2000); "The sophomore year is likely to be the time when students cannot obtain the... institutional attention they may have received as first-year students" (Flanagan, 1991, p. 5). Yet sophomore students have some of the highest expectations and strongest needs of any class level (Juillerat, 2000). High needs and expectations left unmet and unsupported leave this population of sophomore students "stranded in no-[person's] land" (Richmond & Lemons, 1985, p. 176).

Engagement as Peer Mentors

Although sophomore students are unique in many ways, they still benefit from engaging in co-curricular activities. Administrators, particularly those connected with student affairs, are well aware of the importance of engaged students. How co-curricular activities and experiences enhance classroom content knowledge is well documented (Springer, Terenzini, & Pascarella, 1995; Terenzini, Pascarella, & Blimling, 1996), as is the positive influence of involvement in college on developmental outcomes (Astin, 1977, 1985, 1993). Sophomore students have spent the previous year learning to navigate their new university environment and are primed for more engagement. Opportunities for involvement are ample and range

from general membership in clubs or organizations to leadership positions in student organizations. Additionally, university departments routinely tap the available skills of students for positions such as peer mentors.

Peer mentors serve as role models to fellow students in the form of tutors, counselors, assistants, educators, and mentors where they provide support and guidance to their peers (Ender & Newton, 2000; Gould & Lomax, 1993). The role of students as peer mentors is documented in the colonial period when students were hired as tutors (Ender & Newton, 2000). This tradition has grown over time with 86% of institutions responding to a national higher education survey reporting the use of students as peer mentors (Carns, Carns, & Wright, 1993). Peer mentors have demonstrated significant influence on the personal development of their peers: "the student's peer group is the single most potent source of influence on growth and development during the undergraduate years" (Astin, 1993, p. 398). Furthermore, influence is reflected in student satisfaction (Astin, 1993), academic performance (Astin, 1993; Donahue, 2004; Terenzini, Pascarella, & Blimling, 1996), retention and persistence (Astin, 1993; Bean, 1985; Braxton 2002; Tinto, 1993). Additionally, participation as a mentor has proven beneficial to the peer mentor given the "personal development of college students can be enhanced through programs that expect and encourage students to take responsibility for growth in others and provide opportunities for students to assume alternative roles" (Ender & Carranza, 1991, p. 535). In conclusion, peer mentors have long been utilized and our contemporary use of peer mentors in orientation programs and residence life continues.

Resident Assistants

Ever present on residential campuses are residence life offices that are known to

employ students as peer mentors, most often referred to as resident assistants (RA). Of 118 senior student affairs administrators from 2 and 4 year institutions, 85 reported the use of student paraprofessionals, with 81% of employed student paraprofessionals in the residence halls (Winston & Ender, 1988). From advising and counseling students, enforcing university policy, program development for their residents to connecting their residents to other campus activities and resources (Upcraft & Gardner, 1989), RAs aid in the transition to college given their front line interaction with residential students. The RA position also aids in the creation of a learning environment outside of the classroom; RAs have been described as active promoters of student learning (Barefoot, Gardner, Cutright, Morris, Schroader, & Schwartz, 2005; Kuh, Kinzie, Schuh, & Whitt, 2005). The importance and influence of these student staff members surpass the countless responsibilities described in their job description. These students also serve as the face of the university and are often the front lines for disseminating the overall value structure of the institution (Johnson & Kang, 2006). The significance of these positions lie in the general influence they have in multiple areas including those more obscure and less accountable (Bowman & Bowman, 1995). RAs have a significant influence on their residents and play an important role in creating the ideal collegiate experience. Conversely, working as an RA can have a profound effect on the individual.

Research on the influence of the RA position on the RAs themselves includes studies on burnout, stress, benefits, job satisfaction, and selection (see Deluga & Winters, 1990, 1991; Nowack, Gibbons, & Hanson, 1985; Nowack & Hanson, 1983; Winton & Fitch, 1993). Because student staff members are held responsible for multiple roles including role model, administrator, counselor, teacher, and student (Blimling, 1998), they are often overwhelmed by

the conflicting demands of their various duties. Deluga and Winters (1990) defined role conflict based on the work of Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964) as the experience of attempting to satisfy competing and incompatible role demands concurrently. For example, an RA may feel pulled between meeting the academic demands of being a student, such as studying for an upcoming exam, and feeling the need to respond immediately to a resident's personal crisis. Role conflict alone creates stress for the RA and stress has been linked to burnout (Nowack & Hanson, 1983). Additional RA stress research found that not being able to describe one's personal values and having poor health habits are also factors significantly related to stress and burnout (Benedict & Mondloch, 1989; Fuehrer & McGonagle, 1988). In addition, RA emotional exhaustion and depersonalization has been linked with less favorable job performance (Nowack, Gibbons, & Hanson, 1985). Overall, Miller and Conyne (1980) found that RAs experienced more personal problems than did a comparison group of non-RAs. Such a potentially challenging and stressful position hardly seems an ideal environment for sophomore students already under stress; yet sophomores are employed in this capacity.

The Sophomore RA

Historically, employment practices targeted upper class students, juniors and seniors, thus limiting the number of sophomores being hired as RAs. However, as the pool of candidates diminished, "residence life professionals often [felt] no choice but to hire at least some sophomore RAs" (Schaller & Wagner, 2007, p. 34). Candidate pools were once large due to the RA position being an attractive option for students to develop leadership skills and offset the cost of college room and board. Students can now find financial support at a variety of other positions on campus. Further, on-campus housing options are aging and often times less

desirable than off-campus housing and the freedom this lifestyle allows (Schaller & Wagner, 2007), enticing potential RA candidates to forgo the RA position and move off-campus instead. In a recent effort to expand the candidate pool and hire top quality RAs, first-year students have been invited to apply and have been hired. The sophomore student turned sophomore RA is now in a position of extensive responsibility with great benefit but laden with high stress and challenges. Residence life professionals are left with a unique population of sophomore RAs who have inadequate representation in the literature.

Descriptive characteristics of the sophomore year are well documented in the literature; however, little research has directly examined the experience of the sophomore student in a peer mentor position, such as the RA position. The population of sophomore RAs is left to navigate the internal struggles characteristic of the sophomore year experience while trying to be successful in their RA position. This experience as a sophomore RA with high expectations, increased responsibility, and often times conflicting demands provides the backdrop for the current study.

Assessment in Student Affairs

While assessment can be intrinsically driven, student affairs administrators are finding themselves in an environment demanding increased accountability. Legislatures, accrediting agencies, boards of trustees, donors, and prospective students are stakeholders who want evidence of successful initiatives, demonstrated quality, and accountability for results (McClellan & Stringer, 2011). Aside from external pressures, assessment in student affairs is a necessity internally for improving efficiency and effectiveness (Mosier & Schwarzmueller, 2002). The need for and application of assessment is evident; the issue of quality assessment is

a separate consideration. The quality of the instrument used in assessment efforts is of particular interest in the current study.

Research Problem

Sophomore students contend with specific struggles and challenges unique to their class standing. Further, resident assistants are intrinsically stressful positions. The sophomore year experience and the additional burden of the resident assistant position have been independently investigated and supported in the literature. Yet the sophomore resident assistant combination has just begun to emerge in the literature. The existing sophomore resident assistant literature is limited to qualitative studies, descriptive in nature, based on small sample sizes and in specific educational environments, such as Christian institutions and liberal arts colleges. This study provides the first known quantitative, national study investigating the sophomore resident assistant experience. In addition, the current study takes what is known descriptively about the sophomore year and seeks to understand how the sophomore student in an RA position experiences job satisfaction, turnover intention, and RA self-efficacy.

The ACUHO-I/EBI RA Survey, the instrument for the current study, was developed in 1999 and has been utilized extensively by residence life departments nationally for assessment and benchmarking, but remains untested by academia. The psychometric properties for the instrument as presented by EBI are limited. Statements made by EBI merely suggest construct validity and reliability measures are based on the entire population of survey respondents. Full discloser of the survey development process and psychometrics is unobtainable. Reliability and validity of the instrument when applied to sub-populations is unknown, or unavailable to the

general public. Research conducted about this instrument has been internal to EBI. Additional research on the ACUHO-I/EBI RA Survey is necessary to confirm the factor structure and psychometric properties of the survey for a group of sophomore RAs.

Statement of Significance

The current study takes what is known independently about RAs and the general population of sophomores and explores the space in which these two populations overlap as sophomore RAs. Broadly, the current study will add depth to the sophomore student literature. Relative to the first-year of college, the sophomore year experience remains understudied. However, Tobolosky (2008, p. 60) reminds us that "Educators should be interested in the sophomore year because this is the year in which students make many of the decisions that help them succeed in subsequent years, such as clarifying their sense of purpose, making major declarations, and narrowing their career options." The current study is an attempt at understanding a subset of the sophomore population in a distinct environment, the RA position. Understanding further this sophomore RA experience may expose insight into the experience of sophomores in peer mentorship positions. New perspective on sophomore peer mentors has potential application across campus to other peer mentor positions such as alternative spring break, leadership camps (i.e., LeaderShape), student organizations, and student governance.

Also broadly, as institutions compete for students, financial support, and resources a great deal of attention has been placed on graduation rates, which forces consideration of attrition rates. Who is leaving and why? Merely increasing the first-year to sophomore year retention rates fails to account for the complexity of graduation rates. Even an unrealistic first-

year retention rate of 99% would yield, at most, a graduation rate of 86.5% suggesting the need for improved retention rates of both sophomores and juniors (Lehigh University, 2002). Furthermore, only a third of the retention problem is attributable to first year students; therefore, making improvements to the retention of the first year cohort alone is inadequate (Swail, 2004). Sophomores are leaving institutions as transfers and dropouts. Sophomore RAs at a very basic level are sophomores in an invasive intervention environment, the RA position. By understanding further the associations between the RA position environment on the intent to return for sophomore RAs, institutions may be provided with strategies to utilize when developing, improving, and assessing sophomore retention initiatives.

Further, retention has financial implications. Research has demonstrated the cost effectiveness of retaining a student as opposed to recruiting a new one (Braxton, 2000; Tinto, 1993). As funding sources change from state to private support (including donations, grants, and students' tuition payments), retention to the junior year positively impacts an institutions' bottom line. On a smaller scale, cost effective strategies are equally valuable at the residence life department level in regard to retaining staff members. A great number of hours go into the selection and training of RAs; to retain these students for at least two years is definitely of value, especially if they are good staff members. Furthermore, returning staff members play a special role in mentoring new staff members and may bring a higher level of expertise to the RA position. By exploring and better understanding how sophomore RAs experience their RA responsibilities and position, supervisors can amend criteria and tools used in the selection of new RAs and identify appropriate training topics for their staffs. Furthermore, efforts can be made to prepare and better support these sophomore RAs.

While the current study may provide value at the institutional and organizational level, worthwhile significance is present at the student level. The sophomore experience is not without its trials and tribulations. Tremendous growth and development occurs during the sophomore year and life altering and defining decisions are upon the students. Couple this sophomore experience with the RA position laden with stressors. Sophomore RAs are in positions where they are expected to help their residents deal with many of the same issues they themselves are challenged with. Sophomore RAs are working to navigate their sophomore year with the help or potential hindrance from the residence life system they are employed with.

The combination of the sophomore experience with the RA position may be filled with what appears to be an almost unmanageable collection of pressures coming from all directions. However, the exact opposite may be occurring. Being an RA during the sophomore year may be just one of many engagement activities that sophomores may decide to participate in which help overcome the struggles of the sophomore year. If indeed the RA experience serves as a strategic support mechanism there is reason to learn more about what aspects of the RA position provide this support. Once identified, these components could be explored in other engagement opportunities and considered in the development of new initiatives to support sophomore students.

Finally, the current study tested the psychometric properties of the ACUHO-I/EBI RA Survey. While this survey continues to be used extensively for benchmarking and assessment purposes at institutions nationally, no known construct validity measures are readily available to researchers and administrators. EBI has published at least one white paper report ensuring

psychometric validity of EBI studies. The document highlights face validity and provides a passing reference to convergent and divergent validity, but fails to provide adequate evidence of the construct validity of the survey. EBI consistently reports high reliability coefficients (Cronbach alpha) annually based on the entire population who participated that year, but does not address subsets within the population. Furthermore, after an extensive review of the literature, no known peer reviewed article has been published testing the rigors of the RA Survey. Given the application of these survey results at institutions for assessment leading to decision making, strategic planning, budget allocations, and program development, continuation, and elimination, it is important that the RA Survey must measure what it claims to measure.

The results of the current study have immediate application and consequence to residence life departments who have already implemented the ACUHO-I/EBI RA Survey, specifically as it relates to sophomore RAs who have completed the survey.

Purpose and Research Questions

The purpose of the current study was to (1) provide psychometrics for the ACUHO-I/EBI RA Survey and (2) explore the sophomore RA experience. More specifically, the current study examines the construct validity of the RA Survey through confirmatory factor analysis and reliability measures for a sophomore RA sample. In addition, associations between specific factors attributed to the sophomore student (gender, expectations, and GPA), resident assistant position factors (role of the hall director, training, expectations, and work/life conditions) and the outcomes or output measures (job satisfaction, turnover intention, and RA self-efficacy) are explored.

The current study explores the sophomore resident assistant experience through the following research questions:

1. Does the ACUHO-I/EBI RA Survey serve as a valid and reliable instrument when used with sophomore RAs?
2. What relationships exist between the remaining valid and reliable factors to better understand the sophomore RA experience?

Definition of Terms

For the purposes of the current study, the following terms are defined to allow for common understanding.

Association for College & Univeristy Housing Officers International (ACUHO-I). ACUHO-I is an international professional organization with members representing over 950 colleges and universities and over 200 private companies and organizations committed to developing exceptional residential experiences (ACUHO-I, 2013).

Attrition. Attrition is the loss of students from one semester or year to the next. This loss may be voluntary or involuntary such as dismissal for poor academic performance.

Educational Benchmarking Incorporated (EBI). EBI is a private company with a mission, "to empower college educators to positively impact student retention, success, learning and satisfaction; to improve the overall quality of the college student experience" (EBI, 2013). EBI partnered with ACUHO-I to develop residence life assessment tools including the ACUHO-I/EBI RA Survey (currently called the ACUHO-I/EBI Student Staff Assessment).

First year student. A student entering college with full-time status for the first time; alternately referred to as a freshman student (Upcraft, Gardner, & Barefoot, 2005).

RA Survey. The ACUHO-I/EBI RA Survey instrument developed in collaboration between EBI and ACUHO-I. This instrument measures perceptions and attitudes concerning RAs satisfaction with the RA position.

Resident. An undergraduate student living in an on-campus residence whom the RA has responsibility for.

Resident assistant. A paraprofessional student position living and working in an on-campus residence who holds the responsibility for managing a group of students living in the same residence (Upcraft, Pilato, & Peterman, 1982). Institutions tend to use various terms to refer to this position including, but not limited to, resident advisor, resident mentor, community advisor, or mentors. As previously established, resident assistant is abbreviated as RA.

Residence Hall. A university operated facility for students residing on-campus in which residence life staff provide an educational learning environment integrated within the social atmosphere while attending to a student's development is a residence hall (Pike, Schroeder, & Berry, 1997; Schroeder & Mable, 1994).

Residence Hall Director (RHD). A RHD is a full-time, live-in professional employed through residence life. The RHD has responsibility for the residents residing within a building or complex of multiple buildings with regard to student comfort, safety, and development through the implementation of programs and management of staff and residence life policy (Komives & Woodward, 2003). The RHD may also be referred to as a Hall Director.

Retention. Retention by definition means the act of retaining (Retention, 2013); continued enrollment from one semester or year to the next. For the purposes of the current

study, retaining sophomore students to their junior year at a single institution is one aspect of this concept. Retaining sophomore RAs to an additional year as an RA is the second aspect. Where these two aspects intersect is when a sophomore RA is retained into their junior year in college, but is not a RA during that junior year.

Sophomore student. Students in their second year of college. While class standing is typically defined institutionally by a pre-selected number of credit hours attained, emphasis is placed on years in college. It is not uncommon for a first-year student to arrive with transferable credits attained through transferred courses or pre-college assessments such as Advanced Placement (AP) Program test scores. In these cases, students may be categorized as sophomores mid-way through their first year in college. Also, a second year student could be defined as a first-year student if fewer credits were taken during the first year or, a junior if extra credit hours were taken.

Document Overview

Chapter 1 provided a brief overview of the research topic, topic significance and an introduction to the specific research questions that seek to clarify the experience of a sophomore resident assistant, the influence on job satisfaction, self-efficacy, and turnover intention. Chapter 2 reviews relevant literature to the current study. Chapter 3 discusses the methodology and instrumentation. The results for the current study are reported in Chapter 4. Chapter 5 discusses the results for the current study and shares implications for practice.

CHAPTER 2
LITERATURE REVIEW

The framework for the current study is based on two areas of research: sophomore students and resident assistants (RA). The first section examined the literature relating to the sophomore experience. The second section of this chapter examined the literature specific to RAs. The population of interest for the current study lies at the intersection of these two areas, sophomore RAs. The third section of this chapter provided an overview of the limited research on sophomore RAs. Throughout the review of literature on RAs and the framework of the sophomore experience, a foundation is provided for the current study, which is to understand the interplay between sophomore RA job satisfaction, turn-over intentions, and RA self-efficacy. The final section of this chapter provided an overview of the I-E-O Assessment Model as the conceptual framework for the current study.

The Sophomore Experience

A review of the literature on the sophomore experience begins by defining the sophomore student. Early literature on the sophomore population is presented including a discussion of the sophomore slump. Next, the most current national studies on the sophomore experience. The remainder of this section explores relevant factors related to the sophomore year including gender, major selection, academic performance, relationship with faculty, lack of institutional support, and dissatisfaction with relationships.

Sophomore Students

Sophomore students are defined in the literature as a traditional, undergraduate students enrolled in their second full year of full-time academic coursework with the emphasis

placed on the second year of college (Gahagan & Hunter, 2006; Juillerat, 2000). This definition is based on an identified period of time, two years, as opposed to an institutional definition. Institutionally, class standing is typically defined by a pre-selected number of credit hours attained. Defining student status by attained credit hours can be deceptive. First-year students could transfer in enough credits through transfer or other pre-college testing (i.e., Advance Placement) to be categorized as sophomores (by credit hour) mid-way through their first year in college or "before they even attend their first college class" (Gahagan & Hunter, 2006, p.19). On the other hand, a student in the second year of college could be institutionally defined as a first-year student if the student did not complete a full course load during the first year. For the purpose of the current study, a sophomore will be defined as a student in their second year of college.

Foundational Sophomore Experience Literature

A discussion of the foundational literature related to the sophomore experience is necessary as it provides the structure upon which the current study is built. These foundational pieces were groundbreaking in revealing a relatively unknown student population, sophomore students. Recent and current sophomore experience researchers frequently cite the initial studies and much has gone into affirming what was initially shared anecdotally.

In the 1930s, sophomore students were first identified as a group in need of additional support (Padelford, 1935; Woodworth, 1938). Padelford (1935) and Woodworth (1938) presented rationale for, and details of, sophomore targeted tutorial programs at Colgate University and Lawrence College, respectively. Administrators at Colgate and Lawrence expected sophomore students to make decisions regarding their major by the end of the

sophomore year; this is consistent with the current expectation (Anderson & Schreiner, 2000). Woodworth recognized and wrote about the importance of declaring one's "choice of major" (p. 89) during the sophomore year and Padelford acknowledged that "the decisions made and the work done during the sophomore year form an important part of the student's academic life" (p. 59). Through these decisions on major, sophomore students are given little support; "the sophomore is without any particular help from the college officers, who feel that he [sic] is now oriented and that they must devote their energies to orienting the incoming class" (Woodworth, 1938, p. 89). In addition to noting the lack of institutional support, Woodworth anecdotally shared concern over behavior problems present during the sophomore year including lower grades than first-year students, checking-out fewer library books, and causing more social problems than any other class at the college. Based on these observations, the Lawrence College tutorial program was initiated in an effort toward mitigating challenges facing sophomore students and "mak[ing] that year a functional part of the four-year program" (Woodworth, 1938, p. 90). The purpose of the Colgate plan was to encourage strategic student-faculty interactions, help students grasp the fundamental concepts of courses in their chosen concentrations, explore and identify lifelong interests, make interdisciplinary connections, and prepare for senior comprehensive exams (Padelford, 1935).

Almost 20 years later, the interest in the sophomore year resurfaced in the literature. In 1956, Mervin Freedman shared a personal account of his experience working with students at Vassar College from entry to graduation. Freedman's account of the sophomore year highlights the role of selecting a major. While students' decisions of major indicate students' dedication to the field and awareness of this decision on one's life plan, Freedman noted that in large

numbers, students select “fashionable” majors or fields in which they “like” other students or faculty (p. 21). Freedman also commented on persistence to junior year; socially oriented and rebellious students withdrew during the sophomore year at the highest rate. Students driven by an interest in men and meeting their future husband left as well. The remaining students who connected with their major on a deeper level were found to move through their academics smoothly and were “industrious and enthusiastic about academic work” (p. 22). While historical context is necessary to consider, Freedman does confirm a trend present today; students are leaving college during and after the sophomore year. Freedman coined the term “sophomore slump” and believed the term best described the “second semester of the freshman year” (1956, p. 22). Regardless, the term “sophomore slump” is commonly used throughout contemporary educational literature.

The term sophomore slump has been co-opted and modified by several researchers. Feldman and Newcomb (1969) define “sophomore slump” as a students’ dissatisfaction with both the college and their personal college experience. Furr and Gannaway (1982) used the term as a way to describe the uncertainty and confusion experienced during the sophomore year. Richmond and Lemons (1985) suggested using “sophomore slump” as a term to broadly describe the maladies of the sophomore class. Attempts to define the term more specifically were challenging; Richmond and Lemons argued that the multitude of problems and the risks associated with lumping the problems of individual students together, supported a broad definition. Lemons and Richmond (1987) also described “sophomore slump” as a period of developmental confusion for the students. Margolis (1976), from a counseling perspective, took a deeper look at “sophomore slump” and suggested that the phenomenon was more of an

identity crisis involving a student's social, academic, and personal self. While Margolis (1976) did find the term "sophomore slump" applicable to students facing similar struggles, he felt the term itself "too stereotypical, not truly descriptive of the individual components of the crisis, and not encouraging in its terminology" (p. 133). Regardless of the definition, these authors seem to be in general agreement that challenges unique to the sophomore year are noteworthy.

Current Understanding of the Sophomore Experience

Although research on sophomores remains limited, research published from the late 90s to 2010, with samples collected in 1998 through 2007, provide the most current information on the sophomore experience. The overview of the current literature is presented chronologically and an in depth review of significant aspects of the literature follows.

The first quantitative, multi-institutional study on the sophomore experience (Juillerat, 2000) was published in *Visible Solutions for Invisible Students* (2000) marking the first book-length publication focused exclusively on the second college year. The monograph, published by The National Resource Center for The First-Year Experience and Students in Transition at the University of South Carolina, made the first commitment to include sophomore students in their research mission. "The center's expanded mission to advocate for a broader focus on 'students in transition' led to a call for attention to efforts to improve the… second or sophomore year" (Hunter et al., 2010, p. 3).

Extrapolated from a national dataset utilizing the Student Satisfaction Inventory (SSI) (Schreiner & Juillerat, 1993b), an attempt to assess the unique expectations and satisfaction levels of sophomores was made (Juillerat, 2000). The first sample included students who

completed the SSI during the 1998-1999 academic year and was used to determine differences between expectations and satisfaction by class level. The second sample was limited to first-year and sophomore students at 64 private, religiously affiliated colleges who completed the SSI in the fall of 1998 and was used to explore retention issues in students who persisted compared to those who dropped out. While sophomores were found to be similar to other students in many ways, sophomores consistently displayed issues and needs unique to the sophomore population. These needs include a sense of belonging; fair student disciplinary procedures; sensible policies related to course add/drops and financial aid and billing; and approachable and tolerant administrators and faculty.

Started as a dissertation (2000) and later published (2005), Schaller conducted focus groups and individual interviews with 19 sophomore students at a midsized, private, Catholic university and developed the only broad theory of sophomore development. Utilizing identity issues (Chickering's theory) and psychosocial development (Baxter Magolda, 1992), Schaller concluded that sophomore students operated in, or moved through, four stages: "random exploration, focused exploration, tentative choices, and commitment" (p. 18) around three main aspects of their lives: "how they viewed themselves, their relationships, and their academic experiences and decisions" (p. 18). A student can be at a different stage within each of the three aspects, but if a student is able to achieve the third stage in at least one aspect, successful development is more likely (Schaller, 2005). Finally, random exploration is a feature of the first-year in college.

In a continuation of her work, Schaller gathered input from an additional 9 students from the same institution as the original 19 (Schaller & Wagner, 2007) and added 8 students

from a nonselective, private institution, and 10 students from a highly selective private institution (Schaller, 2010). No record of the date of data collection was made for these additional 18 students; one can only speculate it was done after 2007 and prior to 2010. Schaller also incorporated transition theory (Bridges, 1980) to her original theory of sophomore development. As before, random exploration is considered a first-year experience, but the additional focus on the transition between first and second year is added. Focused exploration and tentative choices are recognized stages associated with the sophomore year. Commitment follows in the junior and senior year.

While Schaller's work was groundbreaking as the first and only developmental theory on sophomore students, her sample size was relatively small and limited to private institutions. Generalizing to a public institution should be done cautiously given the work of Schreiner's (2010) 2007 Sophomore Experience Survey, which revealed that sophomores at public colleges have different experiences than their private college counterparts.

Gansemer-Topf, Stern, and Benjamin (2007) built upon the work of Schaller (2005) by expanding the sample size and adding third-year students. The sample ultimately included 54 second-year students and 55 third-year students representing 17% and 18% of their respective populations. A phenomenological design applied to focus groups was used to explore the needs and experiences of sophomores at a small, residential, highly selective, liberal arts college in the Midwest. Findings were consistent with the idea that the sophomore year experience is different than the first-year and results emphasized academics, social relationships, and extracurricular involvement.

Qualitative survey research with sophomores has also been limited to a single campus.

Graunke and Woosley (2005) surveyed sophomores to determine how academic success was affected by sophomores' experiences and attitudes. In the spring of 2002, 1,093 second semester sophomore students at a Midwest, public institution responded to the survey, with a response rate of 48%. Notable findings included the connection between GPA and both commitment to an academic major and satisfaction with faculty interactions.

A follow-up to the Juillerat (2000) study was conducted by Schreiner (2010) and shared at the National Symposium on Student Retention in 2007. Schreiner's work included 1,705 sophomores at 31 of the same faith-based institutions in an attempt to identify the significant predictors of sophomore retention. Four factors were found to increase the odds of persistence into the junior year: being male, having a higher college GPA, greater satisfaction with the campus climate, and satisfaction with the quality of instruction (Schreiner, 2010).

Schreiner continued her exploration of the sophomore experience in the spring of 2007 with the only national survey, *Sophomore Experiences Survey*, intentionally targeting sophomore students (Schreiner, 2010). Understanding of the sophomore experience and satisfaction levels were taken into consideration while also assessing levels of thriving. The sample included 2,856 sophomores attending 26 four-year public and private institutions. A portion of the participating institutions distributed the survey to only sophomore leaders or participants in sophomore programs which resulted in an unintentional emphasis on student leaders. Schreiner statistically controlled for the disproportionate number of Caucasian, female, and student leaders by weighting demographics. Although Schreiner's sample is limited and cannot be generalized to all sophomore students, because the sample represents the sophomore RA population, the study is pertinent to the current study that focuses on

sophomore RAs who are student leaders.

What is currently understood about the sophomore experience and commonly referenced has noteworthy limitations. Schreiner (2010) and Schaller (2010), both contributed chapters to the book, *Helping Sophomores Succeed: Understanding and Improving the Second-Year Experience*. This publication comprises the most current research on the overall sophomore experience. As previously noted, the data collected for these studies was collected post-2000 to 2007 with merely 18 students involved between 2007 and post-2010. With data collected primarily from 1998 to 2007, any generalization or application to populations outside this time period should be done so cautiously. Furthermore, qualitative research of shared sophomore experiences on a single campus is prominent in the literature. While this data informs our understanding of the lived sophomore experience, generalizability is limited. The literature is limited to very specific samples with an emphasis on private, religious institutions with many samples collected in the Midwest. National studies include Juillerat (2000) and Schreiner (2010) of which only Schreiner's (2010) survey intentionally explored the sophomore experience with targeted survey questions. While a general understanding of the challenges experienced during the sophomore year is known, less is understood about the influence of these challenges and has been limited to general education courses (Gump, 2007), academically at-risk sophomores (Morrison & Brown, 2006), and qualitative RA studies (Kauffman, 2008; Schaller & Wagner, 2006). A better understanding of the influence of the sophomore experience is worthy investigation.

The remainder of this chapter explores specific salient aspects significant to the sophomore experience and provides a compilation of literature related to each. The aspects

include gender, selection of a major, academic performance, retention, relationship with faculty and staff, lack of institutional support, financial concerns, and dissatisfaction with personal relationships.

Gender

The literature on the role of gender and the sophomore experience is minimal and conflicting. In her 2007 survey, Schreiner identified being male as one of four factors increasing the odds of persistence from sophomore to junior year (Schreiner, 2010). Conversely, at the University of Richmond, sophomore men were found to be four times more likely to be placed on academic probation as compared to women. Men also demonstrated great concern for their future with regard to securing employment, attaining their desired career path, and acceptance into graduate school (Bisese & Fabian, 2006). Because of the discrepancies between these data sets, gender remains a worthy topic of investigation.

Major Selection

The selection of, and commitment to, a college major is a traditional requirement within a college experience. Given that the majority of institutional policies require declaration of a major by the end of the sophomore year, some sophomore students experience this as a daunting task (Juillerat, 2000). Upwards of 12% of sophomore students reported being somewhat or very unsure of their major and acknowledged this as a source of anxiety. One student noted, “knowing what I want to do with the rest of my life is near impossible” (Schreiner, 2010, p. 60). The challenges embedded within the sophomore experience begin as the simple task of selecting an appropriate, achievable major but brings into question a much larger task, developing a sense of purpose (Hunter et al., 2010). When students begin to

struggle with their philosophical question of purpose, their motivation to perform academically may be negatively impacted (Graunke & Woosley, 2005). For example, in one sophomore student's words, "I don't feel like working anymore since I don't know what I want to do after college, and since I'm not even sure of my major" (Schreiner, 2010, p. 60). Once a decision is made, some students continue to experience doubts regarding their career choice and may even consider changing their major (Coburn & Treeger, 1997; Richmond & Lemons, 1985). In addition, they may discover that they do not have the skill set to pursue their dream major (Anderson & Schreiner, 2000). Rather than continue to consider college an opportunity for career exploration, these undecided students may contemplate leaving school to work rather than spend money on college tuition (Anderson & Schreiner, 2000). As mentioned in the previous section on retention, sophomore RAs may not leave the University when faced with major selection challenges, but may instead opt to leave their RA positions in order to re-evaluate their career trajectory.

Academic Performance

Students entering their sophomore year may find themselves at an academic disadvantage. One in five students will begin their second year already failing to make satisfactory progress toward their degree, and one in six will start with low grade point averages (Aldeman, 2006). Aldeman states that "the second academic year offers students the opportunity to recapture any lack of momentum of the first. In this respect, the second year may be even more important than the first" (p. 53). While the second year may be the opportunity students need to revitalize their grades, some sophomores may find that their academic performance continues to slip as a result of numerous challenges; these students

have been coined “decliners” (Wilder, 1993). Decliners were defined as students whose cumulative GPA was between 2.75 and 4.0 after their first-year and exhibited a 20% GPA decline during the two semesters in their sophomore year. The academic experience of a “decliner” was compared to a “maintainer” who also started with between a 2.75 and 4.0 GPA but maintained that GPA in the next two semesters. “Variables such as lack of commitment to school, absenteeism, educational goals, extra-curricular activities, and perceptions of faculty-staff interactions contributed most to the ability to discriminate between decliners and maintainers” (Wilder, 1993, p. 23). Furthermore, Wilder suggested that “absenteeism, more so during the sophomore year than the [first-year], may negatively influence academic performance” (p. 24). Challenged sophomore students have reported an increasing disinterest with the institution and classes (Feldman & Newcomb, 1994), which may lead to decreased attendance and a decline in grades. The decline in grades may result in sophomore attrition given that a higher GPA is positively correlated with improved retention (Schreiner, 2010).

For sophomore RAs, maintaining a high GPA may determine further employment. For RAs, returning to their position may be influenced by poor academic performance if their grades drop below the minimum expectations for employment. Furthermore, RAs may decide to leave their position if they become driven to focus more on their academics. Either circumstance results in turnover, which is a factor in the current study.

Retention

Several reports indicate high attrition rates of sophomore students within the university (Adelman, 2006; Lipka, 2006; Smith, 2010; The Consortium for Student Retention Data Exchange, 2007). Research suggests “sophomores with the lower expectations are the at-risk

group" (Jullirat, 2000, p. 25). When comparing sophomores who persistent to their junior year with those who dropped out, sophomore dropouts produced significantly lower "importance" scores on items related to "campus climate, advising, staff helpfulness, faculty and instructional effectiveness, safety and security, financial aid, registration processes, and the library resources" (Jullirat, 2000, p. 25). Notably, the items endorsed as "low importance" by dropouts were of the "most important" to all other students. Although some sophomore RAs fail to stay for a second year of employment with residence life, they did continue on at the university. Yet sophomore experience literature may provide some insight into why sophomore RAs are not returning to their positions after one year on the job; leaving may have less to do with the job itself and more to do with personal struggles.

One on One Relationships

The literature stresses the importance of one on one support for sophomores as they navigate their sophomore year. Richmond and Lemons (1985) stress the most important factor in helping students overcome the sophomore slump is personal attention from a concerned individual. By paying special attention to sophomore students, they feel good about themselves, the attention bolsters self-esteem, and regular interactions provide opportunity for positive reinforcement. Pertinent literature provides insight into sophomores' relationships with faculty and academic advisors. The impact of faculty and academic advisors was intentionally removed from the current study because this variable has little impact on an RA's commitment to their position in residence life. The topic is mentioned only to reinforce the importance of one on one relationships, and to provide a starting point for understanding the relationship between the hall director and the sophomore RA.

Satisfying interactions between the student and faculty can make a difference in sophomore students' grade point averages (Graunke & Woosley, 2005). "Research indicated that the faculty/student relations affect student satisfaction with college, academic achievement and retention" (Guiffrida, 2004, p 701). Furthermore, "The frequency of student-faculty interaction and students' satisfaction with that interaction were highly significant predictors of intent to reenroll, graduate, and of students' perceiving their tuition as a worthwhile investment" (Schreiner, 2010, p. 49). While these interactions are important, sophomores in general have difficulty managing their interactions with faculty. Sophomores struggle to connect with faculty outside of the classroom (Morgan & Davis, 1981; Schreiner, 2010).

While not as strong as faculty interaction, satisfaction with academic advisors was found to be an important factor (Schreiner, 2010; Wilder, 1993). A sophomore students' satisfaction with their academic advising experience "significantly predicted [the students'] overall satisfaction with their college experience, predicted their perception of tuition as a worthwhile investment, and contributed strongly to their satisfaction with faculty as a whole" (Schreiner, 2010, p. 59). There is evidence to suggest that when faculty also serve as academic advisors, the positive impact of the student/faculty relationship increases. In cases where professional advisors are utilized, students who have not declared a major may benefit from a meeting with a generalist advisor. These advisors may be better suited for helping students identify strengths and determine fit to a variety of majors given "selecting a major that is a good fit is perhaps one of the most important issues for the sophomore year" (Schreiner, 2010, p. 60). In conclusion, the process of selecting a major with good fit is improved when a sophomore

student has a more personal interaction with a faculty member or academic advisor.

Given the proximity and time spent with the hall director, RAs may find that the hall director fulfills aspects of the faculty or academic advisor relationships. For example, assisting an RA in selecting a major may be a productive discussion between a hall director and RA. A hall director may be able to identify an RAs strengths and skills which can inform a productive discussion around career plans and major selection. Better understanding of the RA's perception of the hall director in terms of the hall director's (1) support of RA and (2) management of the staff provides insight into the supportive role a hall director plays in the life of a sophomore RA.

Lack of Institutional Support

Institutional support during the first-year was abundant; every effort was made to ease the transition from high school to the first-year in college. In comparison, the support during the sophomore year appears lacking (Flanagan, 1991; Hunter, 2006). Few programs targeting sophomore students are available. Sophomore students no longer receive special mailings during the summer like they received before starting their first-year. As one sophomore stated, "Your freshman year—it's not that you were babied, but it's like there were so many things that were reaching out to freshman that you come back your sophomore year and it's like you are on your own" (Gahagan & Hunter, 2006, p.17). Relative neglect of the sophomore student can result in them feeling "alone on campus" (Morgan & Davis, 1981, p. 170). During a time of critical decisions and search for purpose, sophomores are not getting the support and guidance they need (Boivin, Fountain, & Baylis, 2000; Gansemer-Topf, Stern, & Benjamin, 2007). Dissatisfaction and lack of institutional support has been associated with a sophomore

experience linked to failed retention. "Sophomore attrition patterns were characterized by significantly higher levels of dissatisfaction with institutional services than seen in first-year student attrition predictors" (Schreiner, 2010, p. 44).

Dissatisfaction with Personal Relationships

Sophomore students often experience various problems in their personal relationships including jealousy and criticism of another's behavior or values (Richmond & Lemons, 1985). Yet, peer satisfaction was the strongest contributor to overall sophomore student satisfaction (Schreiner, 2010). Those sophomores who report being highly satisfied may not be struggling with personal relationships in the same way as compared to those sophomore students who demonstrate lower levels of student satisfaction. Students experiencing the sophomore slump may exhibit a general sense of apathy or indifference (Richmond & Lemons, 1985), which may influence the course of their relationships.

Furthermore, Erikson (1968) suggests that conflicts around identity issues are complicated as sophomores are forced to make value decisions about career plans, values, and lifestyle preferences. As decisions are made around values and lifestyle, finding a complementary cohort of friends may be a challenge as the sophomore also balances self-management skills and developing their values and awareness. Given these developmental tasks, how is it these sophomore RAs are able to help their residents, who are also their peers, and navigate the same personal struggles? Investigating RAs perceptions of their own effectiveness in enhancing students' responsibility and cooperation; self-management and values; and awareness would be a worthy inquiry.

The Resident Assistant

The review of RA literature begins with an overview of the RA general purpose and responsibilities. The remainder of this section focuses on specific aspects of the RA position including job performance; benefits of the RA position; RA self-efficacy; training; the role of the hall director; work/life conditions; independent RA characteristics including gender and academic performance; diversity issues, and the unique characteristics of the sophomore RA.

General Purpose and Responsibilities

The positive influence of undergraduate students residing on campus has been documented in the literature (López Turley & Wodtke, 2010; Pascarella & Terenzini, 2005; Strange & Banning, 2001). Living on campus has a positive influence on personal growth and development, as well as on leadership skill development, persistence to graduation and participation in co-curricular activities (Astin, 1993; Pascarella & Terenzini, 2005; Upcraft, Gardner, & Barefoot, 2005). As housing departments are pressured to provide personal, emotional, social, cultural, and academic development opportunities for their on-campus students, the RA position may help meet these goals (Bierman & Carpenter, 1994; Burchard, 2001). Competent residence life staffs are positively correlated with a desirable environment and the growth and development of undergraduate students (Blimling, 1998; Kohlberg & Hersh, 1977; Murphy & Gilligan, 1980; and Thomas & Chickering, 1984).

The fundamental purpose and roles of an RA is at times debatable, but there is agreement on the potential for student development and the wide-ranging responsibilities of the position. Winston and Fitch (1993) emphasized the value of student development and the broad responsibilities in a general yet concise definition of a paraprofessional serving in a

residence life program:

> A paraprofessional is defined as a student who is selected, trained, and supervised in assuming responsibilities and performing tasks that are intended to (1) directly promote the individual personal development of his or her peers, (2) foster the creation and maintenance of environments that stimulate and support residents' personal and educational development, and/or (3) perform tasks that ensure the maintenance of secure, clean, healthy, psychologically safe, and esthetically pleasing living accommodations. (p. 317)

To live up to these expectations, RAs must assume many roles and responsibilities, i.e., "a peer helper, community developer, administrator, cheerleader, mentor, friend, sanitation engineer, and policy enforcer" (Buhrow, 1999, p. 12). Five primary responsibilities for the RA have been identified. These include role model, administrator, counselor, teacher, and student (Blimling, 1998). Of these, the roles of teacher and counselor have taken on particular importance (Blimling, 1995). The accumulation of responsibilities provides insight into the extensive nature of the position. Boyer (1993), in Blimling's *The Experienced Resident Assistant* provides a glimpse into the RA experience:

> The resident assistant (RA) position was one of the most demanding assignments on a college campus. RAs confront daily the realities of dormitory life. Beyond the ordinary, day-to-day hassles, they must deal with accidents, abuse of alcohol, depression and questions about birth control and abortion. It is a 24-hour-a-day job, one that involves not just keeping order and finding light bulbs, but becoming deeply involved in shaping the lives of students and helping the college accomplish its fundamental goals. (p. i)

While variations on these roles and responsibilities are driven by the mission and vision of each institution and residence life program, the overall significance of the position lies in its broad influence; RAs serve students in countless capacities as described in their job description and in other less recognizable ways (Bowman & Bowman, 1995). RAs play a significant role within residence life systems across the nation; their impact on residential students is undeniable and the amount of responsibility entrusted to them is significant and expansive. The multitude of

roles and responsibilities the RA is required to attend to leaves some researchers to wonder if the job has grown too large for students who must also attend to their own growth, development, and education (Dodge, 1990).

As if the position was not demanding enough, the RA position continues to expand and evolve (Dodge, 1990) as the issues facing college students become more diverse, challenging, and intense (Evans & Forney, 2002; Thomas, 2000). Increased racial diversity, the increased presence of medicated students with psychological disorders, and a societal decrease in civility and tolerance (Kelly, 2001; Levine & Cureton, 1998) are only a few of the issues associated with modern campus culture. Additionally, an increase in Hispanics, Native Americans, Asian Americans, and international students (Aud, Fox, & KewalRamni, 2010; Levine & Cureton, 1998; Peterson, Briggs, Dreasher, Horner, & Nelson, 1999) contributes to a multitude of cross-cultural exchanges, roommate challenges and the need for educational discussions on cultural and sensitivity awareness become necessary. As previously mentioned, the increase in the number of medicated students is also a relevant changing student demographic. Kay Redfield Jamison, a psychiatry professor at John Hopkins, quoted in Kelly's (2001) *Lost on Campus* stated, "The very effectiveness of modern treatment means that a lot of people who never would have made it to college are stable enough to go to universities. Colleges are dealing with a lot of kids who are very sick" (p. 52). While these medicated students are benefiting from the opportunity to attend college, they may require additional support. Much of this needed support and cultural/sensitivity training for students has been added to the already overwhelming list of responsibilities for RAs.

Job Performance

RA job performance has been studied in relation to a number of factors including role ambiguity (Deluga & Winters, 1990), stress and burnout (Nowack & Hanson, 1983), health habits and psychological distress (Nowack, Gibbons, & Hanson, 1985), emotional intelligence (Jaeger & Caison, 2006), and RA perception of leadership (Posner & Brodsky, 1993). Training (Murray, Snider, & Midkiff, 1999; Upcraft & Pilato, 1982) has also been associated with job performance and is discussed later in the section on RA training.

Researchers have demonstrated a link between role ambiguity, role conflict, burnout, and frequency of illness, with stress and emotional exhaustion. RAs who experienced a heightened role ambiguity or conflict indicated increased stress levels (Deluga & Winters, 1990). Role ambiguity was defined as confusion as it related to job expectations, and role conflict was defined as the experience of an internal job-related struggle (Deluga & Winters, 1990). More specifically, RAs attracted to the position to fulfill a desire for power experienced greater levels of stress compared to those RAs attracted for altruistic reasons. Furthermore, a significant relationship was discovered between the frequency and severity of stress (r=0.96, p<0.01) and frequency and severity of burnout (EE: r = 0.83; D: r = 0.88; and PA: r = 0.76; all p < 0.01) (Nowack & Hanson, 1983). Burnout was measured utilizing three dimensions: emotional exhaustion (EE), depersonalization (D), and personal accomplishment (PA). Furthermore, the frequency of stress was found to contribute significantly to the frequency and severity of illness ($F = 4.51$, $p < 0.05$). Health habits contributed significantly ($F = 3.61$, $p < .05$) to the prediction of emotional exhaustion where regular, consistent health habits predicted less emotional exhaustion (Nowack, Gibbons, & Hanson, 1985).

Frequency of illness, burnout, stress, and health habits influenced job performance. RAs experiencing the greatest amount of illness and highest levels of burnout were most likely to be evaluated lowest in job performance (Nowack & Hanson, 1983). Also, as the stress associated with conflict and ambiguity increased, job performance as described by an immediate supervisor declined sharply (Deluga & Winters, 1990). Conversely, RAs demonstrating a positive perspective on role clarity and conflict exhibited a perception of enhanced performance. Those RAs demonstrating higher emotional fatigue, cynicism, and negative feelings tended to receive lower evaluations on their job performance by their residents (Nowack, Gibbons, & Hanson, 1985).

Emotional intelligence and perceived leadership ability has also been positively correlated with RA performance. Emotional intelligence includes the ability to perceive and understand emotions, to access and generate emotions that assist in thought, and to effectively regulate emotions to ultimately promote emotional and intellectual growth (Mayer & Salovey, 1997). RAs with high emotional intelligence scores were 11 times more likely to be identified as outstanding RAs by the residence life professional staff (Jaeger & Caison, 2006). In addition, RAs who considered themselves highly effective leaders were thought of by their supervisors as high achievers. Conversely, RAs who believed themselves to be less effective leaders were viewed as performing less satisfactorily by their supervisors (Posner & Brodsky, 1993). Posner and Brodsky concluded that the leadership ability of RAs is a good predictor of their effectiveness in the position.

The conclusions from Nowack and Hanson (1983) and Nowack, Gibbons, and Hanson (1985) should be considered cautiously as both studies were conducted at the same institution.

Of noteworthy concern to the current study, none of the 37 participants in the Nowack and Hanson (1983) research were sophomores. The Nowack, Gibbons, and Hanson (1985) study did not explicitly state the academic status of the 43 participants. Regardless, these studies were included to emphasize the limited inclusion of sophomore RAs in the literature and to provide the best overview of literature as it relates to job performance.

Job performance is included as a relevant topic in the literature because performance is directly related to turnover. Poor performance may restrict RAs from returning to their position for a second year. While performance itself will not be directly measured in the current study, an understanding of the role of performance in RA turnover may be important for future research.

Benefits of the RA Position

As previously mentioned, the nature of the peer mentor role can be beneficial to the participating peer mentor in addition to the residents being served (Ender & Carranza, 1991). In 1978, a survey of 69 RAs and 21 administrative assistants at Arizona State University reported the top three benefits of the RA position were "personal growth and development, compensation, and the development of a sense of responsibility" (Ames, Zuzich, Schuh, & Benson, 1978, p. 15). RAs also reported a private room and new friends as noteworthy benefits. Lillis and Schuh (1982) asked 59 former Indiana University graduate RAs what skills were affected the most by their RA experience. Skills related to interpersonal and group; communication; teamwork; counseling and advising; and confrontation skills were perceived as being influenced more than personal skills (e.g., budgeting). Generalization of Lillis and Schuh's (1982) results should be avoided as the sample consisted of graduate students, as opposed to

the traditional undergraduate RA, and was two-thirds male.

Understanding the benefits of the RA position, along with factors that impact performance, may begin to suggest job satisfaction. Limited literature was discovered that directly addresses job satisfaction for RAs. The current study includes job satisfaction as a construct of interest in an attempt to identify what factors may be associated with RAs' perceptions of job satisfaction.

Retention

The selection of RAs is time consuming (Jaeger & Caison, 2006), as is the training process. When RAs leave after one year, many hours are lost as new staff must be hired and trained. Furthermore, there is value in having returning staff that can build on previous knowledge and mentor new staff. No one piece of literature directly addresses the retention of RAs, let alone sophomore RAs. Retention of RAs can only be surmised by the literature on burnout, stress, and job performance (see Deluga & Winters, 1990, 1991; Nowack, Gibbons, & Hanson, 1985; Nowack & Hanson, 1983), benefits (see Ames, Zuzich, Schuh, & Benson, 1978; Lillus & Schuh, 1982), selection (see Winton & Fitch, 1993) and training (Murray, Snider, & Midkiff, 1999; Winston & Buckner, 1984). While research on role conflict and other sources of stress for staff does provide some insight into why staff members may leave their positions, no conclusive results were discovered in the literature. The current study begins to fill the gap in understanding as to what factors are associated with the intent to stay or leave the RA position for a second year.

Training

Residence life staffs are generally accepting of mandatory RA training (Sandeen &

Rhatigan, 1990). Training is a significant component of the RA position as effective training not only prepares RAs for their job responsibilities, but may also compensate for possible skill shortcomings in the RA or the selection process (Eichenfield, Graves, Slief, & Haslund, 1988). Training, as a form of quality control, is critical because untrained or poorly trained RAs may represent a legal liability for the university (Barr 1988, Barr 1991, Kaplin & Lee 2013).

Although the need for current and effective RA training is agreed upon (Elleven, Allen, & Wircenski, 2001), how staff should be trained with regard to method, timing, and content is not consistently agreed upon (Upcraft & Pilato, 1982; Winston & Buckner, 1984). Although training methods may vary, the most common methods include workshops, seminars, academic credit courses, retreats, and in-service meetings (Bowman & Bowman, 1995; Twale & Burrell, 1994; Winston & Buckner, 1984). Training formats tend to include cognitive information, vicarious and experiential activities, and opportunities to apply and practice the skills and knowledge acquired (Ender & McFadden, 1980).

Training content spans a variety of topic areas. While some topics are truly institutional specific, there are a number of topics that are common to most all RA training agendas. Knowledge of university policies, department protocol, campus resources (Bowman & Bowman, 1995; Upcraft & Pilato, 1982), conflict resolution, crisis management, interpersonal skills, and disciplinary matters (Upcraft, 1982) are necessary. A general understanding of student development (Bowman & Bowman, 1995), coupled with training on substance abuse, security, medical emergencies and health issues (Twale & Burrell, 1994) allow RAs to effectively assist their residents with the transition to college life and support residents when they are in crisis. The development of referral skills (Bowman & Bowman, 1995; Wesolowski, Bowman, & Adams,

1997) and basic human relation skills (Bowman & Bowman, 1995) are also common training topics. While the bulk of the training is directly related to the daily responsibilities of the RA position, additional training topics cover areas necessary for the RA to manage the position. RA training may also include sessions on time management and leadership skills (Bowman & Bowman, 1995).

While public and private institutions may share some common training goals and approaches to trainings RAs, distinctions were found regarding the core training competencies (Elleven, Allen, & Wircenski, 2001). These core training competencies were defined by the Senior Housing Officers (SHO) who completed the *Chief Student Affairs Officer Questionnaire*. Private school SHOs believed that clerical and administrative tasks were more of a priority than their public school counterparts. The SHOs at private schools also considered involvement in co-curricular organizations of greater importance than did their public institution counterparts. The differences in training priorities were found to be relatively minor and generally a product of the specific cultural realities of the two types of schools. The involvement of upper-level administrators in training was also found to be different across institution type. Upper-level administrators in public schools were directly involved in selecting RA training issues 71% of the time; notably less than the 94% reported by private institutions (Elleven, Allen, & Wircenski, 2001). The increased involvement of upper-level administrators at private institutions was explained by the smaller size of most private institutions, where with limited staff, everyone must be involved with training. Furthermore, within the public schools, new professionals with less experience than seasoned professionals often deliver training. The RA staff at public schools, therefore, may have a significantly different training experience than their peers

enrolled at private colleges and universities. Given the reported differences between training at public and private institutions, the current study will include both.

The training that RAs receive appears to influence RAs personally, specifically in the areas of job performance (Murray, Snider, & Midkiff, 1999), susceptibility to burnout, and effectiveness in helping their residents (Winston & Buckner, 1984). RAs who participated in training, even short term training interventions, engaged in twice as many instances of productive behaviors as compared to counterproductive behaviors (Murray, Snider, & Midkiff, 1999). The effects of training on job performance, as measured using a pretest and posttest design, was significantly different ($F = 12.38$, $p = 0.0$) with scores on the posttest higher than those on the pretest (Murray, Snider, & Midkiff, 1999). RA stress level is also affected by training; RAs trained in a pre-employment training course including the opportunity to practice skills, reported decreased stress and greater emotional resiliency, as well as improved counseling skills, and confrontation skills, and basic helping skills (Winston & Buckner, 1984).

In the current study, training is included as a factor because of the reported influence of training has on job performance and stress which may influence job satisfaction and turnover. Furthermore, training has a positive influence on the development of helping skills, which may impact a RA's sense of RA self-efficacy. In addition, new RAs assigned more importance to "appropriate training so they may address challenges with confidence" (Bierman & Carpenter, 1994, p.472) and a sophomore RA is most likely to be a new RA.

The Role of the Hall Director

The influence of the hall director is important to understand when investigating the RA experience. Hall directors typically utilize one of two supervisor strategies in terms of

leadership style: transactional or transformational. Both strategies have a notable influence on the RAs (Komives, 1991a). Transactional leadership, the traditional model of employer-employee relationships, exchanges pay, praise, and criticism for work. In contrast, transformational leadership encourages supervisors to inspire vision, endorse exceptional production, and stimulate their supervisees intellectually. RAs and hall directors reported that hall directors were more likely to demonstrate traits aligned with a transformational leadership style including individual consideration, charisma, and intellectual stimulations (Komives, 1991a). Transformational hall directors are especially beneficial to new RAs given that "subordinates who are inexperienced, immature, or untrained need the individualized consideration of the transformational leader to support, develop, and empower them" (Komives, 1991a, p. 514). The influence of a transformational hall director is noteworthy for sophomore RAs who are typically new to their position. Furthermore, transformational factors in hall directors are associated with higher levels of RA satisfaction with the hall director's role as a supervisor and higher levels of RA motivation to extend extra effort. While RAs tend to go above and beyond, 66% of the variance in RAs extra effort was explained by the hall directors' leadership behaviors while, nearly 40% of the variance was accounted for by transformational leadership factors (Komives, 1991a).

When residence life organizational structures underwent significant changes including coeducational units requiring coed staffs, many RAs found themselves in environments where they were supervised by hall directors of the opposite gender. Contrary to the literature suggesting that females may struggle to supervise males effectively, or staff may not respond positively to female leadership (e.g., Bayes & Newton, 1978; Terborg, J. R., 1977), no such

effect was found between RAs and their hall director. Regardless of gender, RAs who reported to a hall director of the same or different gender made no difference in RAs' views of supervisory leadership, satisfaction with the leader, overall job satisfaction, or motivation to exert extra effort (Komives, 1991b). Male and female hall directors were perceived as equivalently effective supervisors by their staff members, thus suggesting gender is not a significant issue in assigning supervisor and employee pairings in residence halls. While the gender of the hall director will not be considered in the current study, gender may be an appropriate consideration in future studies as the most frequently cited study on this topic, i.e., Komives (1991b), is over 20 years old.

Given the important role the hall director has in supporting and motivating new staff toward extra effort within their RA position, the hall director is included as a factor in the current study. The hall director appears to play two roles significant to the RA position: management of RA staff and support to the RA. Both roles are considered separate factors in the current study.

Work Conditions and Life Balance

The RA position is unique in that RAs must live where they work and work where they live. This arrangement makes the living conditions an important consideration for the current study. Furthermore, new RAs assigned more emphasis to job surroundings (Bierman & Carpenter, 1994).

The experience of RAs serving a population of only first-year students was much different than those serving a mixed group or only upper-class residents. RAs working in residence halls with only first-year students suffered from a higher rate of burnout. This is

likely attributed to higher levels of emotional exhaustion and stress as compared to RAs serving older or mixed populations (Benedict & Mondoloch, 1989; Fuehrer & McGonagle, 1988; Hardy & Dodd, 1998). Heightened stress levels were associated with working with first-year students and their increased need for academic assistance and support in making the transition to college. Interestingly, while burnout tended to be higher for RAs responsible for a first-year population, these RAs scored significantly higher on their performance evaluations than their peers who oversaw upper-class residents (Clark, 2008). Clark's (2008) results depict a different interaction between burnout and job performance as compared to Nowack and Hanson (1983) who reported high burnout with low evaluations of job performance suggesting the additional factor of which population is being served may begin to better explain the relationship between burnout and performance.

The university profile and environment also appears to be a factor in explaining RA burnout. Comparison of a large, public university to a mid-sized university revealed that RAs at the mid-sized university experienced more depersonalization than their peers at the larger institution (Paladino, Murray, Newgent, & Gohn, 2005). This discrepancy was attributed to different department structures, specifically noting far fewer professional staff at the mid-sized institution. RAs at larger institutions also reported work pressure related factors as more undesirable than counterparts at smaller institutions (Bierman & Carpenter, 1994). Residence life programs associated with large universities have been connected with large resident to RA ratios that result in increased pressures as RAs are overwhelmed by the sheer number of residents for whom they are responsible.

Individual RA Characteristics

In addition to the aforementioned factors that are external to the individual sophomore RA, there are factors specific and internal to each RA. These factors include gender differences, academic performance, and RA self-efficacy.

Gender differences

Gender differences are a common factor by which RAs are compared; the results are varied. Gender differences are reflected in desirability for the RA position, performance, job satisfaction, and establishing new relationships (Bierman & Carpenter, 1994; Clark, 2008; Denzine & Anderson, 1999; Hardy & Dodd, 1998; Komives, 1992; Paladino et al., 2005; Schaller & Wagner, 2007). Desirability for the RA position tended to support a gender difference when examining characteristics of the RA position. Females endorsed opportunities for creativity, unlimited occasion for additional responsibility, an emphasis on individual ability, and opportunities to be a positive influence (Bierman & Carpenter, 1994; Schaller & Wagner, 2007) as desirable job characteristics. Males endorsed competition for positions, raises, and promotions as desirable. While performance differences due to gender have been reported (Bierman & Carpenter, 1994; Paladino et al., 2005), others noted no differences (Hardy & Dodd, 1998; Denzine & Anderson, 1999). Females tended to receive higher scores than males on residents' evaluations of RA performance, but the difference never reached statistical significance (Clark, 2008). When considering job satisfaction, gender differences were expressed in how females and males define job satisfaction (Komives, 1992). Females based job satisfaction on their ability to complete tasks independently, while males based job satisfaction on their ability to persuade others to do what was asked of them. With regard to

building new relationships, women established new relationships through their RA position and men experienced the RA position as a barrier to new relationships (Schaller & Wagner, 2007).

Exploration of burnout of RAs produced inconclusive results regarding gender differences. Female RAs demonstrated higher levels of burnout and emotional exhaustion as compared to males (Fuehrer, & McGonagle, 1988; Hetherington, Oliver, & Phelps, 1989). Yet, female and male RAs reported the same frequency of burnout elsewhere (Hardy & Dodd, 1998). Measures of depersonalization, a specific dimension of burnout, were found to be different by gender. Male RAs experienced much greater depersonalization than their female counterparts (Paladino, Murray, Newgent, & Gohn, 2005). Such differences in depersonalization are of no surprise when considering that women are more willing to divulge personal feelings and establish closer peer relationships that are more complex than those formed by men; these differences help us understand why female RAs tend to be more considerate and less aggressive when addressing conflict when compared to men (Blimling, 1998).

Gender differences may not always be overt or consistent, yet differences do appear throughout the literature suggesting gender to be a reasonable factor to consider. Given reported differences in job satisfaction, a factor in the current study, gender will also be considered.

Academic Performance

Grade point average (GPA) has been challenged as the best predictor of academic achievement with populations, not just residence life staff (Gifford, Briceño-Perriott, & Mianzo, 2006; Waldman & Korbar, 2004). In one case, GPA was not found to be a relevant factor in

determining high performing RAs as chosen by their peers and supervisors (Jaegar & Caison, 2006). Yet practitioners in residence life typically use a predetermined minimum GPA as a criterion for consideration in hiring candidates as RAs and as a minimum standard for continued employment. GPA has been linked to RA performance. As performance evaluation scores increased, GPA did as well (Clark, 2008). Clark asserted that his research supports the premise that an academically achieving RA is able to manage multiple roles and is therefore capable of serving as a positive role model. Failure to achieve academically may suggest that the burden of additional responsibilities required as an RA is unmanageable. It is essential to consider academic performance when exploring intention to return as an RA in the upcoming academic year and thus this factor is used in the current study.

RA Self-Efficacy

RAs are involved in a variety of situations that demand they make personal assessments of their own effectiveness. The literature discusses a number of realms that RAs are expected to influence their residents in which personal effectiveness is critical. These areas include effectiveness in enhancing residents' responsibility and cooperation; self-management and values; and awareness. RA self-efficacy, as it relates to the preceding 3 areas, is an outcome of interest in the current study.

The concept of self-efficacy began as a component of Bandura's Social Cognitive Theory (1997), historically referred as Social Learning Theory (1986). Bandura defined self-efficacy as "the belief in one's capabilities to organize and execute courses of action required to produce given attainments" (1997, p.3). As this applies to the current study, RA self-efficacy is the belief RAs have in themselves that they have the ability to be successful in a given situation. The

development of self-efficacy is influenced by four sources: vicarious experiences, social persuasion, psychological and emotional states, and mastery experiences (Bandura, 1997). Vicarious experiences include observation of a model with whom the observer identifies with and who performs a task or activity well, thus enhancing the efficacy of the observer. Social persuasion may include specific performance feedback or a "pep talk" by a credible, trustworthy persuader. Psychological and emotional states, such as excitement or anxiety, facilitate the sense of mastery or incompetence. Finally, mastery experiences, an individual's own successful performance, provide the most reliable source of efficacy information (Bandura, 1986). In the final analysis, perception of a successful performance typically raises an individual's sense of efficacy, while perception of failure lowers a sense of efficacy.

Self-efficacy has been examined as an internal factor that influences an RA's level of accomplishment (Denzine & Anderson, 1999). Self-efficacy is an expansive term and for research purposes self-efficacy is defined as the RAs' perception of their ability to fulfill the responsibilities of the job. RAs' perceptions of their ability to successfully foster the development of their residents were positive in Denzine and Anderson's (1999) study. Futhermore, RAs that demonstrate high self-efficacy felt they were doing better in their position as compared to staff members who had low self-efficacy suggesting that RA performance may be influenced by level of self-efficacy.

In the event that performance may be influenced by RA self-efficacy, job satisfaction and turnover intention may follow similar trends. Turnover intension may be most influenced given the relationship between RA self-efficacy and persistence. Given an individual's causal attribution to a dilemma (Bandura, 1986, 1997), individuals with high self-efficacy will approach

a difficult situation as a challenge and will persist. Those with low self-efficacy will view the situation as a threat (Denzine & Anderson, 1999) and may concede defeat. If an RA demonstrates low levels of RA self-efficacy in the current study, influence on turnover intention may present itself.

Awareness. Raising residents' awareness of issues related to diversity including differences in culture, gender, and sexual orientation are expected of the RA. Responding effectively and confidently to issues of diversity varies depending on the setting of the institution and the ethnic composition of the RA staff. Interestingly, RAs employed at institutions in rural areas were found to be more confident in their responses to diversity related issues (Johnson & Kang, 2006), although, the institutions involved in the Johnson and Kang's study were homogeneous and predominantly White. Furthermore, the diverse structure of the staff contributed to an RA's reaction to diversity issues. The more diverse the staff, the more effective the response to issues of diversity as compared to peers on homogeneous staffs.

In addition to diversity related issues, sexual orientation and sexual identity have a noteworthy role in residence life. Students who self-identified as gay, lesbian, bisexual, or transgender (GLBT) assumed that all RAs were knowledgeable and open-minded with regard to diversity related issues (Evans, Reason, & Broido, 2001). Furthermore, GLBT students expected their RAs to serve as role models for the rest of the residential students. RAs were also held responsible for assisting GLBT students with the "coming-out" process. GLBT students also stressed the importance of having students who identify as GLBT serve in the RA role (Evans, Reason, & Broido, 2001). Such expectations suggest that RAs should at some level, influence the awareness of residents to issues of diversity and aid residents' with the development of

personal values.

The Sophomore Resident Assistant

Typically, experienced students are hired as RAs leading to a staff composed predominantly of juniors and seniors, and a few sophomores. With decreases in the quantity of qualified candidates, partially due to the dwindling desire to live on campus, residence life administrators are left to hire sophomore students (Schaller & Wagner, 2007). The current literature provided limited insight into sophomore RAs.

None of the previously cited works on the challenges and experiences of RAs were based on data collected exclusively from sophomore RAs. A review of the literature implies the participation of sophomores as RAs. Only one study failed to include any sophomore RAs (Nowack & Hanson, 1983). The remaining studies included between 14% to 30% participation of sophomore RAs with an average participation of 21.4% (see Table A.1).

While a number of studies focused on the RAs' class level in an effort to describe the sample, few conducted analysis with the intention of identifying differences between class standing. Of the two studies that did disaggregate by academic standing, no significant differences existed in perceived motivation of RAs according to academic classification (Bierman & Carpenter, 1994) and class standing was not found to be a significant factor in determining who would be a high-performing RA, as chosen by their peers and supervisors (Jaeger & Caison, 2006). Neither of these two studies explored job satisfaction, turnover intentions or RA self-efficacy.

After an extensive literature search, one article and one dissertation were found that described the unique experiences of sophomore RAs. Schaller and Wagner (2007) studied the

experiences of sophomore RAs. A constructivist approach was used to understand the experience of nine sophomore students who were RAs at one mid-sized, Midwest, private institution. In 2008, Kauffman completed her qualitative dissertation entitled, "The Experience of Sophomore Resident Assistant," in an attempt to better understand the sophomore RA experience. The participants included 27 sophomore RAs from 3 Midwestern universities. Overall, Kauffman concluded that the sophomore experience was varied lacking a single pattern of experience. A review of both manuscripts presented an emphasis on academic performance; relationships; job responsibilities, expectations, and training; and retention.

Academic Performance

Reference to academic performance was commonly reported by sophomore RA participants (Kauffman, 2008; Schaller & Wagner, 2007). The interaction between the RA position and academic performance was varied. Consistent with the literature on the sophomore experience, sophomore RAs who were undecided in their major reported a sense of uncertainty and distraction from their RA responsibilities (Schaller & Wagner, 2007). Consistent with the literature, balance between life as a RA, being a friend, and a student was a common struggle. Balance was further described in terms of time management and prioritizing. When academics were first priority, sophomore RAs struggled with completing the responsibilities of the RA position (Schaller & Wagner, 2007). Others found the RA responsibilities to be a "seductive enticement away from academic duties" (Schaller & Wagner, 2007, p. 41) and a barrier to their academic success because of the time commitments and general demands of the position (Kauffman, 2008). Still others found the conflicting pressures a reason to improve their time management and take more control of their schedules, and create a sense of balance

(Schaller & Wagner, 2007) while enhancing academic performance (Kauffman, 2008). In direct complement to the sophomore literature, others blamed poor academic performance on procrastination, more challenging major courses, and time management issues not related to the RA position (Kauffman, 2008).

Relationships

The "prevailing theme within the data was the RAs' struggle to maintain important friendships in their lives" (Schaller & Wagner, 2007, p. 42). Sophomore RAs reported struggles to maintain relationships with those outside of residence life (Schaller & Wagner, 2007) because they had less time to spend with non residence life friends. As a result, importance was placed on the quality of these non residence life friendships over quantity (Kauffman, 2008). Associating with non residence life friends was further complicated given the preponderance of social functions that involved alcohol and in many cases, underage drinking (Schaller & Wagner, 2007). New friendships were limited to within the residence halls. Staff members were reported as being new friends with fellow staff members given the shared experience, common values, and beliefs (Kauffman, 2008). Friendship with residents was portrayed as complicated due to the dual roles required of the RA. The RA must remain supportive and friendly, while maintaining the role of an authority figure (Kauffman, 2008; Schaller & Wagner, 2007). These results suggest the importance of exploring in the current study work/life conditions and sense of RA self-efficacy as it relates to a resident's responsibility and self-management.

Job Responsibilities, Expectations, and Training

Consistent with the literature, sophomore RAs encountered problems similar to other

students (e.g., transition issues, homesickness), but reported benefits of the RA position (e.g., leadership skills, time management, delegation skills, networking) (Kauffman, 2008). Also consistent with the literature, position expectations and training were common themes with the sophomore RAs as with the general population of RAs. Unexpected job expectations were a reoccurring theme reported by sophomore RAs. The position was described as overwhelming, and the time and effort required by the job was often underestimated (Kauffman, 2008). The amount of administrative work was far more extensive than expected and many RAs did not anticipate the strain of the 24-hour a day position (Kauffman, 2008; Schaller & Wagner, 2007). With regard to training, sophomore RAs believed that they could never fully be prepared for dealing with the more traumatic experiences they encountered such as suicide, drugs, physical altercations (Schaller & Wagner, 2007) and the extensive amount of alcohol abuse (Kauffman, 2008). The sophomore RAs also felt unprepared for the discipline process and found confrontation difficult (Schaller & Wagner, 2007). Sophomore RAs that felt they were well informed about the position agreed some of the requirements simply needed to be experienced; no description could truly match the experience (Kauffman, 2008). Furthermore, sophomore RAs reported that their experiences allowed for personal growth and they gained skills in communication, conflict management, and managing emotions (Schaller & Wagner, 2007). Many also reported a new sense of confidence (Schaller & Wagner, 2007). Again, consideration of work/life balance is relevant in addition to job expectations and RA training to both job responsibilities and student concerns.

Retention

Schaller and Wagner (2007) placed little emphasis on the differences in the experiences

between those returning for a second year and those not returning. Of the 9 participants, only 5 were planning to return to their RA position, a mere 55.6% retention rate (Schaller & Wagner, 2007). Kauffman (2008) reported intentions to return to their RA position as a description of the sample and no analysis took place. Of the 27 participants, 15 reportedly planned to return (55.6%). The remaining sophomore RAs either chose not to return, felt academic demands would not allow them to return, were studying abroad, were undecided, or their intentions were unknown. Given sophomores may account for a conservative estimate of 20% of the RA staff, losing almost half of them after only one year of service is considerable. Retention is an outcome of interest in the current study.

Conceptual Framework

The literature on sophomores in combination with the RA literature provides the background necessary to identify the factors of interest to explore the sophomore RA experience, but lacks the structure needed to organize the factors. Astin's Input-Environment-Outcome (I-E-O) Assessment Model (1993) was selected to provide this framework.

The I-E-O Model was developed as a conceptual framework for assessing the effects of student involvement on student outcomes (Astin, 1993) and evolved into a conceptual guide for educational assessment projects. The Model is built on the premise that solely assessing outcomes (outputs) for program assessment is limited with regard to understanding program impact and effectiveness (Astin & antonio, 2012). Program outputs must be evaluated in relation to inputs and in the context of the environment (Figure 2.1). Thus, assessment data requires three data sources: Inputs, Environment, and Outcomes. Inputs refer to the personal qualities the student brings to the program. The environment refers to the aspects of the

program manipulated in order to develop the students' talents. Outcomes refer to the "talents," aims, or objectives of a program.

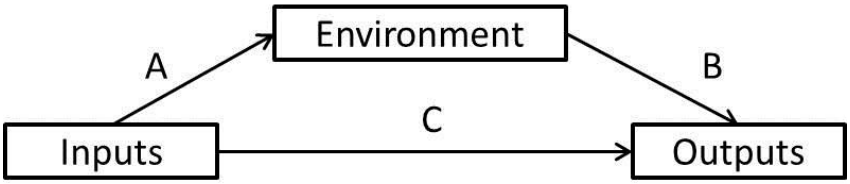


Figure 2.1. *The I-E-O Model* (based on Astin & antonio, 2012)

The relationships between the variables are illustrated by the 3 arrows in the model (see Figure 2.1). While program evaluation tends to be concerned with relationship B, Astin asserts that relationships A and C are critical to learn how a program affects the outcomes (Astin & antonio, 2012). Assessment data requires input data because inputs are always related to outcomes and almost always related to environments (Astin & antonio, 2012). Furthermore, because of the dual relationship, inputs can affect the observed relationship B, between environments and outputs.

In the current study, input factors include gender, GPA, and job expectations. Environment factors include hall director, work/life conditions, and training. Output factors include job satisfaction, turnover intentions, and RA self-efficacy. The sophomore RA experience defined by measures of job satisfaction, RA self-efficacy, and turnover intentions can only be marginally understood by investigating these factors alone. Each individual sophomore student brings personal qualities that must also be considered. These personal qualities impact not only the outputs as illustrated in relationship C, but also the environment (relationship A), the RA position. Furthermore, as the personal qualities impact outputs, the environment also impacts outputs as illustrated in relationship B.

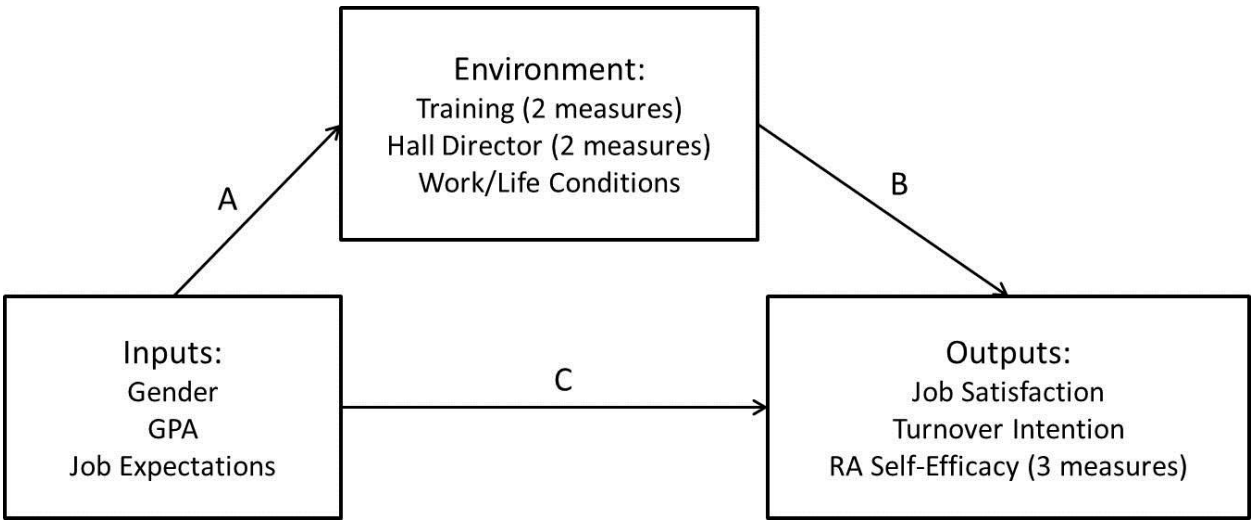


Figure 2.2. *The Applied I-E-O Model*

Summary

This chapter provided an overview of the two primary tracks of literature relevant to the current study: the RA and the sophomore experience literature. The intersection of these two topics, the sophomore RA, was presented to highlight how limited the research was and to expose the limitations. This chapter concluded with an overview of the application of Astin's I-E-O Model as the conceptual framework by which factors were organized. The current study seeks to add to his literature in an effort to improve our understanding of the sophomore RA experience, while exploring in depth the influence of the sophomore RA experience on job satisfaction, turnover intention, and sense of RA self-efficacy.

CHAPTER 3
METHODOLOGY

The current study has two distinct yet valuable purposes. The first purpose is to assess the psychometric properties of the 10 factors on the ACUHO-I/EBI RA Survey of interest in the current study (see Table A.1). The second purpose, using the factors identified as valid and reliable, is to explore the relationships between those factors in an attempt to learn more about the sophomore RA experience as it related to job satisfaction, RA self-efficacy, and turnover intention. This chapter describes the methods used in the current study. The data source and sample description begins the chapter with emphasis on the instrument, known instrument psychometrics, and sample selection. Discussion of analysis procedures and limitations follows. The chapter closes with a description of the data preparation including assessment of missing data, normality, and outliers.

Data Source and Sample Description

The current study uses a pre-existing, national database compiled with the results of a survey distributed to residence life staff during the fall semester of 2004 and the spring semester of 2005. The following two sections will further discuss the instrument and sample.

Instrument

The ACUHO-I/EBI RA Survey (currently called the ACUHO-I/EBI Student Staff Assessment) was developed in 1999 as a joint project between Educational Benchmarking, Inc (EBI) and The Association of College and University Housing Officers – International (ACUHO-I) (Educational Benchmarking, Inc., n.d.). The survey was developed to provide insight into RA perceptions of and satisfaction with various aspects of their RA experience for the purpose of

department benchmarking. The ACUHO-I Standards and Ethical Principles for College and University Housing Professionals and Council for the Advancement of Standards for Student Services/Development Programs (CAS Housing and Residence Life Programs Self-Assessment Guide (1988, revised 2001) professional standards were used as the basis for survey development.

The survey is comprised of 10 participant profile questions and 100 perception questions. Responses are self-reported by the RA completing the survey. The profile questions are demographic or contextual items that include gender, ethnicity/nationality, class standing, semesters as an RA, cumulative GPA, number of hours committed to academics and the RA position, gender of residence life floor, number of students the RA is responsible for, and intentions to return to the position. All profile questions were multiple choice. Perception questions, developed to measure aspects of satisfaction or perceptions of effectiveness, were developed to measure 15 factors. Satisfaction questions relate to the RA selection process, expectations of the position, training, supervision, working/living conditions, impact on resident behavior, hall policies, facilities and overall satisfaction. Questions regarding effectiveness relate to students' responsibility and cooperation; students' self-management and values; and enhancing student awareness. All perception questions use a 7-point Likert type scale with 1 = *very dissatisfied* and 7 = *very satisfied*. A "na," not applicable, option was also available for all questions except for the four items used to measure overall satisfaction.

Institution profile questions were administered with the RA survey and included questions about the institutional characteristics (e.g., Carnegie Class, State, ACUHO-I Region, enrollment) questions specific to the institution's residence life program (e.g., number of

residence halls, number of RAs, total residents), and questions about the availability of auxiliary services (e.g., dining services, maintenance, laundry). Institutional profile questions were completed by an administrator at the institution rather than the RA.

The RA Survey was distributed to RAs, who participated without academic or monetary compensation. The survey was a paper/pencil instrument. Participating institutions had the liberty to distribute their paper surveys to resident assistants in the method they preferred. Options could have included but are not limited to campus mail or during a staff meeting. Personally identifiable information was not requested in the survey, thus maintaining anonymity and confidentiality. Completed surveys were shipped to EBI for scoring. Electronic scanning equipment was used to collect the participants' responses; the absence of individual rater inconsistencies through automated collection is a reliable procedure for scoring (Cronbach & Furby, 1970). While technology has evolved and EBI now offers the survey in both paper form and electronically through EBI's online survey system, during the 2004-2005 data collection period, only a paper/pencil form of the survey was used.

Constructs

The intended purpose of the ACUHO-I/EBI RA Survey was to measure RAs "perceptions" of the residence life program where they were employed (EBI, 2005). According to EBI documents, "In measuring perceptions, the object is to develop several questions (individual items on a questionnaire) that, in concert, capture the notion for a particular topic, such as 'Facilities.' Factor analysis is a statistical technique for confirming whether, in fact, these individual items do constitute a coherent factor" (EBI, 2005, p. 198). Aside from this statement, no additional methods or psychometrics are available to explain the development of the factor

structure of the RA Survey.

The current study utilized 10 of 15 available factors in the RA Survey which coincided with the factors identified as relevant in the literature (see Table A.2). The 10 factors were comprised of 76 questions on the RA Survey. These factors included satisfaction that clear job expectations were established (Factor 1), RA training dealing with student concerns (Factor 2), RA training dealing with job responsibilities (Factor 3), effectiveness in enhancing students' responsibility and cooperation (Factor 4), effectiveness in enhancing students' self-management and values (Factor 5), effectiveness in enhancing students' awareness (Factor 6), hall director/supervisor supporting RA (Factor 7), hall director/supervisor management (Factor 8), satisfaction with the working and living conditions of the RA (Factor 9), and overall RA satisfaction (Factor 10). The items are labeled as "Q#," corresponding to the actual item number on the RA Survey and are referred to by these labels throughout the current study (i.e., Q5, Q34, Q57, etc.).

The remaining three factors of interest were each measured by a single item. Gender was measured by one item with the following four options: Male, Female, Transgender, or Other. Academic success was measured by self-reported cumulative GPA. The multiple-choice item requesting GPA offered 8 options: below 2.25, 2.25 to 2.49, 2.50 to 2.74, 2.75 to 2.99, 3.00 to 3.24, 3.25 to 3.49, 3.50 to 3.74, and 3.75 to 4.00. The item measuring intention to return to the RA position provided four options: yes, undecided, no (able to return, but choose not to), and no (unable to return due to graduation, transfer, etc.).

Validity and Reliability Measures

Psychometrics is the field of study dedicated to the construction and validation of

measurement instruments and procedures. The process of validating an instrument includes assessing validity and reliability measures.

Internal validity of the instrument describes the extent to which the survey measures what it purports to measure (Mertens, 2010). Content validity is the notion that an instrument should sample the range of behaviors represented by the construct being measured (McBurney, 1994) and employs the knowledge from content experts to validate the test items. The collaboration between EBI and ACUHO-I members, the content experts in residence life, was critical in ensuring that the survey not only measured what was important but that the questions were also worded appropriately (Mosier & Schwarzmueller, 2002). The utilization of these ACUHO-I content experts suggest content validity. Face validity assesses the extent that the test appears valid to outside stakeholders (i.e., the institutions who use the ACUHO-I/EBI RA Survey). The continued use of the RA Survey from 1999 to present day by institutions looking for an instrument for benchmarking purposes implies that administrators at these institutions feel the instrument is valid. Thus, face validity is suggested. Construct validity is the notion that a test measures the concept it is designed to measure and does not measure other constructs (McBurney, 1994). Internal studies conducted by EBI suggest construct validity. An EBI published white paper provides support for convergent (predictive) validity and divergent (discriminant) validity; convergent and divergent validity are aspects of construct validity. EBI purports that the RA Survey instrument evaluates constructs that predict Overall Satisfaction. "For each study, and, more importantly, for each participant in that study, we have been able to calculate predictors of Overall Satisfaction" (EBI, n.d., p. 1). In regard to discriminant validity, EBI states that they "do have evidence that divergence exists in our studies" (EBI, n.d., p. 1).

Reliability refers to the consistency of test scores (Murphy & Davidshofer, 2001). Annual EBI documents reported reliability based on Cronbach's Alpha (Cronbach, 1951), a measure of average inter-correlation among the items in a survey instrument or scale. An acceptable reliability coefficient is within the range of 0.7 to 0.95 (Bland & Altman, 1997; DeVellis, 2003; Nunnally & Bernstein, 1994). EBI reports the reliability range of the 10 factors of interest at $\alpha = 0.85$ to $\alpha = 0.95$ for the 2004-2005 administration period. Furthermore, reliability scores have remained stable across multiple administrations of the survey (see Table A.3).

Published data on the validity and reliability of the RA Survey is limited to documents and reports produced and distributed by EBI. Despite the widespread use of the RA Survey, no third-party, published research can be found. Furthermore, EBI reports instrument psychometrics based on the entire population of survey participants. If psychometric statistics for subgroups of the population are calculated, these statistics have not been disclosed. Thus, while reliability coefficients are adequate for the entire population, the instrument may not be acceptable in terms of reliability and validity for a unique subset of the population.

Sample

The sample for the current study was gathered from the administration of the 2004-2005 ACUHO-I/EBI RA Survey. From 1999 through 2008, items on the survey remained unchanged. In the fall of 2008 an updated version of the Survey was distributed. One noteworthy revision included the removal of questions allowing the resident assistants to evaluate their own performance (D. Butler, personal communication, April 8, 2008). These questions measured perceived effectiveness and were the factors used to measure RA self-

efficacy in the current study. The data available from 2006 through 2008 did not include results of the institution profile information, which would not allow for calculation of response rates and an accurate description of the participating institutions. The 2004-2005 data remains the most comprehensive available data set from the administration of the RA Survey that includes measures of the factors of interest in the current study. This time period coincides with the literature on the sophomore experience given the sophomore experience has been predominantly explored with data collected from 1998 into 2007.

The dataset was obtained directly from EBI at no cost. Permission to access and analyze this dataset was obtained from then Project Director of ACUHO-I/EBI Benchmarking Services. (D. Butler, personal communication, April 14, 2005). Due to policy changes regarding data sharing, EBI is no longer permitted to release any institutional client data to external sources (S. Woosley, personal communication, September 23, 2012). Prior to conducting the data analysis, approval was granted from the Michigan State University Institutional Review Boards.

Response Rates

During the 2004-2005 data collection period, 68 institutions participated and 5,782 (sophomore n = 1603) surveys were returned to EBI for scoring. Review of the institutional profile question completion revealed six institutions did not complete these questions. The institutional profile questions are necessary to calculate each institution's response rate and provide an overall description of institutional participants. These six institutions were removed from the dataset, leaving 5,515 (sophomores n = 1529) surveys representing 62 institutions.

Given EBI processes all received surveys without consideration for a defined "usable" or "complete" survey, the current study defines a completed survey as those for which

participants reached the “Overall Satisfaction” questions comprising the final 5% of the survey (i.e., National Survey of Student Engagement, 2012). Only 3% (n = 167) of the participants failed to complete the “Overall Satisfaction” portion of the survey of which 89% (n = 149) only completed 30 questions or less. The 3% identified as incomplete surveys were considered to be from non-respondents and were removed from the dataset leaving 5,348 (sophomores n = 1,485) complete surveys.

The institutional profile questions included one question requesting “total number of resident assistants.” Although this information was used as the best available measure of the total number of resident assistants surveyed, it may be an overly conservative number. For example, if institutions strictly reported resident assistants and did not take into consideration other residential peer mentors, such as multicultural advisors (Lawrie & Wessel, 2006), who may have also completed the survey, response rates would appear inflated. Also, if mid-year hiring of new RAs took place and both the exiting RA and new hire took the RA survey, once again, response rates would appear inflated.

Using institutional responses to “total number of resident assistants” and the actual number of completed surveys per institution, institutional response rates were calculated. Response rates ranged from 124% to 37% with 875% as an outlier. Fifty-two (52) institutions had response rates at 80% or higher. The mean institutional response rate was 90% after removal of the outlier. Inflated responses rates greater than 100% happened in 13 cases. The case of a 875% response rate may be the result of an inaccurate institutional profile response given 140 surveys were complete, but the institution only reported a “total number of resident assistants” as 16 RAs. Results from this institutional outlier were removed from the data set

leaving 61 institutions and 5,208 surveys.

A flowchart illustrating the removal of cases is illustrated in Figure A.1. Overall, 10% (n = 574) of cases were removed from the original dataset, of which 28% (n = 160) were designated as sophomores. At each step of the removal process, the percentage of remaining sophomores in the new total stayed consistent at 28% of the new total. Of the total of sophomore participants in the original dataset (n = 1603), 10% (n = 160) were removed.

Participating institutions included a range of Carnegie classifications and national reach as depicted by state representation. The Carnegie Classification (The Carnegie Foundation for the Advancement of Teaching, 2001) of the participating institutions is presented in Table 3.1. The participating institutions represented the District of Columbia and 28 states. Table 3.2 provides a complete breakdown by ACUHO-I region and state.

Table 3.1

Participating Institutions by Carnegie Classification

Carnegie Classification	n	%	Valid %
Baccalaureate Colleges – Liberal Arts	1	1.6	1.6
Baccalaureate Colleges – General	2	3.3	4.9
Master's College and Universities I	20	32.8	37.7
Master's College and Universities II	1	1.6	39.3
Doctoral/Research Universities – Extensive	29	47.6	86.9
Doctoral/Research Universities – Intensive	8	13.1	100
Total	61	100	

Table 3.2

Participating Institutions by ACUHO-I Region and State Representation

Region	n	State (n)
AIMHO	5	CO (3), NM (1), WY (1)
GLACUHO	7	IL (2), MI (1), OH (4)
MACUHO	11	DC (1), NJ (2), PA (8)
NEACUHO	9	CT (2), MA (2), NY (5)
SEAHO	13	AL (1), AR (1), FL (2), GA (1), MS (1), NC (3), SC (1), TN (2), VA (1)
SWACUHO	3	TX (3)
UMR-ACUHO	8	MN (1), MO (2), ND (1), WI (4)
WACUHO	3	CA (2)
NWACUHO	2	WA (2)

The dataset was further delimited to include only sophomore resident assistants who completed the survey (n = 1,443), which comprised 28% of the total. All participating institutions had sophomore RAs who completed the survey. Sophomore RAs represented 7% to 46% of participating RAs by institution with 49 institutions reporting 20% or more sophomore RAs. The sample for the current study is comprised of 54% females (Table 3.3) and 71% White American students (Table 3.4).

Table 3.3

Gender for the Sophomore RA Sample

Gender	n	%	Valid %
Male	645	44.7	45.1
Female	781	54.1	99.8
Transgender	2	.1	99.9
Other	1	.1	100
Total Valid	1429	99.0	
Missing Data	14	1.0	
Total	1443	100	

Table 3.4

Ethnicity for the Sophomore RA Sample

Ethnicity	n	%	Valid %
Multiracial American	57	4.0	4.0
African American	189	13.1	17.4
Native American	2	.1	17.5
Asian American	50	3.5	21.0
Hispanic American	69	4.8	25.9
White American	1020	70.7	97.9
Non-US Citizen or Permanent Resident	30	2.1	100
Total Valid	1417	98.2	
Missing Data	26	1.8	
Total	1443	100	

Analysis

To review, the research questions in the current study are listed below with corresponding research hypotheses.

1. Does the ACUHO-I/EBI RA Survey serve as a valid and reliable instrument when used with sophomore RAs?

   H1: Each survey item will correlate highest with those items within factors as opposed to items between factors.

   H2: Items on the ACUHO-I/EBI RA Survey will load on to the ten-factor structure of the

instrument.

H3: Confirmatory factor analysis will support the 10-factor structure model of the ACUHO-I/EBI RA Survey.

H4: Cronbach's alpha reliability coefficient for each factor examined in the RA Survey when distributed to a sophomore RA sample will be $\alpha > 0.8$.

2. What relationships exist between the valid and reliable factors to better understand the sophomore RA experience?

   H5: No significant mean difference between gender, male and female, exists across all factors.

   H6: No significant mean difference between GPA range groups exists across all factors.

   H7: No significant mean differences exist between sophomores when grouped by intent to return across all factors.

   H8: No correlations between any of the 13 variables of the sophomore RA experience reached or exceeded a strong relationship threshold (> 0.70).

The software used to perform these analyses was IBM Statistical Program for Social Sciences (IBM SPSS), version 21 (IBM Corp, 2012) and Mplus, version 7.11 (Muthén, & Muthén, 2013).

Construct Validity

Construct validity can be assessed by analyzing the degree to which the correlational structure among the observed test items conforms to the hypothesized, theoretical relationships among the items and the underlying latent factor (Flora, 2002). Confirmatory factor analysis (CFA; Jöreskog, 1969) is accepted as an appropriate procedure to test such relationships and was used in the current study to assess the construct validity of the 10 factors

of interest in the ACUHO-I/EBI RA Survey for a sophomore RA sample.

CFA, a special case of structural equation modeling (SEM), is conducted to test hypotheses about specific *a priori* theory defining the structure of the variables. In the current study, the structure to be tested was the hypothesized measurement model as developed by EBI and ACUHO-I (see Table A.2). Two popular methods for estimating CFA models include normal-theory maximum likelihood (ML) and generalized least squares (GLS). ML assumes that observed data are continuous and normally distributed. GLS also assumes normal distributions. To avoid normality assumptions, methods such as asymptomatically distribution free (ADF) and robust ML have evolved, although both assume that the observed data are continuous. There is considerable disagreement regarding whether Likert type items should be treated as ordinal or interval data, with strong convictions on each side (e.g., Allen & Seaman, 1997; Baggaley & Hull, 1983; Jakobsson, 2004; Jamieson, 2004; Knapp, 1990; Kuzon, Urbanchek, & McCabe, 1996; Maurer & Pierce, 1998 Vigderhous, 1977; Vickers, 1999). The current study assumes Likert type item data as ordinal, not continuous. Thus, there exists "a critical mismatch between the assumptions underlying the statistical model and the empirical characteristics of the data to be analyzed" (Flora & Curran, 2004, p. 466). Continuous/Categorical Variable Methodology (CVM) was developed as a solution to manage ordinal data (Muthén 1983; Muthén, 1984). CVM allows for any combination of data and latent variable estimates based on observed variables. Although upon development, CVM assumed latent normality as a critical component (Muthén, 1993), further research found CVM robust to violations of this assumption (Flora, 2002).

The first step in CFA involves selecting and constructing a correlation matrix. Fundamentally, SEM holds that a properly specified model with known parameter values will

equal the population covariance matrix of observed variables (Σ). This hypothesis breaks down when ordinal data are used. The population covariance matrix of the observed ordinal variables (Σ) will not equal the population covariance matrix for the continuous latent response variables (Σ*; Bollen, 1989); so a consistent estimator of Σ* is necessary. A sample product-moment covariance matrix based upon ordinal data is not a consistent estimator of Σ* (Bollen, 1989) because "the conditions that lead to greater attenuation of the Pearson product-moment correlation also tend to be the same conditions in which CFA methods for continuous data break down when observed variables are ordinal" (Flora, 2002, p. 9). Another option is to use the polychoric correlation matrix (Olsson, 1979). The polychoric correlation estimates the "linear relationship between the unobserved continuous variables given only observed ordinal data" (Flora & Curran, 2004, p.467) and is a consistent estimator of the population covariance matrix of the continuous latent response variables (Bollen, 1989). Again, the concern of the underlying normality assumption is raised and polychoric correlations have been found to be robust to violations of this assumption (Flora & Curran, 2004; Quiroga, 1992).

The second step of CFA is the analysis of the correlation matrix. The method used to analyze the correlation matrix in the current study is robust weighted least squares (WLS). The WLS method was introduced by Brown (1982; 1984) and was applied to ordinal data by Muthén (1983; 1984). The weight matrix in WLS is difficult to compute and invert when the model is large (Browne, 1984; Flora, 2002), such is the case in the current study. As a strategy to better deal with inverting the weight matrix, robust WLS was developed (Muthén, Du Toit, & Spisic, 1997). The "robust WLS estimation nearly always produces a proper solution with χ^2 test statistics, parameter estimates, and standard errors that are much less vulnerable to the effects

of increasing model size" (Flora, 2002, p. 129). Furthermore, "the likelihood of obtaining an improper solution or encountering convergence difficulty is near zero with robust WLS estimation" (Flora, 2002, p. 119). As such, robust WLS was used in the current study.

The third and final step for CFA is the calculation of estimates to determine how well the hypothesized measurement model fits the observed correlation (within sampling error), using goodness of fit to assess the fit. Each measure of model fit is calculated differently and thus adds an additional perspective in the evaluation of the model fit. The chi-square (χ^2) statistic indicates the difference between the observed and expected covariance matrices and is traditionally used to assess goodness of fit. When implementing robust WLS, a mean-and variance-adjusted χ^2 test statistic is suggested (Muthén, et al., 1997). The χ^2 is sensitive to sample size and should be interpreted cautiously. With a large sample, χ^2 will tend to be significant regardless of the CFA results (Harrington, 2009). The root square error of approximation (RMSEA) ranges from 0 to 1 and indicates the discrepancy between the population covariance matrix and the hypothesized model (Hooper, Coughlan, & Mullen, 2008). As a guideline, 0.06 or less is accepted as indicative of an acceptable model fit (Hu & Bentler, 1999). The Tucker-Lewis Index (TLI) is a relative fit index because it compares the χ^2 of the tested model to the χ^2 from the null model. TLI is dependent on the average size of the correlations in the data. If the average correlation between variables is low, the TLI will also be low. A value between 0.90 and 0.95 is considered marginal and above 0.95 is the level of the index that suggests good model fit (Marsh, Hau, & Wen, 2004). Comparative Fit Index (CFI), also known as the Bentler Comparative Fit Index, is a noncentrality-based index and compares the fit of the target model to an independent model where the variables are assumed to be

uncorrelated. Better fit is indicated by a CFI value approaching 1 such that 0.95 is considered the level of the index that suggests good model fit (Marsh, Hau, & Wen, 2004). Ordinal data, as used in the current study, tend to present non-normal distributions and skewness, which produce fit indices that are negatively biased, which ultimately indicate poor model fit; CFI and TLI have been identified as the fit indices least affected by nonnormality (Hutchinson & Olmos, 1998). Furthermore, non-normality tends to lead to an overestimation of the χ^2 values and results in a modest underestimation of fit indices (West, Finch, & Curran, 1995). The weighted root mean square residual (WRMR) fit index utilizes the weighted "square root of the difference between the residuals of the sample covariance matrix and the hypothesized covariance model" (Hooper, Coughlan, & Mullen, 2008, p. 54). It is the absolute fit index reported in MPlus for robust WLS estimation and is deemed the most reliable version of the root mean residual (RMR) fit indices when ordinal data is used (Muthén & Muthén, 1998-2012); WRMR at a 0.95 or 1.0 value is considered to have an acceptable type I error rate with moderate type II error rates in CFA models (Yu, 2002). Chi-square, RMSEA, CFI, TLI, and WRMR were used in the current study.

Sample size is a practical issue for the utilization of CFA. SEM and Chi-square are based on covariances, which are less stable when sample sizes are small. With small samples, Chi-square lacks statistical power leading to an inflated Type I error (Gatignon, 2010). A conservative rule of thumb for sample size requirements has been suggested as 10 participants for each item (Kerlinger, 1986); a more liberal estimate suggests using a sample larger than 100 and having 5 times the number of participants as there are items (Hair, Anderson, & Tatham, 1987). The current study has a sample size of n = 1,443 for the analysis of 76 items, which

meets the more conservative guideline. In addition, the accuracy of the polychoric correlation does not appear to be affected by the sample size (Flora & Curran, 2004).

To summarize, the current study employs the CVM method of CFA with ordinal data and utilizes a polychoric correlation matrix and robust WLS for analysis to examine construct validity of the ACUHO-I/EBI RA Survey for a sample of sophomore RAs.

Reliability

Reliability refers to the consistency of measures (Murphy & Davidshofer, 2001) such that the reliability coefficient is a measure of precision (Raykov & Marcoulides, 2008). Essentially the reliability coefficient is the percentage of true variance in observed variance, or the degree to which scores can be trusted and not the result of error (Raykov & Marcoulides, 2008). The current study measures reliability using Cronbach's Alpha (Cronbach, 1951), a measure of the average inter-correlation among the items in a survey instrument or scale. An acceptable reliability coefficient is within the range of 0.7 to 0.95 (Bland & Altman, 1997; DeVellis, 2003; Nunnally & Bernstein, 1994)

Mean Differences and Correlations

The 13 variables of interest in the current study include: 3 items (GENDER, GPA, and TURNOVER) and 10 factors from the RA Survey (1SATCJE, 2TRAINSC, 3TRAINJR, 4EFFSRC, 5EFFSSMV, 6EFFSA, 7HDS, 8HDM, 9SATWLC, and 10OVERSAT; see Table A.2).

The current study measured mean group differences for gender, academic performance, and turnover intention treating these 3 variables as independent variables and the 10 factors as dependent variables. A three step process was used starting with multivariate analysis of variance (MANOVA), then univariate analysis of variance (ANOVA), and concluding with post

hoc analysis with pairwise comparisons. MANOVA includes independent variables that are factors with two or more levels and multiple dependent variables. MANOVA evaluates the hypothesis that the population means for the dependent variables are the same across all levels of each independent variable or factor. Hotelling's trace criterion is a test used in MANOVA to determine if the means of the groups differ on a discriminant function or characteristic root. Hotelling's trace pools the variance from all the dimensions to create the test statistic. When MANOVA is significant, univariate, one-way ANOVA follows to identify which of the independent variables demonstrates a significant difference in group means. ANOVA is also a procedure used to test for statistically significant mean differences when more than two means are being tested. One-way is used when only one independent variable is used.

Correlation is a technique to demonstrate if two variables are related and the degree of the relationship. Correlation demonstrates a linear relationship only. The correlation coefficient, *r*, ranges from -1.0 to 1.0 with r values approaching |1| the more closely the variables are related. Furthermore, a negative coefficient indicates an inverse relationship. Several methods are available for calculating correlation coefficients. Pearson Product Moment correlation is appropriate to use when both variables are continuous. Two ordinal variables can be analyzed with the Spearman Rank Order Correlation (rho). When one variable is continuous and the other is ordinal, such as a dichotomous variable, point biserial correlation is recommended; although this correlation is typically estimated in practice using Pearson's correlation. Thus, relationships between a continuous variable and an ordinal variable are calculated with Pearson's correlation in the current study. The benchmark guideline for interpreting strength of a relationship is based on the work of Cohen (1988) who defined $r = .50$

as a large effect size. A more conservative view would suggest 0.4 to 0.6 as a moderate relationship and 0.7 to 0.9 as a strong relationship (Dancey & Reidy, 2004). In addition to relationship strength, significance testing on the correlation coefficient determines if the obtained correlation coefficients were significantly different than zero.

Limitations

This section addresses a variety of known limitations of the current study including concerns related to the sample, instrument, use of ordinal data, data collection procedures, and out dated literature. Acknowledging the study limitations provides context by which to frame the study results.

Sample Concerns

The current study utilizes a convenience sample. While generally considered appropriate for exploratory research, a convenience sample tends to be less representative of the population of origin (McMillan, 2004). Thus, the obtained results may not be representative of the population but reflective of a unique subpopulation; analysis of subpopulations is a threat to external validity and leads to restrictions on generalizability (Gay, Mills, & Airasian, 2006).

Furthermore, all participants who completed the survey to the level defined as appropriate for inclusion in the dataset for the current study were included. No random selection or experimental assignment to groups was conducted. While individual participants may not have self-selected into survey participation, the home institution did self-select to participate. Institutions whose administrators chose to participate in assessment may have unique characteristics. Furthermore, institutions who participate in national, third-party

assessments such as those provided by EBI may also be unique. The importance of evidence based practice, available resources to financially support assessment, and even politically driven relationships may impact participation and ultimately make those that participated different from the population of all institutions. Overall, the self-selection tendency may result in a sample distinctly different from the population of all institutions with RA staff.

Instrument Concerns

The shear discrepancy in purpose between a benchmarking survey and a survey developed for strict research purposes is a noteworthy consideration. An instrument developed for the benchmarking may take a very different approach to the organization of questions into concepts or latent variables. Item organization could likely be driven by antidotal knowledge or organizational need and less likely driven by statistical methodology. Furthermore, while items may statistically correlate to form a factor, that factor may not necessarily measure a distinct underlying concept.

A cost was required for access to the instrument. Although RAs did not have to pay, the institutions bore the burden of cost. The cost could have influenced which institutions chose to participate in this assessment.

The current study relied on survey questions presented directly to the participant resulting in self-reported data. Factual, background questions have been found to be reliably reported when questions are clear and respondents know the information requested, including self-reported grades (Baird, 1976; Laing, Sawyer, & Noble, 1988; Noble & Sawyer, 1988). While error is inevitable and 100% accuracy is unlikely, self-reported grades have been deemed adequate for research purposes with caution towards policy implications (Cassady, 2001) and

caution when including transfer students who may not be able to accurately report GPA thus impacting relationships between variables (Herman, 2003). While not explicitly identified, transfer students are unlikely in the current study because sophomore RAs would have completed the selection and hiring process during their first year.

The majority of the questions were attitudinal, which did not allow for answer verification and were susceptible to social desirability bias and halo error (Gonyea, 2005). Social desirability bias (SDB) is the respondents' desire to alter their response in an attempt to look good to the survey administrator (Beretvas, Meyers, & Leite, 2002; Nancarrow & Brace, 2000). Given the ACUHO-I/EBI RA Survey was administered for benchmarking purposes where institutional success was valued, RAs responding may have been motivated to present themselves positively. A small SDB effect has been reported in paper and online survey administration (Gonyea, 2005; Tourangeau, Rips, & Rasinski, 2000) suggesting caution, but confidence in reported responses. Halo error is the tendency for respondents to answer a set of items with a common response based on their general understanding of the topic thus disregarding item specifics and minimizing variance within the set of items (Gonyea, 2005). Measures of satisfaction have been found to be sensitive to halo error (Pike, 1993). In the current study, satisfaction measures made up a preponderance of the questions but were written clear and concisely, a strategy reported to minimize halo error (Gonyea, 2005).

Finally, the phrasing of each question and available answers were limited to what EBI and ACUHO-I determined to be appropriate for their needs. In at least one case, the phrasing of an available answer limited the depth of analysis. The participant profile question assessing intent to return offered the answer of no (unable to return due to graduation, transfer, etc.).

The etcetera leaves open an unknown number of possible circumstances as to why an RA may not be eligible to return. With a sophomore RA sample, graduation is unlikely. Furthermore, transferring to another institution is plausible, but not likely for all those who select this option. RAs may be ineligible for return based on academic performance such as being below minimum criteria for employment or to the extreme of being dismissed from the institution. As the question is written, available information is limited, which in turn may impact hypothesis seven analysis and conclusions.

Ordinal Data

Likert scale items have been treated as both ordinal and interval data given the 7-point scalar gradation and treat them as such (i.e., Gall, Gall, & Borg, 2006). The current study approaches the Likert scale items as ordinal thus utilizing methods identified as appropriate to deal with ordinal data. While not necessarily viewed as a limitation in the current study, there may be researchers who would consider this approach a limitation although plenty of literature is available to review the treatment of ordinal data with correlation and factor analysis (i.e., Choi, Peters, & Mueller, 2010; Finch, 2010; Flora & Curran, 2004; Forero, Maydeu-Olivares, & Gallardo-Pujol, 2009; Yang-Wallentin, Jöreskog, & Luo, 2010).

Data Collection Procedure

Completion of the ACUHO-I/EBI survey was for the purpose of benchmarking and assessment as opposed to research. Thus, procedures often instituted to protect participants such as the option to opt out of the survey may not have been permitted. Inconsistency in data collection is also noteworthy. No information is available to determine how the RA staff was solicited to participate, if incentives were offered, or how many follow-ups were done. For

example, RAs may have received the survey in their mailbox to complete on their own time while others completed the survey at a staff meeting. The differences in survey distribution and completion may have been different across institutions and across residence halls at the same institution. Furthermore, without an option to conduct missing data analyses the potential bias due to nonresponse is unknown.

Out Dated Literature

The literature on sophomores and RAs is getting old and the relevancy of the research comes into question. At some point the samples become too far removed from the current populations to be applicable. Technology is just one example of a remarkable change over time that has impacted society. Sophomore RAs in 1999 provided phone lists to their residents so they could call each other on the residence hall room phones; today, those phones are gone and phone numbers have evolved into facebook groups and twitter feeds. The current study relied on the available literature which was at best dated.

Data Preparation

The dataset, as received from EBI, was already screened for data entry accuracy. However, an additional review of the data included an examination of frequencies and descriptive statistics for each item across all participants to identify data either out of range or unusual frequencies (Raykov & Marcoulides, 2008). Reported minimum and maximum values were within the range of 1 to 7 and 8 for missing data, which corresponds to the Likert scale coding. Review of histograms for each item confirmed acceptable range and did not identify any unusual frequencies, such as an item with the same response selected across all participants. The remainder of this section discusses the identification and management of

missing data, issues of nonnormality, and out-of-range values (Tabachnik & Fidell, 2007).

Missing Data

Analysis of missing data for each item ranged between 0% to 18% missing values with 65 items missing less than 3% (Table A.4). Two items had missing values higher than 5% and were assessed to determine if the data were missing completely at random (MCAR). An SPSS Missing Values Analysis (MVA) for both items was conducted and included Little's MCAR test. Little's MCAR test was significant, χ^2 (23,627, N = 1,443) = 26,498.41, $p < .001$, indicating a likelihood that the pattern of missing items deviates from randomness.

The results provide evidence that the missing data are not MCAR, but may be either missing not at random (MNAR) or missing at random (MAR), also referred to as ignorable nonresponse. When the missing data is related to the dependent variable, then MNAR is of concern (Tabachnik & Fidell, 2007). In the current study, no variables have been defined as dependent, so testing for MNAR is unlikely; this limitation does not rule out the possibility that the missing data are MNAR. MAR holds that a participant's nonresponse is unique to the individual, based on that participant's set of responses. Missingness for another participant may be based on a different set of responses. A special case of MAR is known to exist when there is planned missingness in an instrument (Schafer & Graham, 2002). In the current study, missing values on an item may be triggered by participant non-response or items with a "na," not applicable, response. Both appear as missing values in the dataset. The original surveys were not available to confirm which items were truly missing as opposed to answered "na." The two items with notable missing data are areas in which RAs could realistically answer "na." Item Q7 inquires about working at an information desk, which may or may not be a

responsibility of the RAs. Item Q38, *Satisfaction with RA's effectiveness in enhancing students' ability to: Understand their sexuality*, addresses sexual orientation, which some RAs may never have the opportunity to address this issue with their residents. These items could believably be answered by a "na," not applicable, response. Given, "na" was an option in the survey, is considered to be an appropriate response, and is coded in the survey as missing, provide evidence that missing data may be considered as unique to the individual participant and thus, allows for consideration of MAR.

While the missing data appears random, listwise deletion of missing data was not considered appropriate given valid cases listwise was only n = 616, which would require removal of 827 (57%) cases. A statistical substitution would rely on a number conceived from the data available. While no manipulation would accurately represent a "na" response, treating these "na" values as missing may be mathematically convenient (Schafer & Graham, 2002). Direct maximum likelihood (ML) (Allison, 1987; Muthén, Kaplan, & Hollis, 1987) an acceptable method for managing missing data for SEM applications, such as CFA (Duncan, Duncan, & Li, 1998). The direct ML estimator is also known as the raw maximum likelihood method or Full Information Maximum Likelihood (FIML) estimate given the requirement of raw data as an input. Direct ML assumes missing data are ignorable; while no evidence is available to confirm MAR, treating missing data as ignorable is assumed reasonable given the data are likely MAR resulting from a survey with designed missingness. Further, this estimation method assumes that the data has a multivariate normal distribution; although, recent research has developed procedures for estimating standard error estimates and test statistics for direct ML that are robust to nonnormality (Yuan & Bentler, 2000) and these procedures have been incorporated

into Mplus (Allison, 2003). The complete data set without missing values was utilized in all statistical analysis.

Normality

The ACUHO-I/EBI RA Survey utilizes Likert type scale data; the perception items were answered using a 7-point scale with 1 = *very dissatisfied* and 7 = *very satisfied*. In the current study, Likert scale data are treated as ordinal. Often in social and behavioral sciences, ordinal data are the observed responses when trying to measure a theoretically continuous construct, such as aspects of perspective and satisfaction as in the current study. As such, central tendency indicators of ordinal data are typically limited to median and mode (Stevens, 1975), but have been expanded to include mean, although interval claims should be avoided.

Mean item scores ranged from 0.56 to 6.11 with 94.9% (n = 74) items recording means at 5.00 or higher indicating above "neutral" responses (see Table A.5). Standard deviations of items indicated little variance given a range from 0.92 to 1.80 (SD range = .88).

Statistical methods such as CFA, hold additional assumptions in regard to normality. SEM assumes multivariate normality and Muthén (1993) emphasizes testing for multivariate normality for CMV. While "it is impossible to determine absolutely that an observed ordinal variable has been created from a normal or non-normal distribution" (Flora, 2002, p. 130), univariate normality was assessed with estimates of skewness and kurtosis.

Skewness is a measure of the symmetry around the mean of the distribution. Kurtosis indicates the extent to which a distribution is flat or peaked. A normal distribution will have skewness and kurtosis values of zero. A skewness value in the range of + 1.00 to – 1.00 is generally accepted as evidence of a normal distribution, although a skew value of $\geq |3|$ has

been used to identify extreme estimates (Kline, 1998). Skewness results indicated that 92 of the items produced negatively skewed distributions, matching the aforementioned above "neutral" mean scores. Fifty-five (55) of the items exceeded the accepted range (up to -1.84), but were below the threshold guideline of extreme skewness. A kurtosis value between -1.00 and 2.00 is generally accepted as evidence of a normal distribution; a kurtosis value ≥ |10| provides a liberal guideline for identifying extreme estimates (Kline, 1998). Kurtosis results ranged from -0.62 to 3.16. Nineteen (19) of the items exceeded the accepted range (2.02 to 3.27) suggesting nonnormality, but were within the threshold of extreme kurtosis. Overall, none of the skew or kurtosis values exceeded the guidelines for extreme nonnormality (see Table A.5).

Multivariate normality was examined using Mardia's coefficients of multivariate skewness and kurtosis (Mardia, 1974). Mardia's coefficients suggest deviation from a normal distribution in regard to skew, 1490.19, $p < .001$, and kurtosis, 8098.87, $p < .001$. While a significant result indicates divergence from a multivariate normal distribution, large sample sizes tend to inflate these coefficients (Bollen, 1989).

While all indicators point to a non-normal distribution, the statistics selected for the current study are robust to such departures. The impact of nonnormality on polychoric correlations is minimal; the polychoric correlation continues to be an accurate and consistent estimate of the population correlation matrix regardless of the shape of the underlying variables (Flora, 2002; Flora & Curran, 2004). CFA utilizing CVM methodology is robust to violations of normality (Flora, 2002). While there appears to be some suggestion that chi-square statistics are impacted by nonnormality in the latent response distribution, the "effect

of nonnormality on chi-square statistics is much less pronounced than the effects of model specification and sample size" (Flora & Curran, 2004, p. 479). Statistics have evolved to withstand more extensive deviation from normality making indicators of normality informative, but dispensable. As Muthén (2008) stated, "tests of multivariate normality are of less importance now that we have non-normality robust techniques… Normality testing seems to have been advocated in earlier days when these robust techniques hadn't been implemented" (Skewness, para. 10).

Outliers

Outliers are considered deviant cases with excessive impact on means creating either artificial significance or hiding real significance (Tabachnick & Fidell, 2007). Cases with an extreme value on a single item are univariate outliers. Extreme values on a combination of two or more items are indicative of a multivariate outlier. Among continuous variables, univariate outliers are identified using z-scores; an absolute *z* value of 3.3 or greater typically provides the guidelines by which to identify probable univariate outliers (Tabachnick & Fidell, 2007). Given the current study utilizes ordinal data, assessing z-scores is an inappropriate strategy. The same limitation of ordinal data holds true for assessing multivariate outliers. While multivariate outliers were identified using Mahalanobis distance estimates, 8.5% (n = 122) of the cases were identified ($p < .001$), no concrete decision can be made from this information (e.g., Bedrick, Lapidus, & Powell, 2000). At the most, this information is helpful as a guide and suggests a visual inspection of the cases (Tabachnik & Fidell, 2007). Given 94.9% (n = 74) of the items have means at 5.0 or higher, with a "neutral" rating at 4.0, suggests a population of satisfied sophomore RAs. In addition, when grouped and compared to non-outliers, the outlier group

reported lower means on all items further supporting the premise that outliers appear to be a less satisfied sub group. Regression analysis identified 13 items from 8 (of 10) factors of particular interest: Q35, Q50, Q61, and Q66 ($p < 0.001$); Q20, Q31, Q44, Q64, Q68, and Q75 ($p < 0.01$); and Q13, Q97, and Q99 ($p < 05$). Outliers, univariate or multivariate, are likely to be the subset within the sample that are simply not satisfied. While they appear as outliers, these cases are significant to the population when considering turnover intention. Furthermore, robust WLS estimator, used in the current study, appears reliable in handling outliers (Midi, Rana, & Imon, 2009).

Summary

This chapter provided a description of the methodology used in the current study. The chapter began with a discussion of the ACUHO-I/EBI RA Survey including information on the development of the survey, constructs of interest, and available psychometric measures for the survey. A step by step breakdown of the sample followed. A description of the analysis to be used was presented. The chapter concluded with initial item-level data preparation specifically related to missing data, normality, and identifying outliers. The current study uses CFA, Cronbach's Alpha, and correlations as the primary methods by which to address the research questions. The results of the analysis are presented in the next chapter.

CHAPTER 4
RESULTS

The current study serves a dual purpose. First, the current study intends to assess the psychometric properties of the ACUHO-I/EBI RA Survey as it relates to 10 of the sophomore RA experience factors (see Table A.2). Second, using the affirmed valid and reliable measures, exploration of the relationships between the sophomore RA experience factors is conducted to learn more about the sophomore RA experience. This chapter reports the results of the statistical analysis of the ACUHO-I/EBI RA Survey administered to a sample of sophomore RAs. The results are presented through tables, figures, and narrative. These results begin with the sample descriptive statistics followed by two sections, one devoted to each of the two research question. These sections provide the statistical analysis results for the research question and address the question specific hypotheses. The chapter concludes with a summary.

Sample Descriptive Statistics

The final dataset was comprised of 1,443 completed surveys. The mean institutional response rate was 90% with 52 institutions demonstrating response rates at 80% or higher. The sample represented 61 institutions across a range of Carnegie classifications and national reach with the representation of 28 states plus the District of Columbia (see Table 3.1). The participants were 54% (n = 781) female (Table 3.2) and 71% (n = 1020) White American (Table 3.3). African American identified sophomores accounted for 13% (n = 189) of the sample.

Instrumentation

The ACUHO-I/EBI RA Survey was developed with the purpose of benchmarking, but was

used in the current study to assess the variables of interest. The survey included portions to be completed by the institution representative and the RA sophomore participants. The institution questions were used for descriptive purposes and assessment of response rates in Chapter 3. The participant questions were used for the statistical analysis. Three separate items were used as variables of interest: gender, GPA, and turnover intention. In addition, 10 of the 15 available factors were the target of analysis in the current study (Table A.2).

Research Question 1: ACUHO-I/EBI RA Survey Psychometrics

The first research question, does the ACUHO-I/EBI RA Survey serve as a valid and reliable instrument when used with sophomore RAs, involves assessing the psychometrics, specifically construct validity and reliability, of the ACUHO-I/EBI RA Survey when administered to a sophomore RA sample. Full discussion, decisions, and rationale of data preparation related to missing data, data normality, and outliers for the 76 questions in the 10 factors (see Table A.2) was addressed in chapter 3. Thus, item-level statistics for each of the 76 questions can be found in chapter 3 and in Table A.4 and Table A.5. Overall, the decision was made to preserve all cases and estimate the missing values according to the Full Information Maximum Likelihood (FIML) method. In general, the distributions of each of the 76 items tended to be non-normal and negatively skewed (see Table A.5). Non-normality was not deemed extreme and the planned statistical methods were characterized as robust to non-normality. Thus, the data set was used without any transformations. Finally, while most of the items tested positive for multivariate outliers, the decision was made to retain all cases given the presence of the "not satisfied" sub-population, which is important to the understanding of satisfaction and turnover intention. The remainder of this section presents the results as they relate to inter-item

correlations, confirmatory factor analysis, reliability measures, and the corresponding hypotheses.

Inter-Item Correlations

H1: Each survey item will correlate highest with those items within factors as opposed to items between factors.

Table A.6 presents the polychromic correlations for the 76 Likert scale items. The obtained correlations were all positive and ranged from 0.19 to 0.90 with a mean value of 0.40. Correlations within factors are designated by the grey highlighted cells. Of interest were instances where correlations between items across factors were larger than correlations between items within factors, which may alert of multicollinearity concerns. For example, Table 4.1 displays an excerpt of Table A.6 for two factors, 2TRAINSC (grey highlighted upper left cells) and 3TRAINJR (grey highlighted lower right cells). Item Q13 (belonging to 2TRAINSC), has a higher correlation with Q17, Q18, Q22, Q23, Q24, Q25, and Q29 (all belonging to 3TRAINJR) as compared to several items within the 2TRAINSC factor. Overall, the two factors measuring satisfaction with aspects of training, 2TRAINSC and 3TRAINJR, had noticeable overlap between items across these two subscales. The same pattern was found amongst the three factors measuring RA self-efficacy, 4EFFSRC, 5EFFSSMV, and 6EFFSA, and the two factors measuring satisfaction with the hall director, 7HDS and 8DHM. Three items (Q8, Q10, and Q12) within the factor measuring satisfaction that clear job expectations were established, 1SATCJE, displayed overlap with 10 items (Q13, Q14, Q16, Q20, Q17, Q23, Q24, Q25, Q28 and Q29) across the two training factors with Q12 having the most overlap with 9 of the 17 training items. The factor indicating satisfaction with the working and living conditions, 9SATWLC, demonstrated the

most widespread overlap. All eight items (Q69 - Q76) had varying levels of overlap with other factors. Q74, *Satisfaction with the RA position regarding: Respect you receive from students*, was the only item in the work and living conditions factor to have an extensive overlap with 20 of the 21 items measuring RA self-efficacy. Q71, *Satisfaction with the RA position regarding: Your room accommodations,* had the least amount of overlap demonstrating a higher correlation with only Q97, *Experience: Overall level of satisfaction with the RA experience*. The hypothesis (H1) was not supported.

Table 4.1 *Excerpt of Table A.6: Polychoric Inter-Item Correlation Matric for 2TRAINSC and 3TRAINJR*

	Q13	Q14	Q15	Q16	Q20	Q21	Q26	Q27	Q17	Q18	Q19	Q22	Q23	Q24	Q25	Q28	Q29
Q13	1.00	0.76	0.62	0.65	0.70	0.61	0.52	0.52	**0.57**	**0.58**	0.52	**0.60**	**0.63**	**0.60**	**0.58**	0.51	**0.69**
Q14	0.76	1.00	0.71	0.66	0.67	0.61	0.66	0.55	**0.60**	**0.59**	**0.57**	**0.61**	**0.66**	**0.63**	**0.60**	**0.58**	**0.69**
Q15	0.62	0.71	1.00	0.72	0.64	0.70	0.54	0.58	**0.60**	**0.61**	**0.60**	**0.55**	**0.64**	**0.61**	**0.60**	**0.55**	**0.69**
Q16	0.65	0.66	0.72	1.00	0.63	0.62	0.58	0.54	**0.73**	**0.61**	**0.57**	**0.54**	**0.63**	**0.60**	**0.59**	**0.55**	**0.66**
Q20	0.70	0.67	0.64	0.63	1.00	0.74	0.58	0.62	**0.59**	**0.67**	**0.69**	**0.71**	**0.73**	**0.72**	**0.63**	**0.57**	**0.72**
Q21	0.61	0.61	0.70	0.62	0.74	1.00	0.56	0.62	**0.57**	**0.61**	**0.63**	**0.65**	**0.68**	**0.65**	**0.63**	**0.56**	**0.67**
Q26	0.52	0.66	0.54	0.58	0.58	0.56	1.00	0.58	**0.55**	0.53	0.52	**0.55**	**0.62**	**0.60**	**0.61**	**0.55**	0.63
Q27	0.52	0.55	0.58	0.54	0.62	0.62	0.58	1.00	0.50	0.51	0.52	**0.54**	0.58	0.58	**0.59**	**0.58**	**0.64**
Q17	**0.57**	**0.60**	**0.60**	**0.73**	**0.59**	**0.57**	**0.55**	0.50	1.00	0.65	0.57	0.53	0.60	0.60	0.57	0.56	0.65
Q18	**0.58**	**0.59**	**0.61**	**0.61**	**0.67**	**0.61**	**0.53**	0.51	0.65	1.00	0.76	0.57	0.66	0.66	0.59	0.60	0.66
Q19	0.52	**0.57**	**0.60**	**0.57**	**0.69**	**0.63**	**0.52**	0.52	0.57	0.76	1.00	0.56	0.67	0.66	0.60	0.55	0.64
Q22	**0.60**	**0.61**	**0.55**	0.54	**0.71**	**0.65**	**0.55**	**0.54**	0.53	0.57	0.56	1.00	0.74	0.68	0.61	0.53	0.63
Q23	**0.63**	**0.66**	**0.64**	**0.63**	**0.73**	**0.68**	**0.62**	**0.58**	0.60	0.66	0.67	0.74	1.00	0.80	0.69	0.63	0.70
Q24	**0.60**	**0.63**	**0.61**	**0.60**	**0.72**	**0.65**	**0.60**	**0.58**	0.60	0.66	0.66	0.68	0.80	1.00	0.72	0.62	0.67
Q25	**0.58**	**0.60**	**0.60**	**0.59**	**0.63**	**0.63**	**0.61**	**0.59**	0.57	0.59	0.60	0.61	0.69	0.72	1.00	0.61	0.63
Q28	0.51	**0.58**	**0.55**	**0.55**	0.57	0.56	**0.55**	**0.58**	0.56	0.60	0.55	0.53	0.63	0.62	0.61	1.00	0.66
Q29	**0.69**	**0.69**	**0.69**	**0.66**	**0.72**	**0.67**	**0.63**	**0.64**	0.65	0.66	0.64	0.63	0.70	0.67	0.63	0.66	1.00

Note: Correlations that are higher between subscales are designated in **bold**.

Confirmatory Factor Analysis

H2: Items on the ACUHO-I/EBI RA Survey will load on to the ten-factor structure of the instrument.

H3: Confirmatory factor analysis will support the 10-factor structure model of the ACUHO-I/EBI RA Survey.

Confirmatory Factor Analysis provided the analysis to determine construct validity (CFA; Jöreskog, 1969). Due to the decision to treat the data as ordinal, the following specifications were made: use of the Continuous/Categorical Variable Methodology (CVM) method for estimating the model, a polychoric correlation matrix and robust weighted least squares (WLS) method to analyze the correlation matrix (Muthén 1983; Muthén, 1984; Muthén, Du Toit, & Spisic, 1997; Olsson, 1979). Five goodness of fit indices, the calculation of estimates to determine how well the hypothesized measurement model fits the observed correlation, were used to assess model fit.

The ten-factor model is illustrated in Figure 4.1. The rectangles represent the observed or measured variables; each rectangle represents a single item from the ACUHO-I/EBI RA Survey. The ovals represent the latent factors, variables that are not directly observed, but statistically inferred from other observed variables. Arrows from the ovals are directed toward the items, the rectangles, which assumingly measure its respective latent factor. Curved, two-way arrows represent the covariance between the latent factors. The decision of which factors to load the items on was based on the survey development and organization by EBI and ACUHO-I. The current study was interested in confirming the structure as defined by EBI and ACUHO-I for a sample of sophomore RAs.

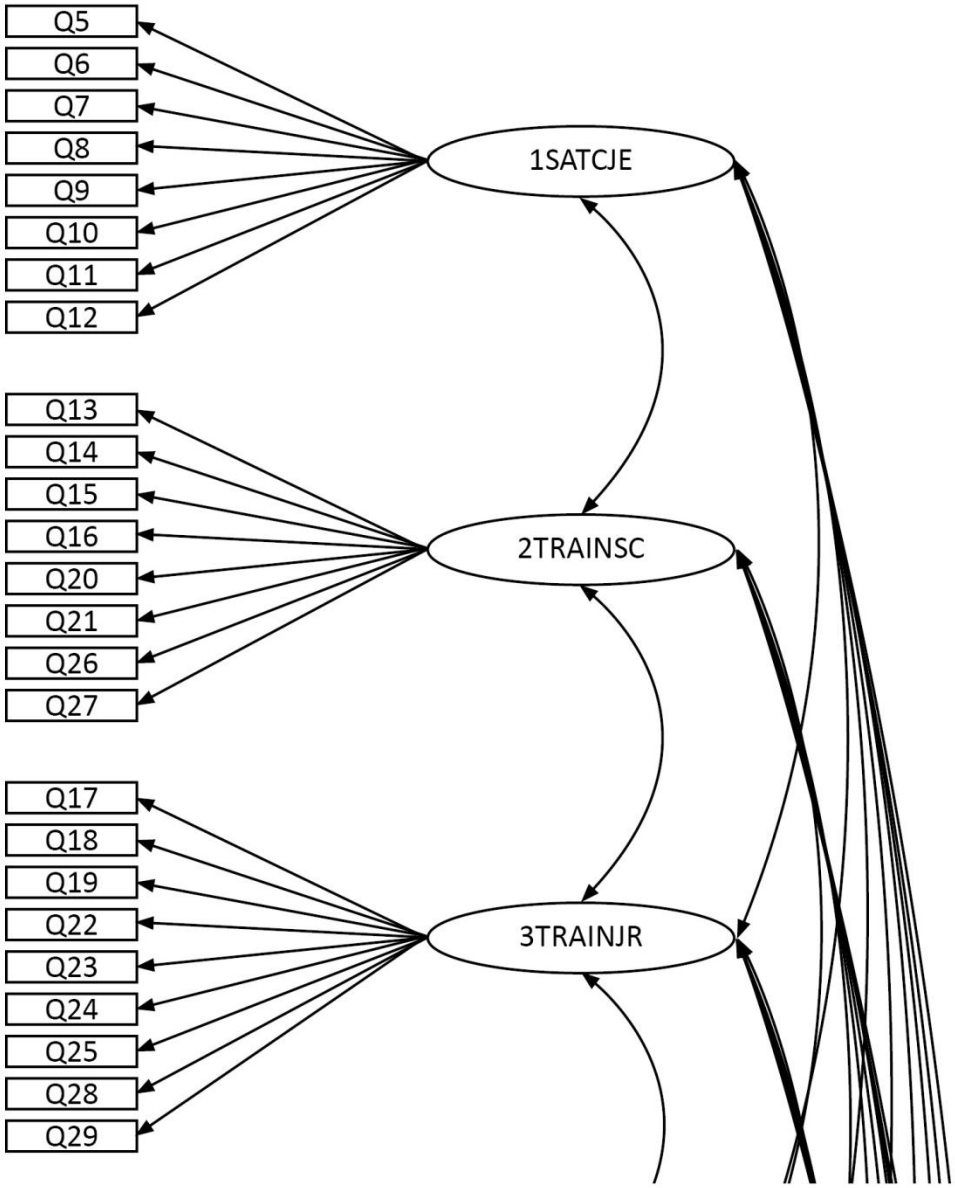


Figure 4.1. *10 Factor Model*

Figure 4.1. (cont'd)

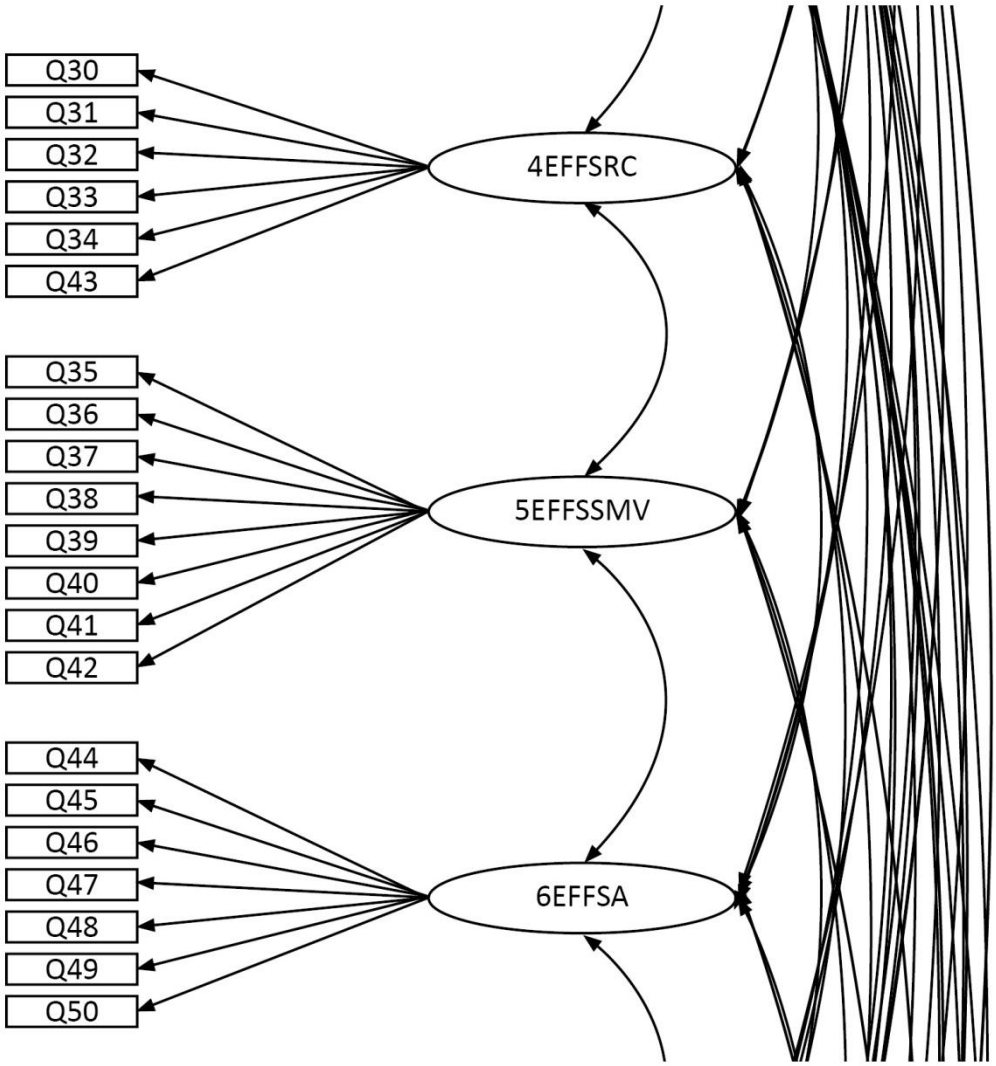
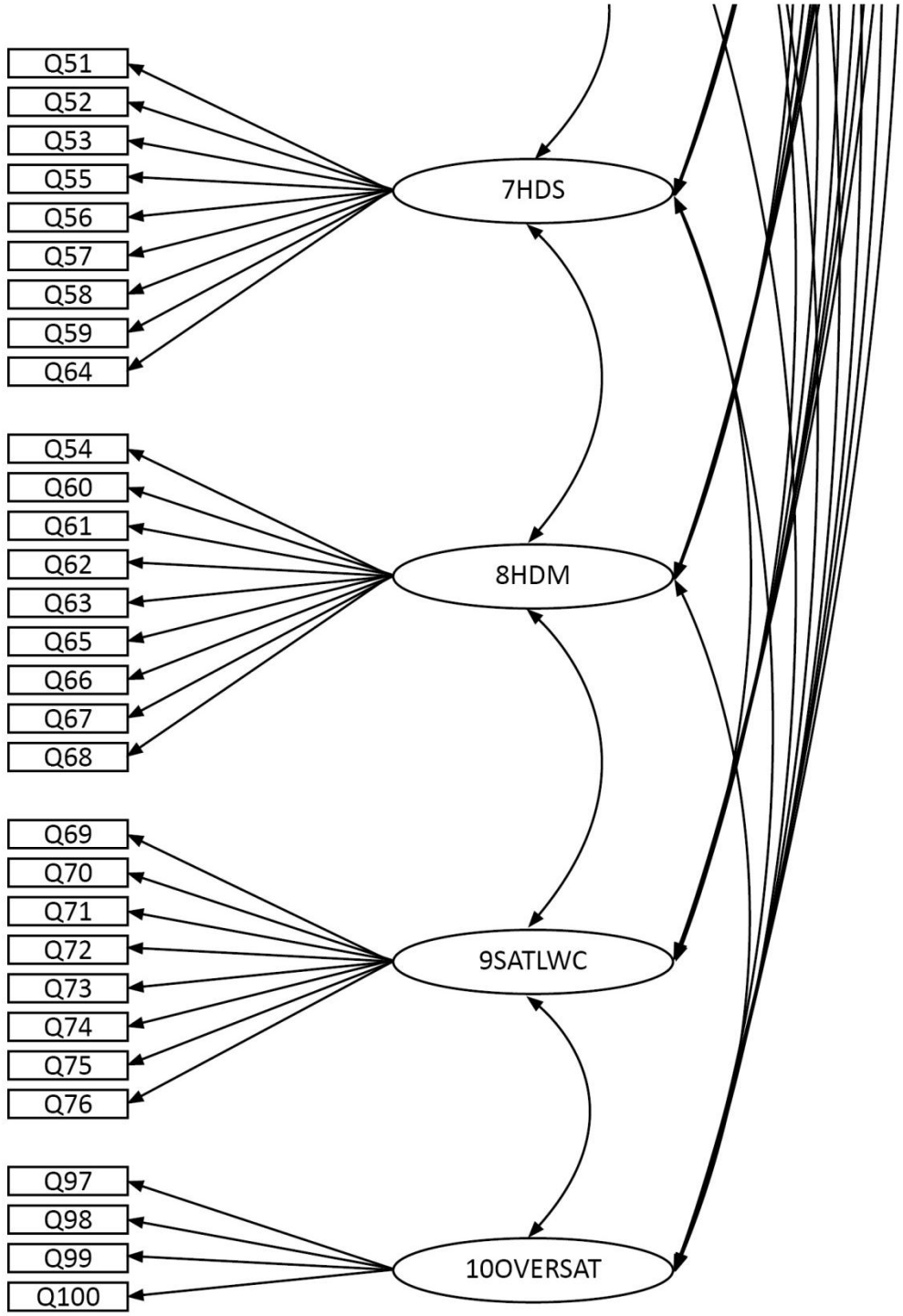


Figure 4.1 (cont'd)



For the 10-factor model, Table 4.2 provides the results from the unstandardized and standardized models including factor loadings (R), factor variances (R^2), and residual variances (1- R^2) for the CVM solution. All factor loadings were statistically significant estimates ($p < .01$) and ranged from 0.52 (Q71) to 0.93 (Q67, Q68, and Q97). The factor loadings were consistently at 0.6 or higher with the exception of 2 items (Q71 *Satisfactions with the RA position regarding: Constraints on leaving campus* [λ = 0.52] and Q76 *Satisfaction with the RA position regarding: remuneration (salary, room, board, tuition, etc.)* [λ = 0.56]). Factor loadings are expected to meet a minimum of 0.3 (Brown, 2006) with values of 0.6 and above for best analysis (Tabachnick & Fidell, 2007). Factor variances, presenting variance in the observed variable accounted for by the latent factor, ranged from 27% to 87% and residual variances, variance not attributed to a specific cause, ranged from 13% to 73%. A majority of the items (70) had a factor variance above 52.7% with six items below that threshold (ranging from 27.2% to 49.6%). The hypothesis (H2) was supported by the data.

The goodness of fit χ^2 test yields a value of 10592.39 (df = 2729) with a $p < .001$. This significant χ^2 suggests that a difference exists between the predicted and the actual covariance matrix, thus suggesting an inadequate fit. While χ^2 may suggest otherwise, model fit indices for Root Mean Square Error of Approximation (RMSEA = 0.045), Comparability Fit Index (CFI = .951), Tucker-Lewis Index (TLI = .949), and weighted root mean square residual (WRMR = 1.92) provide evidence of a well-fitting model (Hu & Bentler, 1999; Marsh, et al., 2004; Muthén & Muthén, 1998-2012). Hypothesis H3 was supported by the data. Given the results in support of hypotheses H2 and H3, the factor composition was deemed valid as developed by EBI and ACUHO-I.

Table 4.2

Unstandardized and Completely Standardized Parameter Estimates

		Unstandardized		Standardized			
Item	Factor	Factor Loading (*R*)	SE	Factor Loading (*R*)**	SE	Factor Variance (R^2)	Residual Variance (1 - R^2)
Q5*	1SATCJE	1.000	0.000	0.764	0.014	0.584	0.416
Q6	1SATCJE	0.955	0.023	0.730	0.017	0.533	0.467
Q7	1SATCJE	0.847	0.029	0.647	0.021	0.419	0.581
Q8	1SATCJE	1.046	0.026	0.799	0.014	0.638	0.362
Q9	1SATCJE	0.911	0.028	0.697	0.018	0.486	0.514
Q10	1SATCJE	1.003	0.026	0.766	0.015	0.587	0.413
Q11	1SATCJE	1.150	0.024	0.879	0.010	0.773	0.227
Q12	1SATCJE	1.072	0.024	0.819	0.013	0.671	0.329
Q13*	2TRAINSC	1.000	0.000	0.802	0.011	0.643	0.357
Q14	2TRAINSC	1.037	0.017	0.832	0.011	0.692	0.308
Q15	2TRAINSC	1.000	0.017	0.802	0.011	0.643	0.357
Q16	2TRAINSC	0.996	0.017	0.799	0.011	0.638	0.362
Q20	2TRAINSC	1.066	0.016	0.855	0.009	0.731	0.269
Q21	2TRAINSC	1.012	0.019	0.812	0.012	0.659	0.341
Q26	2TRAINSC	0.935	0.020	0.750	0.014	0.563	0.438
Q27	2TRAINSC	0.905	0.021	0.726	0.014	0.527	0.473
Q17*	3TRAINJR	1.000	0.000	0.759	0.013	0.576	0.424
Q18	3TRAINJR	1.053	0.020	0.799	0.011	0.638	0.362
Q19	3TRAINJR	1.011	0.022	0.767	0.013	0.588	0.412
Q22	3TRAINJR	1.021	0.022	0.775	0.012	0.601	0.399
Q23	3TRAINJR	1.144	0.021	0.868	0.009	0.753	0.247
Q24	3TRAINJR	1.110	0.021	0.842	0.009	0.709	0.291
Q25	3TRAINJR	1.051	0.022	0.797	0.012	0.635	0.365
Q28	3TRAINJR	0.994	0.023	0.754	0.014	0.569	0.431
Q29	3TRAINJR	1.143	0.022	0.867	0.010	0.752	0.248

*Mplus 7.11, by default, uses the first item per factor as a marker indicator to scale the latent factor; the factor loading and standard error for each item was set to 1.0 and 0.0, respectively.
**All 76 factor loadings are statistically significant ($p < 0.01$)

Table 4.2 (cont'd)

		Unstandardized		Standardized			
Item	Factor	Factor Loading (R)	SE	Factor Loading (R)**	SE	Factor Variance (R^2)	Residual Variance (1 - R^2)
Q30*	4EFFSRC	1.000	0.000	0.704	0.016	0.496	0.504
Q31	4EFFSRC	1.154	0.027	0.813	0.012	0.661	0.339
Q32	4EFFSRC	1.165	0.027	0.820	0.011	0.672	0.328
Q33	4EFFSRC	1.181	0.029	0.832	0.011	0.692	0.308
Q34	4EFFSRC	1.116	0.032	0.786	0.014	0.618	0.382
Q43	4EFFSRC	1.216	0.032	0.856	0.012	0.733	0.267
Q35*	5EFFSSMV	1.000	0.000	0.754	0.014	0.569	0.431
Q36	5EFFSSMV	1.096	0.023	0.827	0.011	0.684	0.316
Q37	5EFFSSMV	1.084	0.024	0.818	0.011	0.669	0.331
Q38	5EFFSSMV	0.976	0.026	0.736	0.014	0.542	0.458
Q39	5EFFSSMV	1.103	0.024	0.832	0.010	0.692	0.308
Q40	5EFFSSMV	1.069	0.022	0.806	0.012	0.650	0.350
Q41	5EFFSSMV	1.098	0.027	0.828	0.012	0.686	0.314
Q42	5EFFSSMV	1.099	0.024	0.829	0.011	0.687	0.313
Q44*	6EFFSA	1.000	0.000	0.895	0.007	0.801	0.199
Q45	6EFFSA	1.000	0.011	0.894	0.008	0.799	0.201
Q46	6EFFSA	0.975	0.012	0.872	0.009	0.760	0.240
Q47	6EFFSA	0.999	0.012	0.893	0.008	0.797	0.203
Q48	6EFFSA	0.924	0.013	0.827	0.010	0.684	0.316
Q49	6EFFSA	0.893	0.015	0.799	0.013	0.638	0.362
Q50	6EFFSA	0.899	0.016	0.805	0.013	0.648	0.352
Q51*	7HDS	1.000	0.000	0.898	0.007	0.806	0.194
Q52	7HDS	1.005	0.008	0.902	0.007	0.814	0.186
Q53	7HDS	0.982	0.010	0.882	0.008	0.778	0.222
Q55	7HDS	0.980	0.010	0.880	0.008	0.774	0.226
Q56	7HDS	0.972	0.011	0.873	0.008	0.762	0.238
Q57	7HDS	0.930	0.011	0.835	0.009	0.697	0.303
Q58	7HDS	1.022	0.009	0.918	0.006	0.843	0.157
Q59	7HDS	1.009	0.009	0.906	0.006	0.821	0.179
Q64	7HDS	0.979	0.010	0.879	0.008	0.773	0.227

*Mplus 7.11, by default, uses the first item per factor as a marker indicator to scale the latent factor; the factor loading and standard error for each item was set to 1.0 and 0.0, respectively.
**All 76 factor loadings are statistically significant ($p < 0.01$)

Table 4.2 (cont'd)

		Unstandardized		Standardized			
Item	Factor	Factor Loading (*R*)	SE	Factor Loading (*R*)**	SE	Factor Variance (R^2)	Residual Variance ($1 - R^2$)
Q54*	8HDM	1.000	0.000	0.860	0.009	0.740	0.260
Q60	8HDM	0.980	0.013	0.843	0.009	0.711	0.289
Q61	8HDM	0.979	0.013	0.843	0.009	0.711	0.289
Q62	8HDM	1.014	0.012	0.873	0.008	0.762	0.238
Q63	8HDM	1.001	0.012	0.862	0.009	0.743	0.257
Q65	8HDM	1.062	0.011	0.914	0.006	0.835	0.165
Q66	8HDM	0.928	0.015	0.798	0.011	0.637	0.363
Q67	8HDM	1.084	0.011	0.933	0.005	0.870	0.130
Q68	8HDM	1.081	0.012	0.930	0.006	0.865	0.135
Q69*	9SATWLC	1.000	0.000	0.775	0.015	0.601	0.399
Q70	9SATWLC	0.938	0.027	0.726	0.016	0.527	0.473
Q71	9SATWLC	0.674	0.035	0.522	0.025	0.272	0.728
Q72	9SATWLC	0.838	0.029	0.649	0.019	0.421	0.579
Q73	9SATWLC	0.956	0.025	0.740	0.015	0.548	0.452
Q74	9SATWLC	0.959	0.031	0.743	0.019	0.552	0.448
Q75	9SATWLC	1.007	0.032	0.780	0.019	0.608	0.392
Q76	9SATWLC	0.725	0.032	0.562	0.023	0.316	0.684
Q97*	10OVERSAT	1.000	0.000	0.934	0.012	0.872	0.128
Q98	10OVERSAT	0.904	0.018	0.844	0.012	0.712	0.288
Q99	10OVERSAT	0.916	0.018	0.855	0.011	0.731	0.269
Q100	10OVERSAT	0.906	0.018	0.846	0.012	0.716	0.284

*Mplus 7.11, by default, uses the first item per factor as a marker indicator to scale the latent factor; the factor loading and standard error for each item was set to 1.0 and 0.0, respectively.
**All 76 factor loadings are statistically significant ($p < 0.01$)

Reliability Measure

H4: Cronbach's alpha reliability coefficient for each factor examined in the RA Survey when distributed to a sophomore RA sample will be $\alpha > 0.8$.

Each factor was evaluated individually for reliability using Cronbach's alpha reliability coefficient. Acceptable reliability coefficients were reported for each scale (i.e., $\alpha > 0.8$) and presented in Table 4.3. The results suggest that items within each factor are consistent with

each other to a predictable degree. The H4 hypothesis is supported and suggests that the factors measured by the items in the RA Study are reliable when distributed to a sophomore RA sample.

Table 4.3

ACUHO-I/EBI RA Study Factor Reliability Coefficients for a Sophomore RA Sample

Factor	α
1. Satisfaction That Clear Job Expectations Were Established	0.88
2. RA Training: Dealing with Student Concerns	0.91
3. RA Training: Dealing with Job Responsibilities	0.90
4. Effectiveness in Enhancing Students' Responsibility and Cooperation	0.88
5. Effectiveness in Enhancing Students' Self-Management and Values	0.91
6. Effectiveness in Enhancing Students' Awareness	0.91
7. Hall Director/Supervisor: Supporting RA	0.95
8. Hall Director/Supervisor: Management	0.94
9. Satisfaction with the working and living conditions of the RA	0.84
10. Overall RA Satisfaction	0.90

Research Question 2: Relationships between Sophomore RA Experience Factors

The second research question, what relationships exist between the valid and reliable factors to better understand the sophomore RA experience, in the current study explored the relationships between the factors of interest: gender, GPA, turnover intentions, job expectations, 2 measures of training, 3 measures of RA self-efficacy, 2 measures of hall director involvement, work life balance, and overall satisfaction (see Table A.7). The organization of this section begins with the reporting the factor-level data preparation. The results from mean difference testing follow and the chapter concludes with correlation results.

Data Preparation

Data preparation at the item level was addressed in Chapter 3. Data preparation at the factor level includes discussion of missing data, univariate normality and outliers. Missing data

at the item-level was addressed with a FIML estimator and the resulting data set was utilized for all statistical analysis including the factor calculations. Factor values were calculated in MPlus and correlations, MANOVA, and ANOVA were calculated in SPSS. Means, standard deviations, skewness, and kurtosis are presented in Table 4.4. Mean factor scores ranged from 3.984 to 4.004. Standard deviations indicated little variance given a range from 0.67 to 0.87 (SD range = 0.2). Skewness results ranged from -0.20 to 0.11, within the range of + 1.00 to – 1.00, the generally accepted evidence of a normal distribution. Three of the factors, 7HDS, 8HDM, and 10OVERSAT, produced negatively skewed distributions with *z*-scores at or above 3.00 suggesting non-normal distributions, but not extreme non-normality (Kline, 1998). Kurtosis results ranged from -0.23 to 0.48, within the range of -1.00 and 2.00 as the generally accepted evidence of a normal distribution, and with no single *z*-score exceeding |1.82|. Thus, the univariate normality assumption was accepted. Possible univariate outliers (0.01%, n = 16) were identified as those with z-scores >3 or <-3 ranging from -3.83 to -3.003. While all cases were in the tails of the distributions, none appeared "disconnected" from the remaining observations upon review of boxplots. Furthermore, large samples (in hundreds) may include a few extreme cases that need not be outliers (Raykov & Marcoulides, 2008). Outliers are likely a subset within the sample that are generally unsatisfied and appear as outliers in a sample of predominantly satisfied participants. Thus, all outliers were retained.

Table 4.4

Factor Univariate Characteristics

Factor	Mean	SD	Skewness	SE	Kurtosis	SE
1SATCJE	4.000	0.73	0.08	0.06	-0.05	0.13
2TRAINSC	4.003	0.79	0.11	0.06	0.18	0.13
3TRAINJR	4.004	0.75	0.11	0.06	0.16	0.13
4EFFSRC	3.999	0.67	0.07	0.06	0.11	0.13
5EFFSSMV	4.003	0.73	0.13	0.06	0.18	0.13
6EFFSA	3.994	0.84	0.04	0.06	0.01	0.13
7HDS	3.984	0.85	-0.19	0.06	-0.23	0.13
8HDM	3.987	0.82	-0.20	0.06	-0.22	0.13
9SATWLC	3.994	0.72	0.01	0.06	0.01	0.13
10OVERSAT	3.989	0.87	-0.19	0.06	0.00	0.13

Note: N = 1443 for all Factors

Mean Differences

Multivariate analysis of variance (MANOVA) was conducted to determine the effect of gender, intent to return, and academic performance (as measured by reported cumulative GPA) on the 10 survey factors (see Table A.7). Analysis of variance (ANOVA) for each of the 10 factors was conducted as follow-up to occurrences of statistically significant MANOVA results. Post hoc analysis to statistically significant univariate ANOVAs were conducted as necessary and is explained fully in the sections that follow.

H5: No significant mean difference between gender, male and female, exists across all factors.

While the question requesting gender identification allowed for 4 different responses (Male, Female, Transgender, or Other), only 2 participants identified as “Transgender” and 1 as “other” (see Table 3.2). Therefore, gender was treated as a dichotomous variable. Table 4.5 summarizes the means and standard deviations by gender across all factors. Females in general reported higher means on all factors except for satisfaction with hall director management

(8HDM) and satisfaction with the working and living conditions of the RA (9SATWLC) where male mean scores were higher. Differences between genders across all survey factors were found to be non-significant (Hotelling's Trace = 0.009, F (10, 1355) = 1.204, p = 0.284). No univariate ANOVAs were conducted and the H5 hypothesis was retained.

Table 4.5

Means and Standard Deviations for Sophomore RA Experience Factors by Gender

Factor	Gender	Mean	SD
1SATCJE	Male	3.98	0.73
	Female	4.03	0.72
2TRAINSC	Male	3.96	0.81
	Female	4.05	0.76
3TRAINJR	Male	3.97	0.75
	Female	4.04	0.73
4EFFSRC	Male	3.98	0.66
	Female	4.02	0.67
5EFFSSMV	Male	3.99	0.74
	Female	4.02	0.72
6EFFSA	Male	3.98	0.85
	Female	4.02	0.83
7HDS	Male	4.00	0.83
	Female	3.98	0.86
8HDM	Male	4.00	0.80
	Female	3.98	0.83
9SATWLC	Male	3.97	0.74
	Female	4.02	0.70
10OVERSAT	Male	3.93	0.92
	Female	4.04	0.83
GPA	Male	4.52	1.70
	Female	4.95	1.62

Note: Male n = 645; Female n = 781 for all Factors

H6: No significant mean difference between GPA range groups exists across all factors.

The academic performance indicator, self-reported cumulative GPA, included 8 levels: below 2.25, 2.25 to 2.49, 2.50 to 2.74, 2.75 to 2.99, 3.00 to 3.24, 3.25 to, 3.49, 3.50 to 3.74, and

3.75 to 4.00. Overall, a majority of the sophomore RAs, 76% (n = 1,103), reported GPAs at 3.00 or higher (Table 4.6). Differences between GPAs across all survey factors were found to be non-significant (Hotelling's Trace = 0.052, F (70, 9473) = 1.003, p = 0.470). No univariate ANOVAs were conducted and the H6 hypothesis was retained.

Table 4.6

Cumulative Grade Point Average (GPA) for the Sophomore RA Sample

Cumulative GPA Range	n	%	Valid %
Below 2.25	8	.6	.6
2.25 to 2.49	34	2.4	2.4
2.50 to 2.74	105	7.3	7.3
2.75 to 2.99	189	13.1	13.1
3.00 to 3.24	294	20.4	20.4
3.25 to 3.49	280	19.4	19.4
3.50 to 3.74	262	18.2	18.2
3.75 to 4.00	267	18.5	18.5
Other than 4.0 GPA Scale	4	.3	.3
Total	1443	100	

H7: No significant mean differences exist between sophomores when grouped by intent to return across all factors.

The intention to return item (TURNOVER) provided the following options: yes, undecided, no (able to return, but choose not to), and no (unable to return graduate, transfer, etc.). Table 4.7 displays the sample distribution by turnover intention. While 69% (n = 993) intended to return, 20.5% (n = 297) indicated that they would not be returning and 10.4% (n = 150) were undecided about their intentions at the time they were surveyed. Of the 20.5% who were not returning, 22.5% (n = 67) were unable to return for reasons which may include graduation, transferring institutions, or poor grades failing to meet the minimum criteria for continued employment.

Table 4.7

Turnover Intentions for the Sophomore RA Sample

Turnover Intention	n	%	Valid %
Yes, will return as an RA	993	68.8	69.0
Undecided	150	10.4	10.4
No, able to return, but choose not to	230	15.9	16.0
No, unable to return (graduate, transfer, etc.)	67	4.6	4.7
Total Valid	1440	99.8	100.0
Missing Data	3	.2	
Total	1443	100	

Results from the MANOVA indicated significant differences were found among the 4 categories of intent to return across the 10 survey factors, Hotelling's Trace = 0.128, $F(30, 4061) = 5.762$, $p < 0.001$. The multivariate η^2 based on Hotelling's Trace was weak, 0.04. ANOVA on each survey factor was conducted as follow-up tests to the significant MANOVA. The Bonferroni procedure was implemented to control for Type I error, thus testing each ANOVA at the 0.005 level (0.05 divided by 10, the number of ANOVAs conducted). Table 4.8 displays the means and standard deviations on each survey factor for the 4 groups and the corresponding ANOVA results.

Post hoc analysis to statistically significant ANOVA for 1SATCJ, 2TRAINSC, 3TRAINJR, 7HDS, 8HDM, 9SATWLC, and 10OVERSAT consisted of conducting pairwise comparisons to identify which group. Each pairwise comparison was tested at the 0.001 level (0.005 divided by 3, the number of comparisons per factor) to remain consistent with the decision to control for Type I error with the Bonferroni approach. Those sophomore RAs indicating intent to return demonstrated significantly different means as compared to those indicating intentions to leave, but were able to return if they chose to do so (see Table 4.9). The results reject hypothesis H6.

Table 4.8

Means and Standard Deviations for Sophomore RA Experience Factors by Turnover Intention and Results of ANOVA

Factor	Intent to Return	n	Mean	SD	F	df1	df2	p	η^2
1SATCJE	Return	993	4.09	0.71	9.964**	3	1364	0.000	0.021
	Undecided	150	3.81	0.71					
	No (able)	230	3.78	0.75					
	No (unable)	67	3.93	0.76					
2TRAINSC	Return	993	4.08	0.77	8.419**	3	1364	0.000	0.018
	Undecided	150	3.86	0.78					
	No (able)	230	3.81	0.79					
	No (unable)	67	3.82	0.88					
3TRAINJR	Return	993	4.08	0.73	7.927**	3	1364	0.000	0.017
	Undecided	150	3.86	0.73					
	No (able)	230	3.83	0.75					
	No (unable)	67	3.83	0.81					
4EFFSRC	Return	993	4.04	0.66	3.517	3	1364	0.015	0.008
	Undecided	150	3.92	0.67					
	No (able)	230	3.86	0.69					
	No (unable)	67	4.00	0.72					
5EFFSSMV	Return	993	4.04	0.71	2.998	3	1364	0.030	0.007
	Undecided	150	3.93	0.76					
	No (able)	230	3.88	0.76					
	No (unable)	67	4.00	0.76					
6EFFSA	Return	993	4.05	0.83	2.310	3	1364	0.075	0.005
	Undecided	150	3.93	0.84					
	No (able)	230	3.82	0.83					
	No (unable)	67	3.95	0.88					
7HDS	Return	993	4.08	0.82	7.800**	3	1364	0.000	0.017
	Undecided	150	3.82	0.89					
	No (able)	230	3.74	0.88					
	No (unable)	67	3.83	0.84					

** ANOVA significant at the 0.005 level

Table 4.8 (cont'd)

Factor	Intent to Return	n	Mean	SD	F	df1	df2	p	η^2
8HDM	Return	993	4.07	0.79	7.187**	3	1364	0.000	0.016
	Undecided	150	3.84	0.86					
	No (able)	230	3.76	0.84					
	No (unable)	67	3.82	0.81					
9SATWLC	Return	993	4.13	0.68	23.817**	3	1364	0.000	0.050
	Undecided	150	3.74	0.63					
	No (able)	230	3.59	0.69					
	No (unable)	67	3.86	0.84					
10OVERSAT	Return	993	4.21	0.77	49.293**	3	1364	0.000	0.098
	Undecided	150	3.59	0.74					
	No (able)	230	3.35	0.92					
	No (unable)	67	3.73	0.97					

** ANOVA significant at the 0.005 level

Table 4.9

Pairwise Comparison Significant Results

Factor			Mean Difference	SE	*p*
1SATCJE	Return	Undecided	0.279**	0.062	0.000
	Return	No (able)	0.320**	0.052	0.000
2TRAINSC	Return	No (able)	0.283**	0.057	0.000
3TRAINJR	Return	No (able)	0.262**	0.054	0.000
7HDS	Return	No (able)	0.332**	0.061	0.000
8HDM	Return	No (able)	0.306**	0.587	0.000
9SATWLC	Return	Undecided	0.395**	0.060	0.000
	Return	No (able)	0.546**	0.050	0.000
10OVERSAT	Return	Undecided	0.638**	0.069	0.000
	Return	No (able)	0.870**	0.058	0.000
	Return	No (unable)	0.489**	0.099	0.000

** Mean Difference is significant at the 0.001 level

Correlations

H8: No correlations between any of the 13 variables of the sophomore RA experience reached or exceeded a strong relationship threshold (> 0.70).

Correlation coefficients were computed among the 13 sophomore RA experience variables. The Bonferoni approach was applied to control for Type I error across the 78 correlations. A *p*-value of less than .0006 was required for significance (.05/78 = .0006). Fifty-four out 78 correlations were statistically significant and were greater than or equal to 0.10 (Table 4.10).

The strongest correlations were between the two factors measuring satisfaction with aspects of training, 2TRAINSC and 3TRAINJR (r = 0.99), and the two factors measuring satisfaction with the hall director, 7HDS and 8DHM (r = 0.99). Strong correlations were also found amongst the three factors measuring RA self-efficacy, 4EFFSRC and 5EFFSSMV (r = 0.91), 4EFFSRC and 6EFFSA (r = 0.88), and 5EFFSSMV and 6EFFSA (r = 0.86). Given these significant, strong correlations coupled with the results of inter-item correlations analysis, the demonstrated overlap between these instances concern of multicollinearity is raised. Therefore, further consideration of factor relationships will consider these factors as one (2TRAINSC and 3TRAINJR will be treated as a single training factor; 4EFFSRC, 5EFFSSMV, and 6EFFSA will be treated as a single RA self-efficacy factor; 7HDS and 8HDM will be treated as a single hall director factor).

Those correlations indicating a strong relationship (0.70 and above) and moderate relationship (0.50 to 0.69) are illustrated in Figure 4.2. Removing the moderate relationships from the figure leaves a linear view of the relationships as illustrated in Figure 4.3.

Table 4.10

Correlations among the Sophomore RA Experience Variables

	GENDER	GPA	TURNOVER	1SATCJE	2TRAINSC	3TRAINJR	4EFFSRC	5EFFSSMV	6EFFSA	7HDS	8HDM	9SATWLC	10OVERSAT
GENDER	1.00												
GPA	0.12**	1.00											
TURNOVER	0.04	0.09	1.00										
1SATCJE	0.03	-0.05	-0.15**	1.00									
2TRAINSC	0.05	-0.07	-0.14**	0.75**	1.00								
3TRAINJR	0.04	-0.06	-0.14**	0.78**	0.98**	1.00							
4EFFSRC	0.01	-0.08	-0.08	0.64**	0.71**	0.66**	1.00						
5EFFSSMV	0.01	-0.09	-0.07	0.58**	0.67**	0.62**	0.91**	1.00					
6EFFSA	0.01	-0.10**	-0.09	0.58**	0.64**	0.60**	0.88**	0.86**	1.00				
7HDS	-0.02	-0.05	-0.15**	0.64**	0.54**	0.56**	0.47**	0.41**	0.46**	1.00			
8HDM	-0.02	-0.05	-0.15**	0.62**	0.52**	0.55**	0.46**	0.41**	0.46**	0.99**	1.00		
9SATWLC	0.03	-0.05	-0.26**	0.72**	0.65**	0.65**	0.60**	0.54**	0.57**	0.63**	0.61**	1.00	
10OVERSAT	0.06	-0.06	-0.35**	0.62**	0.56**	0.54**	0.48**	0.43**	0.44**	0.56**	0.55**	0.83**	1.00

** Correlation is significant at the 0.0006 level (2-tailed)

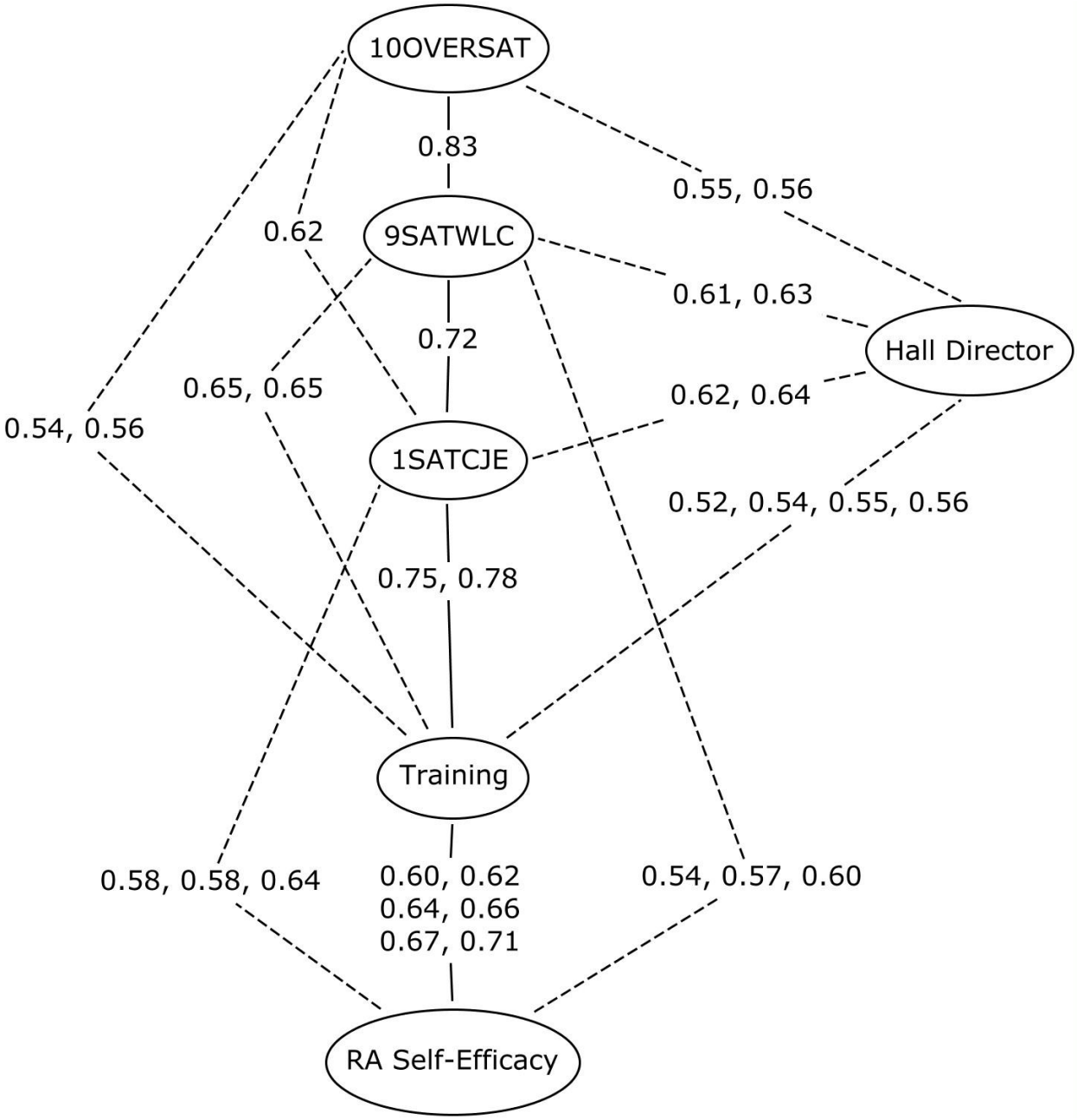


Figure 4.2. *Strong and Moderate Correlations*

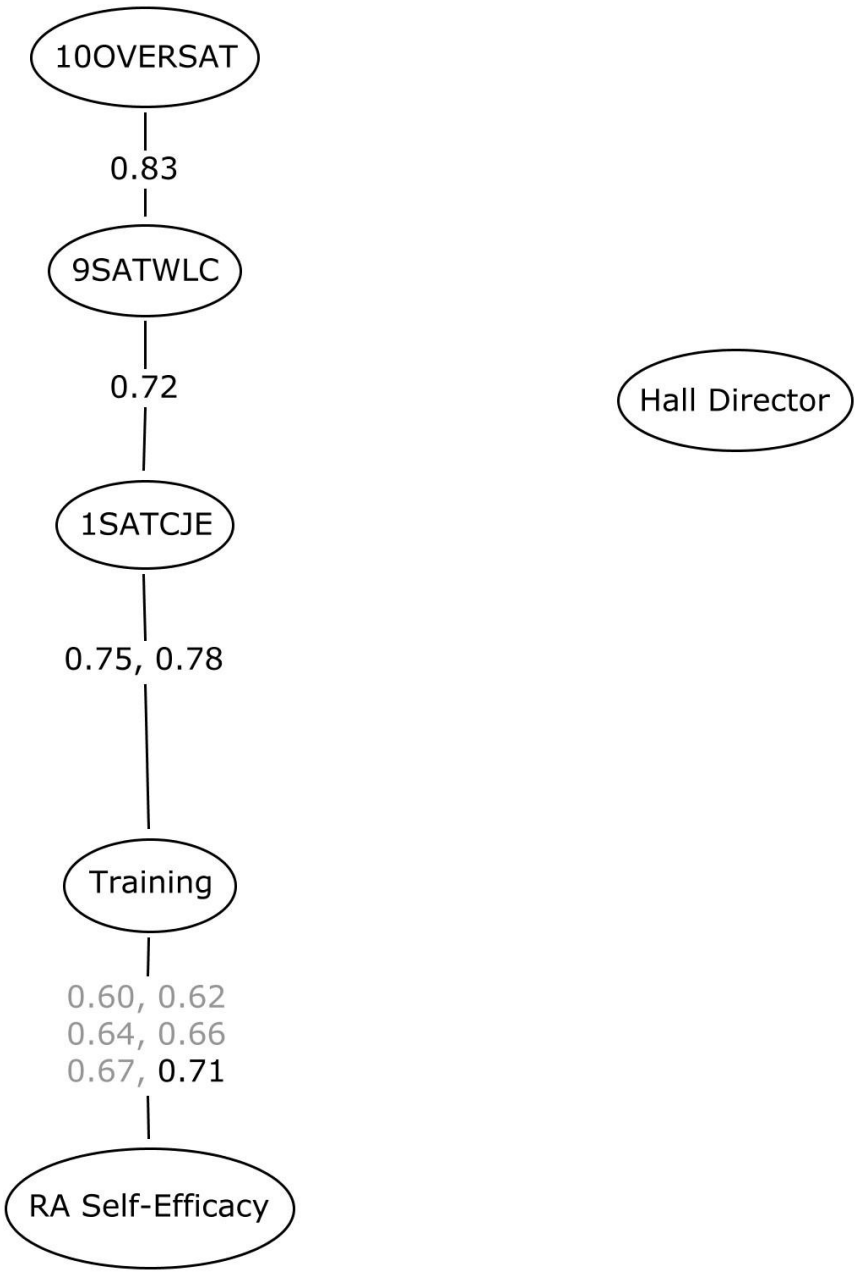


Figure 4.3. *Strong Correlations*

Summary

Chapter 4 began with a brief review of the study purpose and instrument. Sample descriptive statistics were presented. The first research question was addressed through results related to inter-item correlations, confirmatory factor analysis, and reliability testing. The second research question was addressed through results related to mean difference testing and correlations. Hypotheses were tested and findings were presented. Data analysis supports the validity and reliability of the RA Survey when used with sophomore RAs. Furthermore, significant differences were present when considering GPA, gender, and intent to leave and significant correlations between sophomore RA experience variables were present. Chapter 5 provides an interpretation of the results, connection to relevant literature, implications for practice, and future research.

CHAPTER 5
DISCUSSION

This chapter is divided into five major sections of which two are dedicated to the research questions. Each of the research question sections include a review of the purpose for that research question, summary discussion of the results of the analysis, connections to prior research where applicable, and recommendations for future research. The discussion for the first research question includes the topics of inter-item correlations, confirmatory factor analysis, and reliability evidence. The discussion for the second research question includes gender, academic performance, turnover intention, and factor relationships. The final two sections conclude this chapter with a chapter summary section and document conclusion section.

Research Question 1: ACUHO-I/EBI RA Survey Psychometrics

The ACUHO-I/EBI RA Survey has been widely implemented since its development in 1999 and EBI has been forthcoming with acceptable reliability coefficients for each of the instrument's 15 factors as distributed to the entire population of participants. Lacking is evidence of construct validity and reliability measures of the survey when administered to RAs by class status and a sophomore RA sample specifically. The current study provides initial validity and reliability evidence for the RA Survey when distributed to a sample of sophomore RAs. Furthermore, the current study provides the only known documentation of survey psychometrics published outside of EBI. This section includes discussions of inter-item correlations, confirmatory factory analysis, and evidence of reliability. Recommendations for

future research and implications for practice conclude this section.

Inter-Item Correlations

Inter-item correlations were explored to address the first hypothesis (H1: Each survey item will correlate highest with those items within factors as opposed to items between factors). Results indicated noticeable overlap, instances where correlations between items across factors were larger than correlations between items within factors, between the two training factors, between the three RA self-efficacy factors, and between the two hall director factors. This overlap was confirmed by evidence of strong, significant correlations between these sets of factors.

Instrument development strives to create the most accurate measure of a latent variable while being efficient; thus, selecting the fewest number of items that most accurately measures the latent variable of interest (Murphy & Davidshofer, 2001). The objective is to find the balance between the number of survey items to include and the demonstrated acceptable levels of validity and reliability measures as defined by relevant literature when using those items. While the RA Survey has the essence of a psychological test in that the factors are meant to measure a specific aspect of satisfaction, the underlying latent variable, the intended purpose of the RA Survey is benchmarking. The difference in instrument purpose, psychological test or benchmarking tool, influences which survey items are included and how they are organized.

The factors in the RA Survey may serve as a measure of satisfaction with different aspects of the RA position, but as a benchmarking instrument, the survey factors may serve a primary role as an organizational structure for an extensive collection of questions. Each

question is assumed to add value to the instrument by collecting more information, although the value of each question may not be statistically significant to measure the latent variable. The subtle differences in each question add value by assessing satisfaction with specific aspects of the residence life program or experience. Each item when examined independently provides unique insight into the factor of interest. For example, Q71 had the lowest factor loading (0.52) for factor 9SATWLC but is the only question in the survey that asks about satisfaction with room accommodations. Removing this question because of the relatively low factor loading ultimately removes an opportunity for RAs to respond about satisfaction with their room accommodations.

The risk of losing unique data is also likely if a new, single factor was constructed and composed of the most statistically significant collection of items from the pair (or trio) of factors. For example, the 3 RA self-efficacy factors are comprised of 21 individual questions. Statistically, 21 questions for a single factor are unnecessary, yet removal of questions once again reduces the amount of information collected and removes the impact that information has on the factor. Q35 has no correlation with any other RA self-efficacy item higher than 0.68 and may be a candidate for removal, but this is also the only question addressing the satisfaction in enhancing a students' ability to study more effectively.

When considering how the survey results are utilized by residence life administrators, an administrator may scan the overall factor statistics in an initial surface review of the results but will spend extensive time on the specific results of each item. Therefore, in order to remain a useful instrument for residence life organizations, including all the questions as developed is necessary. Reducing the number of items per factor is not advised because removing

statistically non-significant questions removes potentially unique information collected by the survey.

Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) provided the analysis to determine construct validity as explored in the second and third hypotheses (H2: Items on the ACUHO-I/EBI RA Survey will load on to the 10-factor structure of the instrument; H3: Confirmatory factor analysis will support the 10-factor structure model of the ACUHO-I/EBI RA Survey).

CFA supported the 10-factor model of the ACUHO-I/EBI RA Survey when administered to a sample of sophomore RAs. Reporting χ^2, RMSEA, CFI, and TLI values are predominant and recommended for CFA (Jackson, Gillaspy, & Purc-Stephenson, 2009). All fit indices (RMSEA, CFI, TLI, and WRMR) except the χ^2 had an acceptable range of values. The χ^2 is sensitive to sample size and with a large sample will tend to be significant regardless of the CFA results (Harrington, 2009). Likewise, in the current study, χ^2 was statistically significant ($\chi^2 = 10592.388$, $df = 2729$, $p < .001$). Thus, the 10-factor model fits well given consistent values for RMSEA, CFI, TLI, and WRMR. Factor loading values consistently at or well above 0.6, an accepted level for factor loadings to provide the best analysis (Tabachnick & Fidell, 2007), provide additional evidence that the 10-factor structure is appropriate for the sophomore RA data.

EBI's internal white paper on the "Statistical Validity of EBI Studies" is not sufficient evidence of the RA Survey's psychometrics. EBI determines validity of its surveys through face validity and construct validity via convergent (predictive) validity and divergent (discriminant) validity. Yet the EBI document fails to disclose any statistical evidence of validity, relying on vague statements such as, "we have been able to calculate predictors of Overall Satisfaction"

and "we do have evidence," merely suggesting construct validity without providing the actual evidence (EBI, n.d., p. 1). Although the current study does not establish validity and reliability evidence for all participants, the study does provide evidence of adequate model fit for the RA Survey with a sample of sophomore RAs through CFA, an accepted, appropriate procedure to test relationships and assess construct validity (Jöreskog, 1969). Based on these results, coupled with content and face validity, evidence suggests that the ACUHO-I/EBI RA Survey measures accurately sophomore RA perception of satisfaction with aspects of their RA experience.

Reliability Evidence

Reliability evidence was analyzed with Cronbach's alpha guided by the fourth hypothesis (H4: Cronbach's alpha reliability coefficient for each factor examined in the RA Survey when distributed to a sophomore RA sample will be $\alpha > 0.8$).

Data from the current study yielded Cronbach's alpha reliability coefficients ranging from 0.84 to 0.95 indicating internal consistency when using the ACUHO-I/EBI RA Survey with sophomore RAs. Furthermore, reliability coefficients for the current study (Table 4.4) are consistent with the reliability coefficients for the entire sample in the 2005, as well as, the 2 years prior (see Table A.3). In comparison, the reliability coefficients from the sophomore RA sample with the 2004-2005 national sample as reported by EBI differed by a margin ranging from 0.01 to 0.03. In comparison to the 2003-2004 and 2002-2003 national samples, reliability coefficients differed by a range of 0.01 to 0.02 and 0.01 to 0.03, respectively.

Future Research

The RA Survey continues to be utilized in practice for benchmarking purposes; thus,

continued efforts to demonstrate the validity and reliability of the survey are necessary. The current study explored a subset of the participants and only a portion of the survey factors leaving a noticeable gap of psychometric evidence. Future efforts to fill these gaps will provide a base of evidence in the literature validating the RA Survey ultimately allowing institutions to confidently use the results from the RA Survey for benchmarking, decision making, and policy development. Without the confirmation that the RA Survey is actually providing accurate and dependable information, the value of the survey results should be questioned. In addition, third party evaluation of the survey provides EBI with unbiased validation of their product.

The current study examined only 10 factors of the ACUHO-I/EBI RA Survey, leaving the psychometric properties of 5 factors unknown. A worthwhile next step in future research should include the evaluation of the psychometric properties, specifically evidence of validity, for the entire instrument across the entire range of participants. Ensuring that all factors are valid and reliable is necessary for the use of the RA Survey in its entirety. Comparing the results from a valid factor with results from a factor with unknown validity essentially negates the results of the comparison.

In addition, just as the survey psychometrics were examined in the current study with a sample of sophomore RAs, other subsets of the population may be worthy of independent consideration. For example, the survey is also administered to RAs who are juniors and seniors; confirming that the survey is valid with these subpopulations has merit. The survey is also used across a variety of institutional types. Participants at different institution types may respond to the survey in common patterns that complement the responses from the total participation resulting in validity and reliability evidence that match. On the other hand, participants at a

specific institution type may respond differently than the population leading to lower or less acceptable reliability and validity measurers; in which case, administrators at these unique institutions should reconsider the use the instrument for their population (i.e., Mourtzanos, 2005). Prior research suggests that RAs at public colleges have different experiences than their private college counterparts (Schreiner, 2010) and RAs at large, public institutions have different experiences than mid-sized universities (Paladino, Murray, Newgent, & Gohn, 2005). Ensuring that the instrument is appropriate for select subpopulations is necessary for drawing the most representative results and appropriate conclusions.

As revealed in the current study, issues of multicollinearity are present between the two training factors (2TRAINSC and 3TRAINJR), between the three RA self-efficacy factors (4EFFSRC, 5EFFSSMV, and 6EFFSA), and between the two hall director factors (7HDS and 8HDM). Multicollinearity occurs when two or more predictor variables are highly correlated leading to problems when using multiple regression (MR; Stevens, 2009). Multicollinearity complicates the interpretation of MR due to an influence on the magnitude of regression weights and inflation of standard error "thereby negatively influencing the statistical significant tests of these coefficients" and influencing the ability to make interpretations of the individual factors (Kraha, Turner, Nimon, Zientek, & Henson, 2012, p. 1). If the questions in the current version are similar in structure as the 2004-2005 version there is reasonable concern that the multicollinearity issue persists across survey versions.

The current study examined the RA Survey that was distributed in 2004-2005. While the 2004-2005 survey remained unchanged until the fall of 2008, the most current version of the RA Survey is different, most notably in the removal of the RA self-efficacy questions. With each

new version of the survey, psychometric properties beyond reliability measures that are provided annually by EBI, should be evaluated and published to assess the impact of new questions and the removal of old questions on validity. Furthermore, as the same survey is administered to new populations of students over time, psychometrics should be annually evaluated to assess the impact of changes in the student experience on the validity of the RA Survey with each new population.

Furthermore, while CFA, as used in the current study, is generally accepted as an appropriate procedure to establish construct validity, other sources of validity evidence have benefit. Accumulation of knowledge about the psychometric properties of the RA Survey furthers the understanding of the underlying constructs and builds confidence in the instrument. Validating the survey and publishing the results to make them readily available to practitioners and administrators would be a noted improvement over what is currently available.

Finally, as reliability and validity evidence is accumulated, the publication of this information is essential because it provides a readily available base of literature by which to validate the results of the RA Survey and limitations of its application. Aside from the current study, administrators who rely on the results of the RA Survey are reliant on documents provided by EBI. To date, these vague statements of validity with no statistical evidence fail to provide documentable evidence of a valid survey. The current study begins the process of publishing the psychometric properties of the RA Survey from the perspective of a third party.

Implications for Practice

Evidence of successful initiatives, demonstrated quality, and accountability for results is

driving higher education professionals to implement assessment tools to collect evidence. Administrators in higher education rely on evidence to demonstrate improvement and accountability (Shutt, Garrett, Lynch, & Dean, 2012). Benchmarking continues to be a well-established and frequently used strategy to gather evidence. Benchmarking assessments create common data fields by which administrators can make comparisons to either best practices or other self-selected institutions. The RA Survey from EBI is a tool by which residence life departments can gather benchmarking data to assess RA satisfaction. EBI advertises that their products provide "the essential foundation of an effective assessment" (EBI, 2013).

Data, or evidence, from the RA Survey have the potential to influence policy and program improvement, where program improvement should be the primary purpose (Wehlburg, 2008). EBI further supports the use of their products for improvement efforts; "EBI benchmarking assessments are rooted in accreditation and professional standards and in principles of continuous improvements" (EBI, 2013). The use of data to inform decision making is evident. The concern that remains is the use of tools that lack necessary evidence of validity. Professionals who continue to use assessments without fully confirming validity and reliability of the instrument contradict the purpose of assessment. The instrument is only useful if it measures the constructs accurately and reliably.

Administrators should proceed with caution and continue to ask questions regarding validity and reliability especially if their institution could be considered a subset of the population. For example, if the residence life department employs only graduate students as RAs, the graduate RA responses may be significantly different than the majority of the

responses from undergraduate students. The same case could be made for a secular institution or an institution with a single sex student body (i.e., Mourtzanos, 2005). Just as additional analysis was conducted in the current study to confirm reliability with a sophomore RA sample, administrators should consider taking similar actions in the event that their institution's population could be different from the total sample (i.e., residential college, secular institution, community college, etc.). The RA Survey may be valid and reliable with these types of institutions or organizational structures, but to demonstrate evidence that the instrument is appropriate the psychometrics of the survey when administered to that institutional population should be evaluated.

Furthermore, administrators should proceed with caution if planning more advanced statistical analysis with their survey data. While item overlap, instances where correlations between items across factors were larger than correlations between items within factors, makes sense conceptually, the three instances of highly correlated factors cause problems with multicollinearity when these factors are used as independent factors (refer to the two training factors 2TRAINSC and 3TRAINJR; the three RA self-efficacy factors 4EFFSRC, 5EFFSSMV, and 6EFFSA; and the two hall director factors 7HDS and 8HDM). Therefore, theory in addition to bivariate correlations should be utilized to guide the decision of which single factor of the pair (or trio in the case of RA self-efficacy) should be used for analysis.

Aside from the survey psychometrics, for benchmarking to be valuable, the chosen institutions for comparison should demonstrate a collection of commonalities with the home institution. The selection of peer institutions should be a thoughtful and deliberate process (Carrigan, 2012); not a haphazard selection from the institutions that just happen to be

available for comparison. Unfortunately, the institutional participation group may lack acceptable peer institutions for meaningful comparisons. Without an appropriate comparison group, the results obtained are likely to be meaningless. In 2004-2005, 68 institutions participated in the RA Survey, of which 61 institutions were ultimately included in the current study. If an institution was located in Alabama, there were no other institutions in Alabama to select for comparison. If an institution was classified as a Baccalaureate College – Liberal Arts, there were no other institutions in the same classification by way to compare to. Although the selection of an appropriate comparison group should rely on more than location and Carnegie Classification (The Carnegie Foundation for the Advancement of Teaching, 2001), administrators planning to use the RA Survey should consider that EBI's national representation may not actually include a large enough participation group by which to make benchmarking via comparison analysis feasible.

While great attention in this section has been given to the need for evidence of reliability and validity of instruments, administrators must also determine if the instruments ask the questions that will collect the type of data and information necessary to address the concerns or areas of interest. There is a marketplace of assessment instruments all claiming reliable and valid measures, which may indeed be true, but the instrument may not meet the institution's needs. The national, third-party assessment instrument may not be as valuable as one developed in-house at the institution. The decision to purchase an instrument verses developing a tool, should be considered thoughtfully with a clear direction as to the purpose of the assessment tool. Ultimately, the instrument should allow the user to accomplish the level of accountability determined to be necessary.

Finally, this discussion of accountability and quality assessment hinges on a culture that expects and values assessment. If such a culture is not present, the utilization of assessment will be happen only when absolutely necessary, such as for accreditation, and may be poor in quality given lack for forethought and planning. Creating a culture that values assessment requires support from senior officers, formal expectations, a belief that assessment is a means to improvement, and an atmosphere that is supportive and collegial (Seagraves & Dean, 2010). In addition, resources may need to be reallocated to provide educational opportunities to faculty and staff lacking the requisite skills to conduct assessment and/or to hire the staff necessary to do the assessment. Policy, expectations, and resources about the use of assessment should be considered and developed as necessary and implemented in such a way to cultivate a culture of quality assessment.

Research Question 2: Relationships between Sophomore RA Experience Factors

The sophomore RA population is a complex group of students who consist of the sophomore experience crossed with a demanding RA position. The sophomore experience is plagued with struggles and challenges unique to the sophomore year. The RA position is rewarding and stressful in its own right. Where these two experiences overlap is the focus for the current study, the sophomore student in an RA environment. In an effort to better understand the sophomore RA experience, the current study explored the relationships between the 13 factors (see Table A.7) identified through the sophomore and RA literature as important and available in the ACUHO-I/EBI RA Survey. This section includes discussions of gender, academic performance, turnover intention, and factor relationships. Recommendations for future research and implications for practice conclude this section.

Gender

Gender was included as a factor for consideration in the fifth hypothesis (H5: No significant mean difference between gender, male and female, exists across all factors) based on prior sophomore and RA research, which reported varying degrees of gender difference. In the current study, gender was determined to be a non-significant factor. These results suggest that gender continues to be a variable of inconsistent significance given past and recent research demonstrates differences by gender (Komives, 1992; Paladino, Murray, Newgent, & Gohn, 2005; Schreiner, 2010). While the lack of statistical difference may suggest no need to recommend changes in how the RA position addresses each gender, under more refined circumstances, gender differences may be more recognizable. For example, within a residence hall with single sex occupants, sophomore RAs may have an experience impacted more by their gender. Such specific scenarios were not explored in the current study. The broad factors may have simply been too general to allow for a gender difference to be exposed.

Academic Performance

Academic performance was included as a factor for consideration in the sixth hypothesis (H6: No significant mean difference between GPA range groups exists across all factors). Self-reported GPA was used in the current study as the measure of academic performance. The sample reported 76% (n = 1103) with GPAs at or above a 3.0, or a "B" average, suggesting good academic performance. These results are consistent with hiring trends for RAs given predetermined minimum GPA as a criterion for consideration in hiring candidates as RAs and academic performance expectations for continued employment, which is also based on GPA. Furthermore, some RAs have found the conflicting pressures between the RA position and their

academics as the reason to improve their time management and take more control of their schedules (Schaller & Wagner, 2007), ultimately improving their academic performance.

A mere 0.6% (n = 8) reported below a 2.25 GPA placing them on or near the academic probation threshold of 2.0 at many institutions. In the context of sophomore literature, a higher percentage of borderline and poor academic performance reports may have been expected. A low GPA at the beginning of the sophomore year (Woodworth, 1938) or a decrease in GPA from first-year to sophomore year (Aldeman, 2006) describes what a sophomore students' academic performance could appear as. Although, few poor performing RAs does not imply that a sophomore RA does not experience a drop in GPA from first-year to sophomore year; a decrease in GPA is possible, although results suggest not low enough for the sophomore RA to drop to academic probation status.

Academic performance is clearly more complex than what can be concluded from a single reported GPA measure alone. RAs may achieve good grades as represented by a high GPA, but struggle with their academic performance, such as progression toward degree. Indecision about a major can be a major hurdle to degree progression and is a profound necessity in the sophomore year (Juillerat, 2006). Some RAs fold under the pressure to declare a major. Sophomore RAs who are undecided in their major have reported a sense of uncertainty and distraction from their RA responsibilities (Schaller & Wagner, 2007).

Residence life administrators should be aware that a low GPA is not the only indicator of academic struggles, even if it appears to carry substantial weight in relation to continued employment. A noticeable drop in GPA from the first-year to the sophomore year may be equally meaningful. Furthermore, undecided sophomore RAs may be in need of support even if

their GPAs are high. The interplay of academic performance for the sophomore RA is worthy of additional research.

Turnover Intention

Retention of RAs, let alone sophomore RAs, is missing in the literature providing reason to include turnover intention in the seventh hypothesis (H7: No significant mean differences exist between sophomores when grouped by intent to return across all factors).

The current study reported a conservative 68.8% retention rate for sophomore RAs intending to return to their position the coming year. The retention rate is likely higher given 10.4% (n = 150) of the sophomore RA participants were still undecided regarding their intentions to return. This finding was more hopeful than the mere 55.6% retention rates reported in previous studies (Kauffman, 2008; Schaller & Wagner, 2007), which may be due to a much larger sample size in the current study (N = 1,443 in the current study, N = 27 in Kauffman, and N = 9 in Schaller & Wagner). Furthermore, the 68.8% rate is more representative of the national rate given the large, national sample in the current study.

Retention is typically preferred to attrition. Retaining staff carries seemingly more benefit than losing them after a single year of employment. The costs, be it fiscal, time, or lost productivity (see Hom & Griffeth, 1995), are evident for the organization when considering selection and training. Given a 100% retention rate is improbable; there must be a threshold of acceptable attrition rates with sophomore RAs. At some point, an organization will benefit from an RA leaving rather than staying (i.e., poor performing RA). There is also a point where there is benefit to the RA to leave, which may or may not be a detriment to the organization. A high performing RA who is struggling academically would be an example where the RA benefits

from leaving while the organization is impacted by the loss. But when high performing staff members are also achieving academically, there seems to be little reason for them to leave and the assumption is that they should be retained for another year. Yet, for a sophomore RA, leaving may be the best option for them. The voluntary decision to leave is interesting; voluntary leavers included 15.9% (n = 230) of the sophomore RAs and were identified by their response, "able to return, but are choose not to." When comparing voluntary leavers to those who stay, a significant difference between the two groups across all factors begins to suggest a very different experience for those who intend to leave.

Voluntary leavers were significantly less satisfied than those who intended to return, suggesting that the realities of the RA position may have something to do with a sophomore RA not returning to the RA position. Dissatisfaction with the work/life condition may also provide reason to leave if the frustration of the position coincides with non residence life friends signing leases off-campus. Frustration with the position or the work life conditions provide an explanation as to why the decision to leave is made, but likely does not accommodate all decisions to leave. Academic aspects may also provide insight into voluntarily leaving the RA position.

While the sophomore literature reports a positive correlation between higher GPA and improved retention at the institutional level (Schreiner, 2010), the current study found voluntary leavers reporting higher mean GPAs than returners. Retention for a sophomore RA may be more dependent on future academic performance. For example, a sophomore who has selected a rigorous major may decide that future academic success requires emphasis on their academics, which means leaving their RA position to allow more time for studying and extra-

curricular activities directly related to the declared major. There is also the circumstance of changing majors, which may require the realignment of priorities and time management in order to be successful in the new major. The opportunity to study abroad may be another explanation as to why sophomore RAs voluntarily leave their position. A semester abroad may be more valuable to the RA than retaining their RA position.

Exploring more fully the experience of voluntary leavers may expose why some sophomore RAs are choosing to leave and determine what factors can be controlled, improved, and impacted. For example, if the voluntary leavers are simply unsatisfied with the work and living conditions to the point they want to live off-campus, there is little to change that portion of the experience. What can be changed is how the experience is marketed so prospective RAs apply and start the position with clear and real expectations. The discussion of clear expectations with work and living conditions will continue in the section on Factor Relationships. The results of the current study are limited in speculating exactly why sophomore RAs may voluntarily leave the RA position after only one year. Yet, administrators need to remain aware that those voluntary leavers have a significantly different experience than those who stay.

Factor Relationships

H8: No correlations between any of the 13 variables of the sophomore RA experience reached or exceeded a strong relationship threshold ($r > 0.70$).

The scope of research question two was to explore the relationships amongst the sophomore RA experience variables. After clustering the factors that demonstrated issues of inter-item correlations and illustrating only the strong correlations ($r > 0.70$), Figure 5.2

illustrates the significant and notable factor correlations. While assuming a linear relationship is premature, this section will address each factor in the order in which the factor appears in Figure 5.1. The hall director factors while highly correlated with each other, failed to demonstrate a strong correlation with any of the other factors and will be discussed last in this section.

Figure 5.1. Conceptual Map of Sophomore RA Experience based on Strong Correlations

RA Self-efficacy

RA self-efficacy was measured with 3 independent factors (effectiveness in enhancing students' responsibility and cooperation, effectiveness in enhancing students' self-management and values, and effectiveness in enhancing students' awareness). There were noticeably strong inter-item correlations between these 3 RA self-efficacy factors. The effectiveness in enhancing students' responsibility and cooperation (4EFFSRC) demonstrated the most occurrences of overlap and effectiveness in enhancing students' awareness (6EFFSA) had the least overlap. Conceptually, each of the three RA self-efficacy factors has a distinct focus: students' responsibility and cooperation; students' self-management and values; and awareness. Given how specific these areas are, there may be reason to modify the questions in order to minimize the inter-item correlation overlap that currently exists. This improvement would be especially critical if more targeted statistical analysis is to be conducted. If the ongoing purpose continues to be primarily benchmarking with evaluation of each item, revisions may be impractical. Revision would also require better definition of the underlying latent factor.

As far as factor relationships are concerned, RA self-efficacy demonstrated moderate correlations (ranging from 0.54 to 0.64) with satisfaction that clear job expectations were established (1SATCJE) and satisfaction with the working and living conditions (9SATWLC) and strong correlations with the two training factors (0.75, 0.78). Furthermore, sophomore RAs are slightly to moderately satisfied with their ability to be effective on all items in the RA self-efficacy factors (see Table A.5). The sophomore RAs appear to be confident in helping their peers even if they may be facing similar struggles (Erikson, 1968; Richmond & Lemons, 1985).

Training

Training will remain a necessity (Elleven, Allen, & Wircenski, 2001; Sandeen & Rhatigan, 1990). The strong to moderate correlations between the training factors and all other factors aside from gender and GPA indicate significant relationships with training. As noted previously, there is a significant relationship between training and the RA self-efficacy factors. Correlations between training and RA self-efficacy ranged from moderate (0.60) to strong (0.71). The benefits of training have highlighted decreased stress, greater emotional resiliency, and improved counseling skills, confrontation skills, and basic helping skills (Winston & Buckner, 1984), which support the relationship between training and RA self-efficacy. In addition, the training factors demonstrated a strong correlation to satisfaction that clear job expectations were established, which is addressed in the next section.

For the sophomore RA, training may become more than preparation for the RA position. RA training includes content on university policies, campus resources, student development, referral skills, basic human relation skills, time management, leadership skills (Bowman & Bowman, 1995; Upcraft & Pilato, 1982), conflict resolution, crisis management, and

interpersonal skills (Upcraft, 1982). Many of these topics assist RAs with supporting their residents' transition to college and supporting residents when they are in crisis. These transition skills continue to be of value well into the sophomore year. And in a worst case scenario where sophomore RAs feel they are in crisis, they are trained on who to call and are knowledgeable of the support available. Sophomore RAs are trained to know the campus resources such as the counseling center, academic advising, career services, and learning resources centers; these are all resources available to assist the undecided sophomore (Schreiner, 2010), support the sophomore who is questioning their philosophical purpose (Graunke & Woosley, 2005), and to support a sophomore struggling with poor academic performance (Aleman, 2006). RA training for a sophomore RA evolves into preparation to navigate their sophomore year.

As noted in the section on inter-item correlations, the two training factors, satisfaction with RA training to deal with student concerns and satisfaction with RA training to deal with job responsibilities, are highly correlated and exhibit extensive overlap between items. Thus, while initially analyzed separately, both training factors were illustrated as a single factor in Figure 4.2 and Figure 4.3. For the purpose of benchmarking, this item overlap may be a non-issue because of the unique information collected by each question. The literature would suggest that training content varies and distinguishing different types and purposes of content could be supported by research (i.e., Bowman & Bowman, 1995; Twale & Burrell, 1994; Upcraft, 1982; Upcraft & Pilato, 1982). If the decision is made to clearly distinguish between types of training content, the items in the RA Survey will need to be re-evaluated and possibly reconceived in order to more clearly define the two types of training and minimize the inter-item correlation

issues between the training factors. In the RA Survey's current state, the training factors cannot stand alone as independent factors without issues of multicollinearity, which occurs when two or more variables are highly correlated and limit the ability to distinguish the impact of an individual factor.

Clear Job Expectations with Working and Living Conditions

Unexpected expectations were a reoccurring theme reported by sophomore RAs (Kauffman, 2008; Schaller & Wagner, 2007) and as such provide legitimacy to including satisfaction that clear job expectations were established (1SATCJE) as a variable of interest in the current study. Expectations are typically established before engaging in an activity or in the current study before performing the RA position. When considering where RA job expectations could be established, there is little surprise to find strong correlations with the two training factors and moderate correlations with the hall director factors. Training in general should prepare the RA to perform all aspects of the position and typically, hall directors provide the training. At the very least, a hall director will provide the training and define the expectations for an individual residence hall. As it relates to training, sophomore RAs reported feeling unprepared for the discipline process and found confrontation difficult (Schaller & Wagner, 2007); two topics commonly addressed in RA training (Upcraft, 1982). Residence life administrators are encouraged to take these results into consideration when planning training as adjustments in content and training method (e.g., Bowman & Bowman, 1995; Murray, Snider, & Midkiff, 1999; Upcraft, 1982) may decrease the extent of reported unexpected expectations. Training method may be a good target for strategic improvement given some sophomore RAs felt informed about the position, but some aspects simply needed to be

experienced. No description of the RA experience could truly match the actual experience (Kauffman, 2008) suggesting a possible change in training method.

Furthermore, unexpected expectations as reported by sophomore RAs also targeted the working and living conditions of the RA position. There was a strong correlation (0.72) between satisfaction that clear job expectations were established (1SATCJE) and satisfaction with the working and living conditions of the RA position (9SATWLC). RAs recognize that living in a residence hall room on the same floor with their residents is a basic expectation of their position. How the dynamic of working where you live manifests requires an entirely different level of understanding, which may not be communicable. Living the experience might be the only way to truly understand what this expectation means. The same could be said for what it means to be "On Duty" (Q5), available to students (Q11), and involved with floor members (Q12). RAs described the position as overwhelming, and the time and effort required by the job was often underestimated (Kauffman, 2008). Furthermore, the amount of administrative work was far more extensive than expected and many RAs did not anticipate the strain of a 24-hour a day position (Kauffman, 2008; Schaller & Wagner, 2007).

Job Satisfaction

The current study included job satisfaction as a variable of interest in an attempt to identify what factors may be associated with resident assistants' perceptions of job satisfaction. In the current study, the overall RA satisfaction factor was used as the measure of job satisfaction. Overall RA satisfaction as a proxy for job satisfaction may have provided a broadly defined sense of satisfaction with the RA experience and not just the job itself. There may be RAs who were satisfied with the job responsibilities but were not as satisfied with the work and

living conditions; thus, these RAs may have indicated lower overall RA satisfaction responses than they would have rated a RA job satisfaction question. Evidence of RA satisfaction being broader than RA job satisfaction is supported by the strong correlation (0.83) between overall RA satisfaction (10OVERSAT) and satisfaction with the working and living conditions of the RA position (9SATWLC). Results indicated general sense of satisfaction across the sample with females slightly more satisfied. RA job satisfaction in the literature has been limited to date and has been explored as a variable by which to examine another variable. For example, Komives (1992) used job satisfaction to better understand achieving styles of RAs and hall directors, but in the course of the research learned that males and females define job satisfaction differently. A similar gender difference was not found in the current study, but this level of investigation into job satisfaction was not explored. Males and females may ultimately show no significant differences in level of satisfaction even if they define satisfaction differently.

Satisfaction that clear job expectations were established (1SATCJE) has a moderate correlation with the overall job satisfaction factor. If the position matches or exceeds a sophomore RAs expectations, satisfaction may be more likely than if the expectations are extraordinarily high and unable to be met.

Hall Director

A common theme in the existing sophomore research suggests the need for additional support (Padelford, 1935; Woodworth, 1938) from approachable and tolerant administrators and faculty (Juillerat, 2000) or simply personal attention from a concerned individual (Richmond & Lemons, 1985). Given the sophomore RA has by organizational design a built in support

person for the residence life staff, the hall director has the potential to be important in the experience of the sophomore RA. Based on the results of the current study, the hall director does not appear to fill this need with quite the anticipated level of impact. The hall director appears to fulfill a tangential role with moderate level relationships with training, job expectations, work/life conditions and overall job satisfaction. Once moderate relationships are removed, the hall director factors appear to stand-alone, no longer demonstrating a significantly relevant relationship with the rest of the factors (see Figure 4.3). Without a far reaching influence, a correlation of greater strength is not demonstrated, but should not be construed as lacking influence. The hall director position may not have the same level of influence across all RAs and their experiences with the other factors, but a more specific relationship may exist that was not readily explored or evident in the current study.

As a general statement of impact, the hall director position lacks a strong relationship with all the RA Survey factors, but the hall director may have profound relationships with some individual sophomore RAs. In such cases, those sophomore RAs have identified someone who provides a satisfying interaction, which makes a difference (Grauke & Woosley, 2005). Even if the hall director does not become the primary support, the hall director is trained to be connected with university resources and can help refer students to different sources of support such as academic advisors or faculty, both of which have been identified as important to the sophomore experience. (Graunke & Woosley, 2005; Guiffrida, 2004; Morgan & Davis, 1981; Schreiner, 2010; Wilder, 1993)

As noted in the section on inter-item correlations, the two hall director factors, supporting the RA and management, were found to be highly correlated to each other and

demonstrate noteworthy item overlap. Thus, while analyzed separately, both hall director factors were illustrated as a single factor in Figure 4.2 and Figure 4.3. Similar to the training factors, if the decision is ever made to consider each hall director factor independently, the RA Survey will need to be re-evaluated and possibly rewritten with regard to these questions. In the survey's current state, the hall director factors cannot stand alone as independent factors without issues of multicollinearity.

Future Research

Turnover intention, specifically the subset of those voluntarily or choosing to leave, continues to be an area where additional questions arise. The RA Survey is limited in this regard. Questions to collect data related to academics such as commitment to a college major and change in GPA from first year to sophomore year would be helpful to connect the sophomore academic performance literature to sophomore RA turnover intention rates. In addition, while performance itself was not measured in the current study, an understanding of the role of job performance in RA turnover may be important for future research. Also, a question to learn more about the population being served may provide yet an additional bit of information about turnover intention given a discrepancy in burnout and population of residents served (Benedict & Mondoloch, 1989; Clark, 2008; Fuehrer & McGonagle, 1988; Hardy & Dodd, 1998).

The effects of institutional context were not explored in the current study, but merit consideration. Aside from the differences between institution type as defined by Carnegie Classification, specific policy issues may be worth some attention. Declaring a major often occurs at the end of the sophomore year (Andrews, 2006), but not all institutions follow this

policy. If students are expected to declare a major at the end of the first-year, their experience as it relates to the sophomore literature may be noticeably different and thus impact the sophomore RA experience. Requirements and policies for living on-campus in residential housing may also be impactful. Institutions with the residential capacity to require students to live on-campus for the duration of their tenure at an institution may provide a different context by which sophomore RAs experience their positions and their desire to return to those positions. For example, sophomore RAs at a university requiring mandatory on-campus housing will never experience the pressure to move off-campus with their non residence life friends. Future research should consider the use of multilevel models to examine variation within and between institutions when data are organized at more than one level (nested data) such is the case with institutional affiliation.

The scope of the current study was specifically sophomore RAs and understanding their experience. Future research to compare the sophomore RA experience with the junior or senior RA experience could provide an additional perspective to identify which findings are reflective of the sophomore experience and which are reflective of the RA position.

The current study tested difference of means and correlations to explore the sophomore RA experience through the 13 selected variables with the objective of identifying mean differences and identifiable relationships. Neither method provides direction of causality between these relationships. As strong correlations were charted between factors, a linear appearing relationship emerged. This is not to say the relationship between these factors is linear. To conclude such a model would require understanding of the direction of causality and the impact of factor combinations, which is outside the scope of the current study and

limitations of the chosen methods for analysis. The conceptual map is merely a starting point for future research (see Figure 5.2). Because of the analysis limitations, future research should also consider the interplay of factor combinations and causality.

The sample in the current study is comprised of predominantly satisfied sophomore RAs. Exploring the unsatisfied sophomore RAs as an independent group and in comparison to the satisfied RAs may be worthwhile. Given the predominance of satisfied RAs, the impact of the unsatisfied RAs on each factor and the relationships between factors may have been diluted. Also, given the statistically significant differences in satisfaction between returning RAs and those voluntarily leaving across multiple factors (1SATCJ, 2TRAINSC, 3TRAINJR, 7HDS, 8HDM, 9SATWLC, and 10OVERSAT), future research may be able to better understand the experience of the unsatisfied, voluntary leavers. Furthermore, the instrument may lack the same level of reliability and/or validity with the unsatisfied subset of the sample. The unsatisfied subset may be so different from the satisfied group that identifying those differences may help to understand why highly unsatisfied participants were consistently identified as data outliers.

Implications for Practice

Conclusions based on the results of the current study provide three notable areas to be addressed in practice: RA Survey psychometrics, the presence of sophomore RAs, and how the RA position may serve as an intervention for sophomores who are RAs.

Presence of Sophomore RAs

Sophomores are being hired as RAs (Schaller & Wagner, 2007), but little evidence is available to confirm the actual prevalence of sophomore RAs employed across the nation. The

prevalence of sophomore RAs has been merely an estimate at best given research conducted from 1990 to 2006 described sample sizes including 14% to 30% sophomore RA composition (see Table A.1). The current study provides a national perspective with 28% sophomore participation in the 2004-2005 dataset provided by EBI. Institutions reported a range of 7% to 46% sophomore membership in their RA staffs, with 49 (of 61) institutions reporting 20% or more sophomore RAs. The current study confirms the prevalence of sophomores hired as resident assistants and serves as a reminder that sophomore RAs are present and account for a noticeable percentage of a residence life staff. As such, residence life departments are encouraged to be aware of the unique challenges for sophomore RAs related to academic challenges, retention, lack of institutional support, and dissatisfaction with personal relationships. Efforts to provide targeted support for these staff members may prove beneficial.

In the past, there was a hesitancy to hire sophomores as RAs. As the applicant pools dwindled, residence life departments needed to adjust restrictions and thus make the RA position an opportunity for sophomores.

The RA position as an intervention

The RA position may inadvertently serve as an intervention to assist in the navigation of the sophomore year for those hired as sophomore RAs. Recognizing that the population of sophomore RAs is a subset of the total sophomore population and likely has unique characteristics when compared to the total; literature confirms that sophomore RAs do indeed face the same challenges that are reported by sophomores in general (Kauffman, 2008; Schaller & Wagner, 2007). At some institutions, the general population of sophomores is targeted for

intentional support through Sophomore Year Experience (SYE) Programs. In comparison, the RA experience is the specialized training. The presence of the hall director even with moderate correlations to other factors provides a needed support for the sophomore RA who needs more invasive and regular support.

The extensive RA training to prepare RAs to help support their residents is equally valuable to the RA in their own college success. RA training which includes time management strategies can directly improve sophomores' experience in managing a more rigorous academic schedule, employment, and extra-curricular opportunities. Training on confrontation may give the sophomore RA more confidence is addressing struggles they may be having in their coursework or a with a faculty member; thus, improving relationships with faculty (Schreiner, 2010). The RA position may provide the supportive and strategy rich environment that allows the sophomore RA to navigate their own struggles. The invasive work/life conditions force the RA to engage in the residence hall community and university during a time period where other sophomores may be feeling a lack of institutional support (Hunter, 2006). The RA positions may serve as a smaller more manageable and supportive community.

As such, the RA experience may provide insight into a successful, even if unintentional, SYE program. Furthermore, sophomore student leaders are active throughout the university and while their positions are different, they may also be inadvertently supported to overcome the sophomore year challenges.

Imbedded in the RA position, but not specifically addressed in the current study is peer support and camaraderie. RAs find themselves on staffs with peers who may be considered to be friends who can relate to what they are experiencing or older staff members who

unintentionally or formally serve as role models. Research suggests the value of peer satisfaction as the strongest contributor to overall sophomore student satisfaction (Schreiner, 2010). Furthermore, as a staff, there may be an embedded sense of belonging, which has been found to be significant to a positive sophomore experience (Juillerat, 2000).

Peer Mentors

The RA position is one experience among many different peer mentor or peer educator experiences that sophomore students may be engaged in. Administrators need to recognize the value these positions have not only as a benefit to the students who are being served by the peer mentor, but to the student serving as the peer mentor. As these peer mentors are trained to teach and support others, they are practicing what they preach: "peer educators were taking to heart the information that they present to their peers by making responsible decisions in their daily lives as students" (Wawrzynski, LoConte, & Straker, 2011, p. 25).

Summary

Chapter 5 provided a discussion of the results from the current study while making connections back to relevant literature. Suggestions for practice were presented throughout and three implications for practice were provided in a distinct section. Future research was presented for each research questions. The chapter concludes with an overall document summary.

Document Summary

With the intention to better understand the sophomore RA experience, the current study addressed two distinct research questions. First, does the ACUHO-I/EBI RA Survey serve as a valid and reliable instrument when used with sophomore RAs? Assessing the

psychometrics of the survey when administered to a sophomore RA population was necessary given the lack of published survey psychometrics and no known confirmation of the survey being valid or reliable when sophomore RAs are the participants. Once the psychometrics were assessed and interpreted, only then could the sophomore RA experience factors be confidently explored utilizing the RA Survey for data collection. Second, what relationships exist amongst the valid and reliable factors to better understand the sophomore RA experience? Sophomore RAs exist at a point where the sophomore experience and the RA position intersect. At this intersection is tremendous growth and development which is positive, but trials, tribulations, and stress are equally present. By exploring the sophomore RA experience there was an opportunity to learn more about their experience and specifically as it relates to job satisfaction, turnover intention, and RA self-efficacy.

Lack of published validity evidence, specifically construct validity. Thus the current study provides researchers and practitioners additional information on reliability, validity, and item characteristics for the ACUHO-I/EBI RA Survey when used with sophomore RAs. Practitioners can be confident in the results when used with sophomore RAs.

With regard to the sophomore RA experience, the current study offers a confirmed presence of sophomores hired in RA positions and a confirmed sophomore RA attrition rate (return to the RA position for a second year). The current study also provides a sophomore RA experience factor relationship structure based on a national dataset. Furthermore, the implications from the study suggest that the RA position may serve as an unintentional SYE program for sophomores hired as RAs. SYE programs may be able to gather insight into program improvements and other peer mentor positions may find insight into supportive

environments when hiring sophomore students.

The current study is a reminder that there are sophomores who are excelling and managing their sophomore year successfully. The sophomore year literature tends to depict the sophomore year as full of harsh struggles and immense challenges, which may be the case, but there are students who are succeeding amid all the craziness. Overall, sophomore RAs are satisfied with all aspects of their RA position, demonstrated acceptable to high academic performance, and are committed to their RA positions given most will return to their RA positions. Residence life departments could be doing a wonderful job selecting the successful students from the population or the RA position itself provides an environment of support needed to cultivate well-adjusted sophomores.

APPENDIX

Table A.1

Percentages of Sophomores Included in Relevant Literature

Total	Sophomores	Percentage	Study
37	0	0	Nowack & Hanson, 1983
42	8	19	Deluga & Winters, 1990
140	36	25.7	Deluga & Winters, 1991
		30	Posner & Brodsky, 1993
269	38	14	Bierman & Carpenter, 1994
117	24	20	Twale & Burrell, 1994
111	26	23	Denzine & Anderson, 1999
147	27	18	Jaeger & Caison, 2006

Table A.2

2004-2005 RA Survey Presumed Factor Composition

Factor 1: Satisfaction that Clear Job Expectations Were Established (1SATCJE)	
Q5	Satisfaction with the degree to which clear expectations were established regarding: "On Duty" responsibilities
Q6	Satisfaction with the degree to which clear expectations were established regarding: Attending staff meetings
Q7	Satisfaction with the degree to which clear expectations were established regarding: Working an information desk
Q8	Satisfaction with the degree to which clear expectations were established regarding: Enforcing policies
Q9	Satisfaction with the degree to which clear expectations were established regarding: Academic performance minimums
Q10	Satisfaction with the degree to which clear expectations were established regarding: Programming responsibilities
Q11	Satisfaction with the degree to which clear expectations were established regarding: Availability to students
Q12	Satisfaction with the degree to which clear expectations were established regarding: Involvement with floor members

Factor 2: RA Training: Dealing with Student Concerns (2TRAINSC)	
Q13	Satisfaction with the degree to which training provided the skills necessary to: Gain student's respect
Q14	Satisfaction with the degree to which training provided the skills necessary to: Treat everyone fairly
Q15	Satisfaction with the degree to which training provided the skills necessary to: Help students with a problem
Q16	Satisfaction with the degree to which training provided the skills necessary to: Facilitate community development
Q20	Satisfaction with the degree to which training provided the skills necessary to: Manage student behavior
Q21	Satisfaction with the degree to which training provided the skills necessary to: Mediate conflicts
Q26	Satisfaction with the degree to which training provided the skills necessary to: Promote appreciation of diversity
Q27	Satisfaction with the degree to which training provided the skills necessary to: Deal with emotionally disturbed students

Table A.2 (cont'd)

Factor 3: RA Training: Dealing with Job Responsibilities (3TRAINJR)	
Q17	Satisfaction with the degree to which training provided the skills necessary to: Plan hall activities
Q18	Satisfaction with the degree to which training provided the skills necessary to: Implement security procedures
Q19	Satisfaction with the degree to which training provided the skills necessary to: Respond to emergencies
Q22	Satisfaction with the degree to which training provided the skills necessary to: Maintain a quiet environment
Q23	Satisfaction with the degree to which training provided the skills necessary to: Enforce policies
Q24	Satisfaction with the degree to which training provided the skills necessary to: Initiate disciplinary proceedings
Q25	Satisfaction with the degree to which training provided the skills necessary to: Make appropriate referrals
Q28	Satisfaction with the degree to which training provided the skills necessary to: Perform administrative tasks
Q29	Satisfaction with the degree to which training provided the skills necessary to: Overall, how satisfied are you with the training you received

Factor 4: Effectiveness in Enhancing Students' Responsibility and Cooperation (4EFFSRC)	
Q30	Satisfaction with RA's effectiveness in enhancing students' ability to: Meet other people
Q31	Satisfaction with RA's effectiveness in enhancing students' ability to: Live cooperatively
Q32	Satisfaction with RA's effectiveness in enhancing students' ability to: Resolve conflicts
Q33	Satisfaction with RA's effectiveness in enhancing students' ability to: Take responsibility for behavior
Q34	Satisfaction with RA's effectiveness in enhancing students' ability to: Abide by the rules of the living environment
Q43	Satisfaction with RA's effectiveness in enhancing students' ability to: Understand the consequences of their behavior

Table A.2 (cont'd)

Factor 5: Effectiveness in Enhancing Students' Self-Management and Values (5EFFSSMV)	
Q35	Satisfaction with RA's effectiveness in enhancing students' ability to: Study more effectively
Q36	Satisfaction with RA's effectiveness in enhancing students' ability to: Improve interpersonal relationships
Q37	Satisfaction with RA's effectiveness in enhancing students' ability to: Manage their emotions
Q38	Satisfaction with RA's effectiveness in enhancing students' ability to: Understand their sexuality
Q39	Satisfaction with RA's effectiveness in enhancing students' ability to: Clarify their values
Q40	Satisfaction with RA's effectiveness in enhancing students' ability to: Manage time more effectively
Q41	Satisfaction with RA's effectiveness in enhancing students' ability to: Solve their own problems
Q42	Satisfaction with RA's effectiveness in enhancing students' ability to: Adopt a healthy lifestyle

Factor 6: Effectiveness in Enhancing Students' Awareness (6EFFSA)	
Q44	Satisfaction with RA's effectiveness in enhancing students' ability to: Understand the consequences of alcohol use and abuse
Q45	Satisfaction with RA's effectiveness in enhancing students' ability to: Understand the consequences of drug use and abuse
Q46	Satisfaction with RA's effectiveness in enhancing students' ability to: Respect different cultures
Q47	Satisfaction with RA's effectiveness in enhancing students' ability to: Respect differences of gender
Q48	Satisfaction with RA's effectiveness in enhancing students' ability to: Respect differences of sexual orientation
Q49	Satisfaction with RA's effectiveness in enhancing students' ability to: Respect their living environment
Q50	Satisfaction with RA's effectiveness in enhancing students' ability to: Enhance their academic experience

Table A.2 (cont'd)

Factor 7: Hall Director/Supervisor: Supporting RA (7HDS)	
Q51	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Setting goals
Q52	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Prioritizing responsibilities
Q53	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Setting clear expectations for performance
Q55	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Treating staff with respect
Q56	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Fairness in dealing with staff
Q57	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Availability to staff
Q58	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Supporting staff
Q59	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Motivating staff
Q64	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Recognizing staff for a job well done

Factor 8: Hall Director/Supervisor: Management (8HDM)	
Q54	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Helping to resolve floor problems
Q60	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Holding staff accountable
Q61	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Reprimanding staff consistently
Q62	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Consistently enforcing policy
Q63	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Conducting staff meetings
Q65	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Providing positive feedback
Q66	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Providing negative feedback
Q67	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Overall quality of feedback
Q68	Satisfaction with hall director's (or direct supervisor's) supervision regarding: Overall, how satisfied are you with your supervisor

Table A.2 (cont'd)

Factor 9: Satisfaction with the working and living conditions of the RA (9SATWLC)	
Q69	Satisfaction with the RA position regarding: Number of hours worked
Q70	Satisfaction with the RA position regarding: Your privacy
Q71	Satisfaction with the RA position regarding: Your room accommodations
Q72	Satisfaction with the RA position regarding: Constraints on leaving campus
Q73	Satisfaction with the RA position regarding: Balancing academics and job
Q74	Satisfaction with the RA position regarding: Respect you receive from students
Q75	Satisfaction with the RA position regarding: Developing skills of value in future jobs
Q76	Satisfaction with the RA position regarding: Remuneration (salary, room, board, tuition, etc.)

Factor 10: Overall RA Satisfaction (10OVERSAT)	
Q97	Experience: Overall level of satisfaction with the RA experience
Q98	Expectations: To what extent does your RA position fulfill your expectations
Q99	Overall Value: Comparing sacrifices to benefits, rate the overall value of the RA experience
Q100	Recommendation: How inclined are you to recommend being an RA on this campus to a close friend

Table A.3

ACUHO-I/EBI RA Survey Factor Reliability Across 3 Year Span and the Current Study

Factor	2002-2003	2003-2004	2004-2005	Current Study
1. Satisfaction That Clear Job Expectations Were Established	0.90	0.90	0.90	0.88
2. RA Training: Dealing with Student Concerns	0.90	0.92	0.90	0.91
3. RA Training: Dealing with Job Responsibilities	0.93	0.93	0.93	0.90
4. Effectiveness in Enhancing Students' Responsibility and Cooperation	0.89	0.89	0.89	0.88
5. Effectiveness in Enhancing Students' Self-Management and Values	0.92	0.92	0.92	0.91
6. Effectiveness in Enhancing Students' Awareness	0.92	0.92	0.92	0.91
7. Hall Director/Supervisor: Supporting RA	0.95	0.95	0.95	0.95
8. Hall Director/Supervisor: Management	0.95	0.95	0.95	0.94
9. Satisfaction with the working and living conditions of the RA	0.85	0.86	0.85	0.84
10. Overall RA Satisfaction	0.91	0.91	0.91	0.90

Figure A.1

Flowchart Depicting Participant Removal

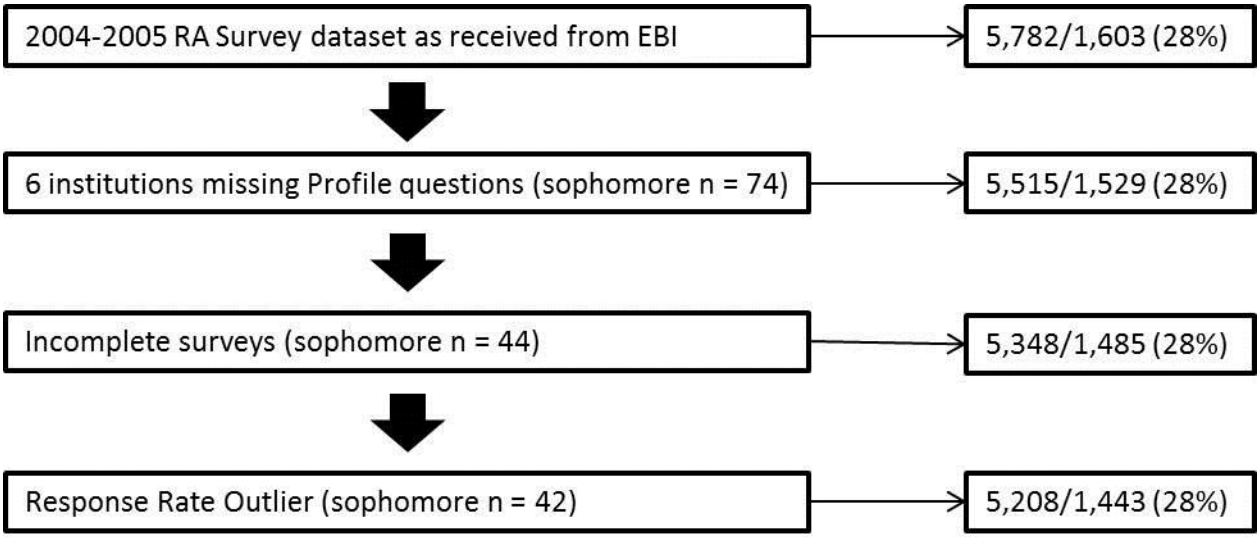


Table A.4

Item Sample Size and Missing Values

Item	n	Missing (n)	Missing %
GPA	1443	0	0.0
TURN	1440	3	0.2
Q5	1434	9	0.6
Q6	1439	4	0.3
Q7	1182	261	18.1
Q8	1432	11	0.8
Q9	1419	24	1.7
Q10	1435	8	0.6
Q11	1434	9	0.6
Q12	1429	14	1.0
Q13	1419	24	1.7
Q14	1418	25	1.7
Q15	1418	25	1.7
Q16	1423	20	1.4
Q17	1424	19	1.3
Q18	1419	24	1.7
Q19	1417	26	1.8
Q20	1420	23	1.6
Q21	1417	26	1.8
Q22	1416	27	1.9
Q23	1423	20	1.4
Q24	1392	51	3.5
Q25	1413	30	2.1
Q26	1418	25	1.7
Q27	1392	51	3.5
Q28	1392	51	3.5
Q29	1413	30	2.1
Q30	1428	15	1.0
Q31	1431	12	0.8
Q32	1416	27	1.9
Q33	1426	17	1.2
Q34	1426	17	1.2
Q35	1412	31	2.1
Q36	1426	17	1.2

Table A.4 (cont'd)

Item	n	Missing (n)	Missing %
Q37	1404	39	2.7
Q38	1304	139	9.6
Q39	1378	65	4.5
Q40	1405	38	2.6
Q41	1425	18	1.2
Q42	1411	32	2.2
Q43	1411	32	2.2
Q44	1413	30	2.1
Q45	1397	46	3.2
Q46	1412	31	2.1
Q47	1392	51	3.5
Q48	1373	70	4.9
Q49	1419	24	1.7
Q50	1422	21	1.5
Q51	1429	14	1.0
Q52	1426	17	1.2
Q53	1428	15	1.0
Q54	1406	37	2.6
Q55	1425	18	1.2
Q56	1426	17	1.2
Q57	1426	17	1.2
Q58	1424	19	1.3
Q59	1428	15	1.0
Q60	1417	26	1.8
Q61	1389	54	3.7
Q62	1422	21	1.5
Q63	1422	21	1.5
Q64	1425	18	1.2
Q65	1423	20	1.4
Q66	1404	39	2.7
Q67	1418	25	1.7
Q68	1392	51	3.5
Q69	1434	9	0.6
Q70	1434	9	0.6

Table A.4 (cont'd)

Item	n	Missing (n)	Missing %
Q71	1433	10	0.7
Q72	1419	24	1.7
Q73	1430	13	0.9
Q74	1429	14	1.0
Q75	1421	22	1.5
Q76	1430	13	0.9
Q97	1434	9	0.6
Q98	1433	10	0.7
Q99	1435	8	0.6
Q100	1438	5	0.3

Table A.5

Item Univariate Characteristics

Item	n	Mean	SD	Skewness	SE	Kurtosis	SE
GPA	1443	4.75	1.67	-0.35	0.06	-0.62	0.13
TURN	1440	0.56	0.92	1.33	0.06	0.36	0.13
Q5	1434	5.78	1.26	-1.36	0.06	1.94	0.13
Q6	1439	6.04	1.20	-1.60	0.06	2.78	0.13
Q7	1182	5.52	1.41	-1.09	0.07	0.95	0.14
Q8	1432	5.82	1.16	-1.28	0.06	2.12	0.13
Q9	1419	5.87	1.21	-1.30	0.06	1.87	0.13
Q10	1435	5.52	1.40	-1.26	0.06	1.48	0.13
Q11	1434	5.82	1.17	-1.35	0.06	2.26	0.13
Q12	1429	5.89	1.14	-1.39	0.06	2.66	0.13
Q13	1419	5.33	1.39	-0.95	0.06	0.76	0.13
Q14	1418	5.83	1.18	-1.37	0.06	2.44	0.13
Q15	1418	5.85	1.15	-1.33	0.06	2.26	0.13
Q16	1423	5.66	1.22	-1.21	0.06	1.67	0.13
Q17	1424	5.56	1.27	-1.14	0.06	1.44	0.13
Q18	1419	5.51	1.29	-0.98	0.06	0.71	0.13
Q19	1417	5.61	1.31	-1.13	0.07	1.14	0.13
Q20	1420	5.42	1.29	-1.03	0.06	1.04	0.13
Q21	1417	5.66	1.23	-1.18	0.07	1.55	0.13
Q22	1416	5.36	1.35	-0.89	0.07	0.49	0.13
Q23	1423	5.70	1.25	-1.38	0.06	2.22	0.13
Q24	1392	5.48	1.29	-1.00	0.07	0.93	0.13
Q25	1413	5.66	1.21	-1.12	0.07	1.46	0.13
Q26	1418	5.71	1.30	-1.25	0.06	1.61	0.13
Q27	1392	5.14	1.39	-0.78	0.07	0.26	0.13
Q28	1392	5.57	1.29	-1.19	0.07	1.50	0.13
Q29	1413	5.54	1.28	-1.15	0.07	1.30	0.13
Q30	1428	5.72	1.08	-0.84	0.06	0.74	0.13
Q31	1431	5.92	0.97	-0.99	0.06	1.63	0.13
Q32	1416	5.83	0.95	-0.86	0.07	1.07	0.13
Q33	1426	5.76	1.13	-1.12	0.06	1.62	0.13
Q34	1426	5.74	1.12	-1.09	0.06	1.37	0.13
Q35	1412	5.25	1.19	-0.66	0.07	0.44	0.13
Q36	1426	5.66	1.04	-0.80	0.06	0.91	0.13

Table A.5 (cont'd)

Item	n	Mean	SD	Skewness	SE	Kurtosis	SE
Q37	1404	5.47	1.12	-0.73	0.07	0.64	0.13
Q38	1304	5.26	1.32	-0.63	0.07	0.24	0.14
Q39	1378	5.41	1.15	-0.69	0.07	0.65	0.13
Q40	1405	5.46	1.16	-0.81	0.07	0.83	0.13
Q41	1425	5.68	1.11	-1.00	0.06	1.44	0.13
Q42	1411	5.52	1.14	-0.84	0.07	0.81	0.13
Q43	1411	5.77	1.14	-1.22	0.07	1.99	0.13
Q44	1413	5.69	1.20	-1.03	0.07	0.98	0.13
Q45	1397	5.70	1.20	-1.06	0.07	1.18	0.13
Q46	1412	5.78	1.09	-0.97	0.07	1.07	0.13
Q47	1392	5.77	1.11	-0.95	0.07	1.14	0.13
Q48	1373	5.56	1.24	-0.86	0.07	0.63	0.13
Q49	1419	5.72	1.20	-1.20	0.06	1.71	0.13
Q50	1422	5.71	1.05	-0.91	0.06	1.15	0.13
Q51	1429	5.87	1.25	-1.37	0.06	1.87	0.13
Q52	1426	5.74	1.36	-1.28	0.06	1.40	0.13
Q53	1428	5.78	1.39	-1.40	0.06	1.77	0.13
Q54	1406	5.81	1.40	-1.45	0.07	1.92	0.13
Q55	1425	6.08	1.35	-1.84	0.06	3.16	0.13
Q56	1426	5.82	1.52	-1.47	0.06	1.56	0.13
Q57	1426	5.81	1.46	-1.44	0.06	1.62	0.13
Q58	1424	5.99	1.40	-1.65	0.06	2.36	0.13
Q59	1428	5.82	1.45	-1.42	0.06	1.59	0.13
Q60	1417	5.85	1.37	-1.47	0.07	1.93	0.13
Q61	1389	5.57	1.51	-1.21	0.07	1.02	0.13
Q62	1422	5.90	1.37	-1.58	0.06	2.43	0.13
Q63	1422	5.96	1.40	-1.68	0.06	2.62	0.13
Q64	1425	6.02	1.32	-1.64	0.06	2.61	0.13
Q65	1423	6.00	1.31	-1.61	0.06	2.50	0.13
Q66	1404	5.81	1.32	-1.33	0.07	1.85	0.13
Q67	1418	5.89	1.34	-1.44	0.06	1.89	0.13
Q68	1392	6.00	1.37	-1.70	0.07	2.55	0.13
Q69	1434	5.33	1.48	-0.94	0.06	0.35	0.13
Q70	1434	5.29	1.60	-0.95	0.06	0.19	0.13

Table A.5 (cont'd)

Item	n	Mean	SD	Skewness	SE	Kurtosis	SE
Q71	1433	5.58	1.64	-1.24	0.06	0.76	0.13
Q72	1419	4.96	1.63	-0.63	0.06	-0.43	0.13
Q73	1430	5.12	1.50	-0.87	0.06	0.22	0.13
Q74	1429	5.58	1.42	-1.26	0.06	1.32	0.13
Q75	1421	6.11	1.08	-1.56	0.06	3.06	0.13
Q76	1430	5.10	1.80	-0.83	0.06	-0.34	0.13
Q97	1434	5.88	1.23	-1.56	0.06	2.59	0.13
Q98	1433	5.09	1.32	-0.55	0.06	-0.26	0.13
Q99	1435	4.89	1.38	-0.42	0.06	-0.35	0.13
Q100	1438	5.39	1.50	-0.95	0.06	0.40	0.13

Table A.6

Polychoric Inter-Item Correlation Matrix

	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q20	Q21	Q26	Q27	Q17	Q18
Q5	1.00	0.74	0.60	0.59	0.49	0.59	0.60	0.55	0.40	0.45	0.42	0.38	0.42	0.40	0.36	0.34	0.40	0.44
Q6	0.74	1.00	0.58	0.51	0.50	0.56	0.56	0.50	0.34	0.41	0.37	0.32	0.35	0.35	0.35	0.28	0.35	0.37
Q7	0.60	0.58	1.00	0.53	0.49	0.48	0.55	0.47	0.34	0.40	0.33	0.32	0.38	0.34	0.37	0.28	0.30	0.38
Q8	0.59	0.51	0.53	1.00	0.57	0.56	0.63	0.55	0.48	0.51	0.46	0.45	0.53	0.46	0.43	0.37	0.41	0.50
Q9	0.49	0.50	0.49	0.57	1.00	0.55	0.59	0.50	0.39	0.48	0.38	0.36	0.41	0.38	0.39	0.29	0.39	0.46
Q10	0.59	0.56	0.48	0.56	0.55	1.00	0.67	0.57	0.41	0.47	0.41	0.43	0.42	0.38	0.41	0.33	0.51	0.44
Q11	0.60	0.56	0.55	0.63	0.59	0.67	1.00	0.80	0.50	0.54	0.49	0.49	0.54	0.46	0.49	0.44	0.46	0.50
Q12	0.55	0.50	0.47	0.55	0.50	0.57	0.80	1.00	0.51	0.52	0.46	0.49	0.53	0.43	0.45	0.42	0.44	0.44
Q13	0.40	0.34	0.34	0.48	0.39	0.41	0.50	**0.51**	1.00	0.76	0.62	0.65	0.70	0.61	0.52	0.52	**0.57**	**0.58**
Q14	0.45	0.41	0.40	0.51	0.48	0.47	0.54	**0.52**	0.76	1.00	0.71	0.66	0.67	0.61	0.66	0.55	**0.60**	**0.59**
Q15	0.42	0.37	0.33	0.46	0.38	0.41	0.49	0.46	0.62	0.71	1.00	0.72	0.64	0.70	0.54	0.58	**0.60**	**0.61**
Q16	0.38	0.32	0.32	0.45	0.36	0.43	0.49	**0.49**	0.65	0.66	0.72	1.00	0.63	0.62	0.58	0.54	**0.73**	**0.61**
Q20	0.42	0.35	0.38	**0.53**	0.41	0.42	0.54	**0.53**	0.70	0.67	0.64	0.63	1.00	0.74	0.58	0.62	**0.59**	**0.67**
Q21	0.40	0.35	0.34	0.46	0.38	0.38	0.46	0.43	0.61	0.61	0.70	0.62	0.74	1.00	0.56	0.62	**0.57**	**0.61**
Q26	0.36	0.35	0.37	0.43	0.39	0.41	0.49	0.45	0.52	0.66	0.54	0.58	0.58	0.56	1.00	0.58	**0.55**	0.53
Q27	0.34	0.28	0.28	0.37	0.29	0.33	0.44	0.42	0.52	0.55	0.58	0.54	0.62	0.62	0.58	1.00	0.50	0.51
Q17	0.40	0.35	0.30	0.41	0.39	**0.51**	0.46	0.44	**0.57**	**0.60**	**0.60**	**0.73**	**0.59**	**0.57**	**0.55**	0.50	1.00	0.65
Q18	0.44	0.37	0.38	0.50	0.46	0.44	0.50	0.44	**0.58**	**0.59**	**0.61**	**0.61**	**0.67**	**0.61**	**0.53**	0.51	0.65	1.00
Q19	0.42	0.35	0.33	0.50	0.42	0.40	0.47	0.43	0.52	**0.57**	**0.60**	**0.57**	**0.69**	**0.63**	**0.52**	0.52	0.57	0.76
Q22	0.38	0.33	0.34	0.47	0.41	0.42	0.48	0.45	**0.60**	**0.61**	**0.55**	0.54	**0.71**	**0.65**	**0.55**	**0.54**	0.53	0.57
Q23	0.49	0.40	0.35	**0.65**	0.44	0.48	0.53	**0.52**	**0.63**	**0.66**	**0.64**	**0.63**	**0.73**	**0.68**	**0.62**	**0.58**	0.60	0.66
Q24	0.47	0.38	0.38	**0.56**	0.43	0.47	0.52	**0.48**	**0.60**	**0.63**	**0.61**	**0.60**	**0.72**	**0.65**	**0.60**	**0.58**	0.60	0.66
Q25	0.41	0.38	0.38	0.47	0.43	0.46	0.51	**0.47**	**0.58**	**0.60**	**0.60**	**0.59**	**0.63**	**0.63**	**0.61**	**0.59**	0.57	0.59

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q20	Q21	Q26	Q27	Q17	Q18
Q28	0.46	0.38	0.44	0.47	0.44	0.45	0.51	**0.48**	0.51	**0.58**	**0.55**	**0.55**	0.57	0.56	**0.55**	**0.58**	0.56	0.60
Q29	0.44	0.39	0.37	0.51	0.42	0.48	0.52	**0.48**	**0.69**	**0.69**	**0.69**	**0.66**	**0.72**	**0.67**	**0.63**	**0.64**	0.65	0.66
Q30	0.24	0.20	0.21	0.29	0.24	0.29	0.37	0.41	0.41	0.39	0.37	0.43	0.36	0.39	0.38	0.33	0.36	0.32
Q31	0.32	0.29	0.25	0.36	0.32	0.36	0.43	**0.47**	0.45	0.45	0.44	0.44	0.43	0.46	0.41	0.37	0.37	0.38
Q32	0.34	0.30	0.28	0.37	0.30	0.35	0.44	0.45	0.47	0.43	0.46	0.45	0.49	0.52	0.42	0.42	0.38	0.38
Q33	0.38	0.32	0.28	0.40	0.35	0.39	0.43	0.45	0.44	0.44	0.44	0.43	0.47	0.46	0.42	0.38	0.36	0.42
Q34	0.34	0.30	0.29	0.36	0.29	0.37	0.42	0.43	0.40	0.44	0.38	0.38	0.46	0.40	0.40	0.38	0.34	0.40
Q43	0.36	0.35	0.28	0.39	0.30	0.36	0.41	0.41	0.42	0.43	0.40	0.40	0.45	0.45	0.39	0.40	0.38	0.40
Q35	0.25	0.19	0.25	0.34	0.30	0.31	0.36	0.34	0.40	0.39	0.34	0.38	0.41	0.38	0.32	0.37	0.34	0.39
Q36	0.30	0.27	0.30	0.33	0.27	0.31	0.40	0.42	0.42	0.41	0.40	0.42	0.41	0.42	0.40	0.38	0.37	0.37
Q37	0.29	0.24	0.27	0.33	0.27	0.31	0.40	0.43	0.45	0.40	0.41	0.42	0.47	0.45	0.36	0.44	0.33	0.37
Q38	0.24	0.20	0.27	0.29	0.21	0.29	0.34	0.39	0.34	0.35	0.30	0.34	0.33	0.32	0.36	0.37	0.30	0.32
Q39	0.30	0.24	0.28	0.34	0.27	0.32	0.40	0.42	0.43	0.42	0.38	0.38	0.44	0.40	0.40	0.45	0.34	0.39
Q40	0.28	0.23	0.29	0.31	0.25	0.32	0.38	0.38	0.43	0.42	0.39	0.40	0.41	0.40	0.36	0.41	0.38	0.38
Q41	0.33	0.31	0.32	0.37	0.32	0.35	0.42	0.43	0.40	0.41	0.41	0.38	0.42	0.45	0.39	0.40	0.34	0.37
Q42	0.30	0.25	0.25	0.31	0.29	0.35	0.39	0.40	0.40	0.39	0.35	0.38	0.42	0.41	0.38	0.42	0.35	0.37
Q44	0.33	0.30	0.28	0.37	0.28	0.34	0.38	0.39	0.38	0.41	0.41	0.36	0.40	0.41	0.36	0.38	0.32	0.38
Q45	0.31	0.29	0.28	0.35	0.25	0.33	0.37	0.39	0.40	0.41	0.40	0.36	0.42	0.42	0.37	0.40	0.32	0.38
Q46	0.31	0.31	0.28	0.37	0.29	0.35	0.40	0.41	0.41	0.44	0.40	0.42	0.43	0.39	0.49	0.39	0.37	0.38
Q47	0.33	0.32	0.26	0.40	0.30	0.39	0.42	0.43	0.42	0.44	0.39	0.41	0.43	0.37	0.45	0.40	0.35	0.37
Q48	0.29	0.26	0.23	0.34	0.26	0.35	0.35	0.39	0.37	0.40	0.34	0.37	0.39	0.35	0.42	0.36	0.33	0.33
Q49	0.30	0.26	0.26	0.35	0.29	0.33	0.36	0.36	0.40	0.38	0.38	0.38	0.42	0.39	0.36	0.36	0.33	0.39
Q50	0.31	0.23	0.24	0.34	0.30	0.35	0.38	0.40	0.42	0.40	0.37	0.43	0.42	0.37	0.39	0.40	0.39	0.40

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q20	Q21	Q26	Q27	Q17	Q18
Q51	0.44	0.46	0.37	0.46	0.39	0.46	0.48	0.43	0.42	0.44	0.41	0.44	0.43	0.41	0.43	0.38	0.42	0.43
Q52	0.44	0.45	0.37	0.44	0.40	0.44	0.46	0.41	0.39	0.40	0.38	0.38	0.39	0.37	0.37	0.34	0.39	0.41
Q53	0.45	0.44	0.37	0.45	0.36	0.44	0.46	0.41	0.37	0.38	0.37	0.38	0.39	0.37	0.36	0.31	0.38	0.41
Q55	0.40	0.46	0.34	0.42	0.39	0.41	0.46	0.38	0.32	0.42	0.39	0.34	0.32	0.33	0.34	0.29	0.32	0.36
Q56	0.39	0.44	0.31	0.41	0.39	0.39	0.44	0.37	0.36	0.38	0.38	0.35	0.34	0.35	0.31	0.30	0.34	0.38
Q57	0.38	0.43	0.32	0.36	0.36	0.37	0.42	0.35	0.32	0.31	0.33	0.32	0.32	0.33	0.28	0.28	0.31	0.35
Q58	0.39	0.44	0.31	0.41	0.40	0.38	0.43	0.37	0.36	0.38	0.38	0.37	0.34	0.35	0.33	0.29	0.36	0.36
Q59	0.41	0.43	0.36	0.39	0.37	0.40	0.42	0.37	0.37	0.38	0.38	0.40	0.35	0.37	0.34	0.31	0.36	0.38
Q64	0.39	0.42	0.34	0.41	0.39	0.39	0.42	0.35	0.36	0.37	0.35	0.37	0.34	0.32	0.34	0.24	0.35	0.34
Q54	0.46	0.45	0.38	0.44	0.41	0.41	0.45	0.39	0.37	0.37	0.39	0.36	0.38	0.36	0.32	0.29	0.35	0.39
Q60	0.38	0.40	0.28	0.39	0.34	0.37	0.41	0.36	0.32	0.33	0.34	0.34	0.32	0.33	0.32	0.29	0.34	0.37
Q61	0.37	0.35	0.28	0.38	0.32	0.36	0.40	0.34	0.35	0.36	0.32	0.31	0.36	0.34	0.32	0.33	0.32	0.38
Q62	0.39	0.40	0.33	0.43	0.37	0.37	0.43	0.35	0.33	0.37	0.36	0.34	0.36	0.38	0.33	0.32	0.35	0.40
Q63	0.40	0.49	0.35	0.42	0.38	0.41	0.44	0.37	0.34	0.37	0.36	0.36	0.33	0.35	0.34	0.29	0.37	0.36
Q65	0.41	0.42	0.35	0.42	0.39	0.40	0.43	0.37	0.34	0.38	0.35	0.38	0.35	0.31	0.35	0.28	0.34	0.35
Q66	0.36	0.37	0.31	0.39	0.32	0.37	0.40	0.35	0.33	0.32	0.29	0.32	0.32	0.31	0.37	0.31	0.33	0.32
Q67	0.40	0.43	0.34	0.43	0.37	0.42	0.44	0.38	0.36	0.38	0.36	0.39	0.35	0.34	0.36	0.31	0.37	0.37
Q68	0.41	0.45	0.34	0.41	0.37	0.40	0.43	0.35	0.33	0.34	0.35	0.34	0.33	0.33	0.32	0.27	0.35	0.35
Q69	0.43	0.43	0.18	0.39	0.38	0.41	0.47	0.36	0.37	0.37	0.35	0.29	0.36	0.35	0.31	0.31	0.34	0.34
Q70	0.38	0.36	0.32	0.39	0.33	0.38	0.46	0.36	0.34	0.37	0.35	0.29	0.35	0.36	0.31	0.30	0.30	0.33
Q71	0.28	0.30	0.21	0.23	0.23	0.24	0.31	0.27	0.25	0.29	0.28	0.26	0.23	0.24	0.28	0.21	0.25	0.24
Q72	0.37	0.35	0.32	0.33	0.32	0.34	0.41	0.32	0.28	0.30	0.27	0.28	0.34	0.31	0.29	0.29	0.29	0.29
Q73	0.36	0.35	0.33	0.35	0.34	0.39	0.46	0.36	0.37	0.35	0.34	0.31	0.37	0.35	0.30	0.34	0.32	0.34

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q20	Q21	Q26	Q27	Q17	Q18
Q74	0.32	0.29	0.27	0.39	0.29	0.32	0.41	0.42	0.47	0.40	0.37	0.37	0.43	0.38	0.33	0.37	0.33	0.32
Q75	0.39	0.41	0.29	0.38	0.37	0.37	0.42	0.38	0.39	0.42	0.45	0.38	0.36	0.41	0.42	0.36	0.39	0.39
Q76	0.27	0.28	0.18	0.27	0.29	0.29	0.30	0.28	0.27	0.30	0.27	0.27	0.31	0.25	0.29	0.22	0.27	0.24
Q97	0.43	0.43	0.35	0.40	0.35	0.44	0.48	0.44	0.43	0.42	0.39	0.40	0.42	0.41	0.36	0.32	0.38	0.37
Q98	0.35	0.37	0.31	0.36	0.30	0.40	0.42	0.40	0.40	0.38	0.36	0.37	0.39	0.36	0.31	0.29	0.35	0.33
Q99	0.35	0.36	0.30	0.37	0.31	0.37	0.41	0.36	0.38	0.36	0.35	0.35	0.39	0.34	0.30	0.33	0.34	0.33
Q100	0.36	0.38	0.32	0.35	0.31	0.37	0.41	0.36	0.36	0.35	0.35	0.33	0.35	0.34	0.29	0.30	0.32	0.32

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q19	Q22	Q23	Q24	Q25	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q43	Q35	Q36	Q37	Q38	Q39
Q5	0.42	0.38	0.49	0.47	0.41	0.46	0.44	0.24	0.32	0.34	0.38	0.34	0.36	0.25	0.30	0.29	0.24	0.30
Q6	0.35	0.33	0.40	0.38	0.38	0.38	0.39	0.20	0.29	0.30	0.32	0.30	0.35	0.19	0.27	0.24	0.20	0.24
Q7	0.33	0.34	0.35	0.38	0.38	0.44	0.37	0.21	0.25	0.28	0.28	0.29	0.28	0.25	0.30	0.27	0.27	0.28
Q8	0.50	0.47	**0.65**	0.56	0.47	0.47	0.51	0.29	0.36	0.37	0.40	0.36	0.39	0.34	0.33	0.33	0.29	0.34
Q9	0.42	0.41	0.44	0.43	0.43	0.44	0.42	0.24	0.32	0.30	0.35	0.29	0.30	0.30	0.27	0.27	0.21	0.27
Q10	0.40	0.42	0.48	0.47	0.46	0.45	0.48	0.29	0.36	0.35	0.39	0.37	0.36	0.31	0.31	0.31	0.29	0.32
Q11	0.47	0.48	0.53	0.52	0.51	0.51	0.52	0.37	0.43	0.44	0.43	0.42	0.41	0.36	0.40	0.40	0.34	0.40
Q12	0.43	0.45	0.52	0.48	0.47	0.48	0.48	0.41	0.47	0.45	0.45	0.43	0.41	0.34	0.42	0.43	0.39	0.42
Q13	0.52	**0.60**	**0.63**	**0.60**	**0.58**	0.51	**0.69**	0.41	0.45	0.47	0.44	0.40	0.42	0.40	0.42	0.45	0.34	0.43
Q14	**0.57**	**0.61**	**0.66**	**0.63**	**0.60**	**0.58**	**0.69**	0.39	0.45	0.43	0.44	0.44	0.43	0.39	0.41	0.40	0.35	0.42
Q15	**0.60**	**0.55**	**0.64**	**0.61**	**0.60**	**0.55**	**0.69**	0.37	0.44	0.46	0.44	0.38	0.40	0.34	0.40	0.41	0.30	0.38
Q16	**0.57**	**0.54**	**0.63**	**0.60**	**0.59**	**0.55**	**0.66**	0.43	0.44	0.45	0.43	0.38	0.40	0.38	0.42	0.42	0.34	0.38
Q20	**0.69**	**0.71**	**0.73**	**0.72**	**0.63**	**0.57**	**0.72**	0.36	0.43	0.49	0.47	**0.46**	0.45	0.41	0.41	0.47	0.33	0.44
Q21	**0.63**	**0.65**	**0.68**	**0.65**	**0.63**	**0.56**	**0.67**	0.39	0.46	0.52	0.46	0.40	0.45	0.38	0.42	0.45	0.32	0.40
Q26	0.52	**0.55**	**0.62**	**0.60**	**0.61**	**0.55**	0.63	0.38	0.41	0.42	0.42	0.40	0.39	0.32	0.40	0.36	0.36	0.40
Q27	0.52	**0.54**	0.58	0.58	**0.59**	**0.58**	**0.64**	0.33	0.37	0.42	0.38	0.38	0.40	0.37	0.38	0.44	0.37	0.45
Q17	0.57	0.53	0.60	0.60	0.57	0.56	0.65	0.36	0.37	0.38	0.36	0.34	0.38	0.34	0.37	0.33	0.30	0.34
Q18	0.76	0.57	0.66	0.66	0.59	0.60	0.66	0.32	0.38	0.38	0.42	0.40	0.40	0.39	0.37	0.37	0.32	0.39
Q19	1.00	0.56	0.67	0.66	0.60	0.55	0.64	0.31	0.36	0.37	0.37	0.33	0.37	0.35	0.34	0.36	0.29	0.36
Q22	0.56	1.00	0.74	0.68	0.61	0.53	0.63	0.28	0.39	0.44	0.42	0.44	0.40	0.39	0.33	0.38	0.34	0.38
Q23	0.67	0.74	1.00	0.80	0.69	0.63	0.70	0.31	0.42	0.45	0.45	0.44	0.45	0.37	0.37	0.39	0.33	0.39
Q24	0.66	0.68	0.80	1.00	0.72	0.62	0.67	0.32	0.39	0.42	0.42	0.39	0.43	0.39	0.39	0.39	0.34	0.42
Q25	0.60	0.61	0.69	0.72	1.00	0.61	0.63	0.34	0.41	0.43	0.43	0.38	0.43	0.36	0.40	0.39	0.35	0.41

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q19	Q22	Q23	Q24	Q25	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q43	Q35	Q36	Q37	Q38	Q39
Q28	0.55	0.53	0.63	0.62	0.61	1.00	0.66	0.31	0.37	0.40	0.40	0.39	0.39	0.34	0.36	0.37	0.35	0.40
Q29	0.64	0.63	0.70	0.67	0.63	0.66	1.00	0.37	0.42	0.47	0.44	0.42	0.44	0.42	0.42	0.44	0.36	0.42
Q30	0.31	0.28	0.31	0.32	0.34	0.31	0.37	1.00	0.72	0.63	0.55	0.45	0.48	0.45	**0.62**	0.53	0.45	0.53
Q31	0.36	0.39	0.42	0.39	0.41	0.37	0.42	0.72	1.00	0.77	0.67	0.59	0.56	0.48	**0.60**	0.54	0.45	0.52
Q32	0.37	0.44	0.45	0.42	0.43	0.40	0.47	0.63	0.77	1.00	0.70	0.60	0.58	0.51	**0.61**	**0.59**	0.46	0.54
Q33	0.37	0.42	0.45	0.42	0.43	0.40	0.44	0.55	0.67	0.70	1.00	0.71	0.68	0.49	0.57	0.55	0.46	0.56
Q34	0.33	0.44	0.44	0.39	0.38	0.39	0.42	0.45	0.59	0.60	0.71	1.00	0.62	0.53	0.56	0.51	0.45	0.53
Q43	0.37	0.40	0.45	0.43	0.43	0.39	0.44	0.48	0.56	0.58	0.68	0.62	1.00	0.52	0.58	0.57	0.48	**0.60**
Q35	0.35	0.39	0.37	0.39	0.36	0.34	0.42	0.45	0.48	0.51	0.49	**0.53**	**0.52**	1.00	0.68	0.62	0.54	0.59
Q36	0.34	0.33	0.37	0.39	0.40	0.36	0.42	**0.62**	**0.60**	**0.61**	**0.57**	**0.56**	**0.58**	0.68	1.00	0.75	0.60	0.66
Q37	0.36	0.38	0.39	0.39	0.39	0.37	0.44	**0.53**	0.54	**0.59**	0.55	**0.51**	**0.57**	0.62	0.75	1.00	0.66	0.71
Q38	0.29	0.34	0.33	0.34	0.35	0.35	0.36	0.45	0.45	0.46	0.46	**0.45**	**0.48**	0.54	0.60	0.66	1.00	0.77
Q39	0.36	0.38	0.39	0.42	0.41	0.40	0.42	**0.53**	0.52	0.54	**0.56**	**0.53**	**0.60**	0.59	0.66	0.71	0.77	1.00
Q40	0.34	0.39	0.38	0.39	0.39	0.38	0.44	**0.49**	0.51	0.52	0.54	**0.53**	**0.63**	0.66	0.64	0.59	0.59	0.67
Q41	0.34	0.34	0.39	0.40	0.41	0.39	0.44	**0.48**	**0.58**	**0.63**	**0.58**	**0.55**	**0.69**	0.53	0.61	0.59	0.51	0.62
Q42	0.34	0.38	0.38	0.39	0.40	0.35	0.41	**0.46**	0.53	0.54	0.54	**0.57**	**0.73**	0.59	0.62	0.62	0.58	0.66
Q44	0.33	0.38	0.41	0.37	0.37	0.37	0.40	0.42	0.52	0.53	**0.60**	**0.58**	**0.73**	0.47	0.52	0.50	0.42	0.51
Q45	0.33	0.38	0.41	0.38	0.39	0.38	0.41	**0.46**	0.54	0.54	**0.59**	**0.57**	**0.71**	0.47	0.52	0.50	0.42	0.54
Q46	0.35	0.37	0.42	0.39	0.41	0.36	0.44	**0.48**	0.54	0.52	**0.57**	**0.55**	**0.60**	0.49	0.58	0.56	**0.54**	0.57
Q47	0.33	0.37	0.42	0.39	0.41	0.40	0.42	**0.51**	**0.56**	0.54	**0.59**	**0.55**	**0.60**	0.48	0.59	**0.60**	**0.59**	**0.62**
Q48	0.28	0.36	0.35	0.35	0.35	0.35	0.37	**0.46**	0.52	0.49	0.53	**0.51**	**0.56**	0.48	0.55	0.54	**0.63**	0.58
Q49	0.33	0.38	0.39	0.36	0.37	0.32	0.37	**0.47**	**0.56**	0.51	**0.59**	**0.59**	**0.60**	0.48	0.50	0.52	0.42	0.51
Q50	0.31	0.38	0.42	0.39	0.39	0.42	0.41	**0.47**	0.53	0.49	0.51	**0.54**	**0.57**	**0.56**	0.54	0.55	0.46	0.57

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q19	Q22	Q23	Q24	Q25	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q43	Q35	Q36	Q37	Q38	Q39
Q51	0.40	0.37	0.46	0.44	0.44	0.42	0.50	0.30	0.36	0.37	0.40	0.39	0.39	0.33	0.35	0.32	0.24	0.33
Q52	0.39	0.35	0.42	0.40	0.41	0.40	0.47	0.26	0.32	0.34	0.36	0.33	0.36	0.32	0.31	0.30	0.23	0.30
Q53	0.37	0.35	0.43	0.39	0.40	0.38	0.45	0.24	0.30	0.31	0.34	0.32	0.33	0.27	0.27	0.24	0.21	0.26
Q55	0.34	0.31	0.39	0.35	0.37	0.34	0.41	0.17	0.28	0.27	0.28	0.30	0.31	0.19	0.22	0.22	0.14	0.22
Q56	0.34	0.33	0.39	0.35	0.38	0.32	0.42	0.22	0.29	0.28	0.31	0.28	0.32	0.25	0.25	0.25	0.18	0.22
Q57	0.31	0.30	0.35	0.37	0.36	0.30	0.38	0.20	0.28	0.29	0.32	0.30	0.33	0.25	0.26	0.26	0.19	0.24
Q58	0.35	0.32	0.39	0.38	0.39	0.31	0.43	0.24	0.29	0.29	0.32	0.29	0.32	0.24	0.25	0.26	0.18	0.26
Q59	0.35	0.33	0.39	0.38	0.41	0.35	0.42	0.24	0.28	0.31	0.32	0.29	0.32	0.28	0.27	0.28	0.21	0.26
Q64	0.33	0.31	0.38	0.35	0.38	0.33	0.41	0.20	0.30	0.30	0.33	0.31	0.30	0.27	0.26	0.25	0.21	0.23
Q54	0.37	0.36	0.42	0.42	0.39	0.38	0.43	0.25	0.31	0.33	0.34	0.32	0.38	0.31	0.32	0.30	0.23	0.28
Q60	0.31	0.29	0.38	0.36	0.35	0.33	0.39	0.25	0.32	0.32	0.32	0.30	0.32	0.26	0.28	0.27	0.21	0.27
Q61	0.32	0.35	0.38	0.37	0.36	0.36	0.41	0.25	0.30	0.31	0.34	0.30	0.31	0.29	0.29	0.29	0.27	0.32
Q62	0.36	0.34	0.44	0.41	0.39	0.36	0.41	0.25	0.34	0.33	0.35	0.32	0.34	0.28	0.30	0.28	0.22	0.28
Q63	0.34	0.33	0.41	0.38	0.39	0.38	0.41	0.20	0.31	0.29	0.32	0.34	0.34	0.24	0.27	0.28	0.22	0.31
Q65	0.34	0.32	0.39	0.36	0.40	0.35	0.41	0.17	0.28	0.27	0.32	0.30	0.30	0.27	0.24	0.25	0.19	0.24
Q66	0.30	0.31	0.37	0.37	0.40	0.32	0.39	0.21	0.29	0.26	0.30	0.30	0.29	0.25	0.24	0.26	0.23	0.27
Q67	0.35	0.35	0.40	0.39	0.41	0.37	0.44	0.20	0.29	0.27	0.32	0.31	0.32	0.27	0.25	0.25	0.19	0.23
Q68	0.33	0.31	0.37	0.36	0.37	0.33	0.43	0.16	0.24	0.26	0.29	0.27	0.29	0.25	0.23	0.22	0.16	0.21
Q69	0.34	0.35	0.37	0.37	0.34	0.34	0.42	0.26	0.34	0.33	0.36	0.31	0.33	0.29	0.30	0.30	0.24	0.27
Q70	0.30	0.38	0.40	0.40	0.36	0.32	0.40	0.18	0.27	0.29	0.32	0.31	0.33	0.29	0.24	0.25	0.21	0.23
Q71	0.21	0.24	0.28	0.24	0.25	0.24	0.28	0.20	0.23	0.21	0.22	0.20	0.22	0.16	0.21	0.19	0.17	0.22
Q72	0.28	0.31	0.33	0.35	0.31	0.33	0.34	0.18	0.23	0.26	0.28	0.25	0.29	0.26	0.26	0.25	0.18	0.26
Q73	0.33	0.37	0.39	0.40	0.34	0.33	0.41	0.24	0.29	0.33	0.34	0.29	0.32	0.34	0.30	0.29	0.22	0.30

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q19	Q22	Q23	Q24	Q25	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q43	Q35	Q36	Q37	Q38	Q39
Q74	0.31	0.40	0.41	0.39	0.35	0.27	0.38	0.38	0.45	0.40	0.45	0.43	0.43	0.34	0.37	0.37	0.27	0.35
Q75	0.38	0.34	0.42	0.38	0.40	0.38	0.46	0.33	0.39	0.36	0.38	0.32	0.37	0.27	0.33	0.34	0.21	0.30
Q76	0.24	0.24	0.26	0.28	0.22	0.24	0.31	0.14	0.17	0.18	0.19	0.20	0.21	0.18	0.19	0.20	0.15	0.18
Q97	0.33	0.37	0.40	0.40	0.37	0.38	0.49	0.28	0.35	0.35	0.35	0.31	0.36	0.32	0.33	0.34	0.20	0.28
Q98	0.30	0.33	0.36	0.36	0.29	0.31	0.44	0.28	0.33	0.32	0.35	0.30	0.30	0.29	0.30	0.33	0.24	0.29
Q99	0.29	0.31	0.36	0.36	0.30	0.33	0.44	0.25	0.28	0.30	0.31	0.28	0.29	0.28	0.28	0.31	0.20	0.27
Q100	0.27	0.30	0.34	0.31	0.29	0.36	0.42	0.24	0.29	0.30	0.30	0.28	0.28	0.26	0.27	0.30	0.19	0.26

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q40	Q41	Q42	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q55	Q56	Q57	Q58	Q59
Q5	0.28	0.33	0.30	0.33	0.31	0.31	0.33	0.29	0.30	0.31	0.44	0.44	0.45	0.40	0.39	0.38	0.39	0.41
Q6	0.23	0.31	0.25	0.30	0.29	0.31	0.32	0.26	0.26	0.23	0.46	0.45	0.44	0.46	0.44	0.43	0.44	0.43
Q7	0.29	0.32	0.25	0.28	0.28	0.28	0.26	0.23	0.26	0.24	0.37	0.37	0.37	0.34	0.31	0.32	0.31	0.36
Q8	0.31	0.37	0.31	0.37	0.35	0.37	0.40	0.34	0.35	0.34	0.46	0.44	0.45	0.42	0.41	0.36	0.41	0.39
Q9	0.25	0.32	0.29	0.28	0.25	0.29	0.30	0.26	0.29	0.30	0.39	0.40	0.36	0.39	0.39	0.36	0.40	0.37
Q10	0.32	0.35	0.35	0.34	0.33	0.35	0.39	0.35	0.33	0.35	0.46	0.44	0.44	0.41	0.39	0.37	0.38	0.40
Q11	0.38	0.42	0.39	0.38	0.37	0.40	0.42	0.35	0.36	0.38	0.48	0.46	0.46	0.46	0.44	0.42	0.43	0.42
Q12	0.38	0.43	0.40	0.39	0.39	0.41	0.43	0.39	0.36	0.40	0.43	0.41	0.41	0.38	0.37	0.35	0.37	0.37
Q13	0.43	0.40	0.40	0.38	0.40	0.41	0.42	0.37	0.40	0.42	0.42	0.39	0.37	0.32	0.36	0.32	0.36	0.37
Q14	0.42	0.41	0.39	0.41	0.41	0.44	0.44	0.40	0.38	0.40	0.44	0.40	0.38	0.42	0.38	0.31	0.38	0.38
Q15	0.39	0.41	0.35	0.41	0.40	0.40	0.39	0.34	0.38	0.37	0.41	0.38	0.37	0.39	0.38	0.33	0.38	0.38
Q16	0.40	0.38	0.38	0.36	0.36	0.42	0.41	0.37	0.38	0.43	0.44	0.38	0.38	0.34	0.35	0.32	0.37	0.40
Q20	0.41	0.42	0.42	0.40	0.42	0.43	0.43	0.39	0.42	0.42	0.43	0.39	0.39	0.32	0.34	0.32	0.34	0.35
Q21	0.40	0.45	0.41	0.41	0.42	0.39	0.37	0.35	0.39	0.37	0.41	0.37	0.37	0.33	0.35	0.33	0.35	0.37
Q26	0.36	0.39	0.38	0.36	0.37	0.49	0.45	0.42	0.36	0.39	0.43	0.37	0.36	0.34	0.31	0.28	0.33	0.34
Q27	0.41	0.40	0.42	0.38	0.40	0.39	0.40	0.36	0.36	0.40	0.38	0.34	0.31	0.29	0.30	0.28	0.29	0.31
Q17	0.38	0.34	0.35	0.32	0.32	0.37	0.35	0.33	0.33	0.39	0.42	0.39	0.38	0.32	0.34	0.31	0.36	0.36
Q18	0.38	0.37	0.37	0.38	0.38	0.38	0.37	0.33	0.39	0.40	0.43	0.41	0.41	0.36	0.38	0.35	0.36	0.38
Q19	0.34	0.34	0.34	0.33	0.33	0.35	0.33	0.28	0.33	0.31	0.40	0.39	0.37	0.34	0.34	0.31	0.35	0.35
Q22	0.39	0.34	0.38	0.38	0.38	0.37	0.37	0.36	0.38	0.38	0.37	0.35	0.35	0.31	0.33	0.30	0.32	0.33
Q23	0.38	0.39	0.38	0.41	0.41	0.42	0.42	0.35	0.39	0.42	0.46	0.42	0.43	0.39	0.39	0.35	0.39	0.39
Q24	0.39	0.40	0.39	0.37	0.38	0.39	0.39	0.35	0.36	0.39	0.44	0.40	0.39	0.35	0.35	0.37	0.38	0.38
Q25	0.39	0.41	0.40	0.37	0.39	0.41	0.41	0.35	0.37	0.39	0.44	0.41	0.40	0.37	0.38	0.36	0.39	0.41

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q40	Q41	Q42	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q55	Q56	Q57	Q58	Q59
Q28	0.38	0.39	0.35	0.37	0.38	0.36	0.40	0.35	0.32	0.42	0.42	0.40	0.38	0.34	0.32	0.30	0.31	0.35
Q29	0.44	0.44	0.41	0.40	0.41	0.44	0.42	0.37	0.37	0.41	0.50	0.47	0.45	0.41	0.42	0.38	0.43	0.42
Q30	0.49	0.48	0.46	0.42	0.46	0.48	0.51	0.46	0.47	0.47	0.30	0.26	0.24	0.17	0.22	0.20	0.24	0.24
Q31	0.51	**0.58**	0.53	0.52	0.54	0.54	0.56	0.52	0.56	0.53	0.36	0.32	0.30	0.28	0.29	0.28	0.29	0.28
Q32	0.52	**0.63**	0.54	0.53	0.54	0.52	0.54	0.49	0.51	0.49	0.37	0.34	0.31	0.27	0.28	0.29	0.29	0.31
Q33	0.54	**0.58**	0.54	**0.60**	**0.59**	0.57	0.59	0.53	0.59	0.51	0.40	0.36	0.34	0.28	0.31	0.32	0.32	0.32
Q34	0.53	**0.55**	0.57	**0.58**	**0.57**	0.55	0.55	0.51	0.59	0.54	0.39	0.33	0.32	0.30	0.28	0.30	0.29	0.29
Q43	**0.63**	**0.69**	**0.73**	**0.73**	**0.71**	0.60	0.60	0.56	**0.60**	**0.57**	0.39	0.36	0.33	0.31	0.32	0.33	0.32	0.32
Q35	0.66	0.53	0.59	0.47	0.47	0.49	0.48	0.48	0.48	0.56	0.33	0.32	0.27	0.19	0.25	0.25	0.24	0.28
Q36	0.64	0.61	0.62	0.52	0.52	0.58	0.59	0.55	0.50	0.54	0.35	0.31	0.27	0.22	0.25	0.26	0.25	0.27
Q37	0.59	0.59	0.62	0.50	0.50	0.56	0.60	0.54	0.52	0.55	0.32	0.30	0.24	0.22	0.25	0.26	0.26	0.28
Q38	0.59	0.51	0.58	0.42	0.42	0.54	0.59	**0.63**	0.42	0.46	0.24	0.23	0.21	0.14	0.18	0.19	0.18	0.21
Q39	0.67	0.62	0.66	0.51	0.54	0.57	**0.62**	0.58	0.51	**0.57**	0.33	0.30	0.26	0.22	0.22	0.24	0.26	0.26
Q40	1.00	0.65	0.70	0.52	0.54	0.56	0.56	0.54	0.54	**0.61**	0.37	0.32	0.31	0.24	0.27	0.26	0.27	0.30
Q41	0.65	1.00	0.71	**0.59**	**0.58**	0.58	0.58	0.53	0.57	**0.57**	0.36	0.34	0.31	0.30	0.30	0.28	0.29	0.31
Q42	0.70	0.71	1.00	**0.60**	**0.60**	**0.62**	0.59	0.57	0.57	**0.63**	0.34	0.29	0.26	0.25	0.25	0.24	0.23	0.26
Q44	0.52	**0.59**	**0.60**	1.00	0.90	0.63	0.63	0.61	0.60	0.56	0.37	0.36	0.35	0.33	0.31	0.32	0.32	0.33
Q45	0.54	**0.58**	**0.60**	0.90	1.00	0.67	0.66	0.62	0.60	0.57	0.36	0.35	0.34	0.30	0.29	0.29	0.31	0.31
Q46	0.56	**0.58**	**0.62**	0.63	0.67	1.00	0.84	0.78	0.65	0.60	0.37	0.33	0.33	0.30	0.27	0.29	0.31	0.31
Q47	0.56	**0.58**	**0.59**	0.63	0.66	0.84	1.00	0.82	0.63	0.62	0.42	0.35	0.35	0.32	0.30	0.31	0.33	0.34
Q48	0.54	**0.53**	0.57	0.61	0.62	0.78	0.82	1.00	0.64	0.60	0.35	0.33	0.29	0.26	0.26	0.29	0.26	0.31
Q49	0.54	**0.57**	0.57	0.60	0.60	0.65	0.63	0.64	1.00	0.69	0.39	0.36	0.32	0.28	0.30	0.32	0.30	0.33
Q50	**0.61**	**0.57**	**0.63**	0.56	0.57	0.60	0.62	0.60	0.69	1.00	0.40	0.36	0.34	0.28	0.28	0.29	0.30	0.31

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q40	Q41	Q42	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q55	Q56	Q57	Q58	Q59
Q51	0.37	0.36	0.34	0.37	0.36	0.37	0.42	0.35	0.39	0.40	1.00	0.86	0.82	0.72	0.70	0.69	0.74	0.77
Q52	0.32	0.34	0.29	0.36	0.35	0.33	0.35	0.33	0.36	0.36	0.86	1.00	0.85	0.74	0.74	0.72	0.76	0.79
Q53	0.31	0.31	0.26	0.35	0.34	0.33	0.35	0.29	0.32	0.34	0.82	0.85	1.00	0.72	0.71	0.70	0.73	0.78
Q55	0.24	0.30	0.25	0.33	0.30	0.30	0.32	0.26	0.28	0.28	0.72	0.74	0.72	1.00	0.86	0.73	0.83	0.78
Q56	0.27	0.30	0.25	0.31	0.29	0.27	0.30	0.26	0.30	0.28	0.70	0.74	0.71	0.86	1.00	0.72	0.81	0.77
Q57	0.26	0.28	0.24	0.32	0.29	0.29	0.31	0.29	0.32	0.29	0.69	0.72	0.70	0.73	0.72	1.00	0.84	0.79
Q58	0.27	0.29	0.23	0.32	0.31	0.31	0.33	0.26	0.30	0.30	0.74	0.76	0.73	0.83	0.81	0.84	1.00	0.89
Q59	0.30	0.31	0.26	0.33	0.31	0.31	0.34	0.31	0.33	0.31	0.77	0.79	0.78	0.78	0.77	0.79	0.89	1.00
Q64	0.27	0.32	0.23	0.30	0.30	0.31	0.32	0.28	0.32	0.29	0.71	0.72	0.71	0.74	0.73	0.71	0.79	0.77
Q54	0.33	0.34	0.30	0.35	0.34	0.33	0.35	0.29	0.32	0.33	**0.75**	**0.77**	**0.76**	**0.76**	**0.73**	**0.72**	**0.76**	0.75
Q60	0.25	0.31	0.26	0.35	0.35	0.35	0.36	0.32	0.35	0.32	**0.72**	0.71	**0.74**	0.68	**0.71**	0.67	0.72	0.75
Q61	0.27	0.29	0.28	0.35	0.34	0.33	0.35	0.32	0.30	0.30	0.68	0.71	**0.73**	0.68	**0.71**	0.66	0.68	0.70
Q62	0.29	0.34	0.30	0.34	0.34	0.35	0.35	0.30	0.35	0.32	**0.73**	**0.76**	**0.74**	**0.73**	**0.75**	**0.70**	**0.73**	0.76
Q63	0.32	0.33	0.28	0.33	0.31	0.35	0.36	0.30	0.31	0.33	**0.73**	**0.73**	**0.74**	**0.74**	**0.71**	0.68	**0.75**	0.73
Q65	0.27	0.30	0.25	0.32	0.32	0.32	0.32	0.28	0.32	0.32	**0.73**	**0.72**	**0.72**	**0.76**	**0.74**	**0.73**	**0.82**	**0.80**
Q66	0.27	0.31	0.26	0.29	0.29	0.35	0.34	0.33	0.31	0.32	0.67	0.65	0.65	0.62	0.63	0.61	0.66	0.68
Q67	0.26	0.31	0.25	0.33	0.31	0.32	0.33	0.29	0.31	0.33	**0.77**	**0.77**	**0.77**	**0.79**	**0.78**	**0.74**	**0.82**	**0.82**
Q68	0.25	0.27	0.22	0.30	0.28	0.27	0.28	0.24	0.28	0.28	**0.78**	**0.82**	**0.80**	**0.84**	**0.83**	**0.78**	**0.86**	**0.85**
Q69	0.26	0.34	0.29	0.33	0.31	0.30	0.30	0.27	0.29	0.27	0.44	0.42	0.40	0.39	0.43	0.38	0.42	0.37
Q70	0.24	0.30	0.27	0.32	0.31	0.28	0.28	0.21	0.26	0.28	0.37	0.39	0.41	0.41	0.41	0.37	0.40	0.36
Q71	0.21	0.22	0.22	0.22	0.22	0.22	0.22	0.15	0.20	0.22	0.30	0.27	0.28	0.28	0.25	0.25	0.28	0.26
Q72	0.21	0.28	0.26	0.28	0.25	0.26	0.27	0.22	0.24	0.27	0.33	0.31	0.30	0.32	0.32	0.29	0.33	0.29
Q73	0.33	0.34	0.32	0.34	0.34	0.34	0.34	0.30	0.33	0.32	0.37	0.34	0.35	0.31	0.33	0.30	0.32	0.30

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q40	Q41	Q42	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q55	Q56	Q57	Q58	Q59
Q74	0.37	0.40	0.40	0.41	0.42	0.43	0.43	0.38	0.45	0.42	0.38	0.32	0.33	0.31	0.35	0.33	0.35	0.32
Q75	0.28	0.35	0.31	0.40	0.37	0.37	0.36	0.27	0.36	0.37	0.49	0.45	0.46	0.44	0.39	0.40	0.46	0.45
Q76	0.17	0.19	0.20	0.23	0.22	0.22	0.22	0.21	0.21	0.22	0.33	0.34	0.32	0.29	0.31	0.32	0.32	0.32
Q97	0.28	0.32	0.29	0.33	0.33	0.35	0.32	0.27	0.30	0.31	0.48	0.47	0.47	0.48	0.46	0.41	0.48	0.46
Q98	0.27	0.28	0.27	0.31	0.29	0.32	0.33	0.28	0.27	0.30	0.42	0.39	0.40	0.36	0.37	0.34	0.39	0.40
Q99	0.26	0.26	0.24	0.29	0.28	0.27	0.29	0.22	0.25	0.26	0.41	0.39	0.40	0.36	0.37	0.35	0.38	0.38
Q100	0.25	0.27	0.26	0.32	0.30	0.29	0.28	0.24	0.28	0.29	0.40	0.39	0.41	0.39	0.39	0.35	0.41	0.40

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q64	Q54	Q60	Q61	Q62	Q63	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76
Q5	0.39	0.46	0.38	0.37	0.39	0.40	0.41	0.36	0.40	0.41	**0.43**	0.38	0.28	0.37	**0.36**	0.32	0.39	0.27
Q6	0.42	0.45	0.40	0.35	0.40	0.49	0.42	0.37	0.43	0.45	**0.43**	0.36	0.30	0.35	**0.35**	0.29	0.41	0.28
Q7	0.34	0.38	0.28	0.28	0.33	0.35	0.35	0.31	0.34	0.34	0.18	0.32	0.21	0.32	0.33	0.27	0.29	0.18
Q8	0.41	0.44	0.39	0.38	0.43	0.42	0.42	0.39	0.43	0.41	**0.39**	**0.39**	0.23	0.33	**0.35**	**0.39**	0.38	0.27
Q9	0.39	0.41	0.34	0.32	0.37	0.38	0.39	0.32	0.37	0.37	**0.38**	0.33	0.23	0.32	0.34	0.29	0.37	0.29
Q10	0.39	0.41	0.37	0.36	0.37	0.41	0.40	0.37	0.42	0.40	**0.41**	0.38	0.24	0.34	**0.39**	0.32	0.37	0.29
Q11	0.42	0.45	0.41	0.40	0.43	0.44	0.43	0.40	0.44	0.43	**0.47**	**0.46**	0.31	**0.41**	**0.46**	**0.41**	**0.42**	0.30
Q12	0.35	0.39	0.36	0.34	0.35	0.37	0.37	0.35	0.38	0.35	0.36	0.36	0.27	0.32	**0.36**	**0.42**	0.38	0.28
Q13	0.36	0.37	0.32	0.35	0.33	0.34	0.34	0.33	0.36	0.33	**0.37**	0.34	0.25	0.28	**0.37**	**0.47**	0.39	0.27
Q14	0.37	0.37	0.33	0.36	0.37	0.37	0.38	0.32	0.38	0.34	0.37	0.37	0.29	0.30	**0.35**	**0.40**	**0.42**	0.30
Q15	0.35	0.39	0.34	0.32	0.36	0.36	0.35	0.29	0.36	0.35	0.35	0.35	0.28	0.27	0.34	**0.37**	**0.45**	0.27
Q16	0.37	0.36	0.34	0.31	0.34	0.36	0.38	0.32	0.39	0.34	0.29	0.29	0.26	0.28	0.31	**0.37**	0.38	0.27
Q20	0.34	0.38	0.32	0.36	0.36	0.33	0.35	0.32	0.35	0.33	0.36	0.35	0.23	0.34	**0.37**	**0.43**	0.36	0.31
Q21	0.32	0.36	0.33	0.34	0.38	0.35	0.31	0.31	0.34	0.33	0.35	0.36	0.24	0.31	**0.35**	**0.38**	0.41	0.25
Q26	0.34	0.32	0.32	0.32	0.33	0.34	0.35	0.37	0.36	0.32	0.31	0.31	0.28	0.29	0.30	0.33	**0.42**	0.29
Q27	0.24	0.29	0.29	0.33	0.32	0.29	0.28	0.31	0.31	0.27	0.31	0.30	0.21	0.29	0.34	**0.37**	0.36	0.22
Q17	0.35	0.35	0.34	0.32	0.35	0.37	0.34	0.33	0.37	0.35	0.34	0.30	0.25	0.29	0.32	0.33	0.39	0.27
Q18	0.34	0.39	0.37	0.38	0.40	0.36	0.35	0.32	0.37	0.35	0.34	0.33	0.24	0.29	0.34	0.32	0.39	0.24
Q19	0.33	0.37	0.31	0.32	0.36	0.34	0.34	0.30	0.35	0.33	0.34	0.30	0.21	0.28	0.33	0.31	0.38	0.24
Q22	0.31	0.36	0.29	0.35	0.34	0.33	0.32	0.31	0.35	0.31	0.35	0.38	0.24	0.31	**0.37**	**0.40**	0.34	0.24
Q23	0.38	0.42	0.38	0.38	0.44	0.41	0.39	0.37	0.40	0.37	**0.37**	**0.40**	0.28	0.33	**0.39**	**0.41**	**0.42**	0.26
Q24	0.35	0.42	0.36	0.37	0.41	0.38	0.36	0.37	0.39	0.36	0.37	**0.40**	0.24	0.35	**0.40**	**0.39**	0.38	0.28
Q25	0.38	0.39	0.35	0.36	0.39	0.39	0.40	0.40	0.41	0.37	0.34	0.36	0.25	0.31	0.34	**0.35**	0.40	0.22

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q64	Q54	Q60	Q61	Q62	Q63	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76
Q28	0.33	0.38	0.33	0.36	0.36	0.38	0.35	0.32	0.37	0.33	0.34	0.32	0.24	0.33	0.33	0.27	0.38	0.24
Q29	0.41	0.43	0.39	0.41	0.41	0.41	0.41	0.39	0.44	0.43	**0.42**	**0.40**	0.28	0.34	**0.41**	**0.38**	**0.46**	0.31
Q30	0.20	0.25	0.25	0.25	0.25	0.20	0.17	0.21	0.20	0.16	0.26	0.18	0.20	0.18	0.24	**0.38**	0.33	0.14
Q31	0.30	0.31	0.32	0.30	0.34	0.31	0.28	0.29	0.29	0.24	0.34	0.27	0.23	0.23	0.29	**0.45**	0.39	0.17
Q32	0.30	0.33	0.32	0.31	0.33	0.29	0.27	0.26	0.27	0.26	0.33	0.29	0.21	0.26	0.33	**0.40**	0.36	0.18
Q33	0.33	0.34	0.32	0.34	0.35	0.32	0.32	0.30	0.32	0.29	0.36	0.32	0.22	0.28	0.34	**0.45**	0.38	0.19
Q34	0.31	0.32	0.30	0.30	0.32	0.34	0.30	0.30	0.31	0.27	0.31	0.31	0.20	0.25	0.29	**0.43**	0.32	0.20
Q43	0.30	0.38	0.32	0.31	0.34	0.34	0.30	0.29	0.32	0.29	0.33	0.33	0.22	0.29	0.32	**0.43**	0.37	0.21
Q35	0.27	0.31	0.26	0.29	0.28	0.24	0.27	0.25	0.27	0.25	0.29	0.29	0.16	0.26	0.34	**0.34**	0.27	0.18
Q36	0.26	0.32	0.28	0.29	0.30	0.27	0.24	0.24	0.25	0.23	0.30	0.24	0.21	0.26	0.30	**0.37**	0.33	0.19
Q37	0.25	0.30	0.27	0.29	0.28	0.28	0.25	0.26	0.25	0.22	0.30	0.25	0.19	0.25	0.29	**0.37**	0.34	0.20
Q38	0.21	0.23	0.21	0.27	0.22	0.22	0.19	0.23	0.19	0.16	0.24	0.21	0.17	0.18	0.22	0.27	0.21	0.15
Q39	0.23	0.28	0.27	0.32	0.28	0.31	0.24	0.27	0.23	0.21	0.27	0.23	0.22	0.26	0.30	**0.35**	0.30	0.18
Q40	0.27	0.33	0.25	0.27	0.29	0.32	0.27	0.27	0.26	0.25	0.26	0.24	0.21	0.21	0.33	**0.37**	0.28	0.17
Q41	0.32	0.34	0.31	0.29	0.34	0.33	0.30	0.31	0.31	0.27	0.34	0.30	0.22	0.28	0.34	**0.40**	0.35	0.19
Q42	0.23	0.30	0.26	0.28	0.30	0.28	0.25	0.26	0.25	0.22	0.29	0.27	0.22	0.26	0.32	**0.40**	0.31	0.20
Q44	0.30	0.35	0.35	0.35	0.34	0.33	0.32	0.29	0.33	0.30	0.33	0.32	0.22	0.28	0.34	**0.41**	0.40	0.23
Q45	0.30	0.34	0.35	0.34	0.34	0.31	0.32	0.29	0.31	0.28	0.31	0.31	0.22	0.25	0.34	**0.42**	0.37	0.22
Q46	0.31	0.33	0.35	0.33	0.35	0.35	0.32	0.35	0.32	0.27	0.30	0.28	0.22	0.26	**0.34**	**0.43**	0.37	0.22
Q47	0.32	0.35	0.36	0.35	0.35	0.36	0.32	0.34	0.33	0.28	0.30	0.28	0.22	0.27	0.34	**0.43**	0.36	0.22
Q48	0.28	0.29	0.32	0.32	0.30	0.30	0.28	0.33	0.29	0.24	0.27	0.21	0.15	0.22	0.30	**0.38**	0.27	0.21
Q49	0.32	0.32	0.35	0.30	0.35	0.31	0.32	0.31	0.31	0.28	0.29	0.26	0.20	0.24	0.33	**0.45**	0.36	0.21
Q50	0.29	0.33	0.32	0.30	0.32	0.33	0.32	0.32	0.33	0.28	0.27	0.28	0.22	0.27	0.32	**0.42**	0.37	0.22

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q64	Q54	Q60	Q61	Q62	Q63	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76
Q51	0.71	**0.75**	**0.72**	**0.68**	**0.73**	**0.73**	**0.73**	**0.67**	**0.77**	**0.78**	**0.44**	0.37	0.30	0.33	**0.37**	**0.38**	**0.49**	0.33
Q52	0.72	**0.77**	**0.71**	**0.71**	**0.76**	**0.73**	**0.72**	**0.65**	**0.77**	**0.82**	**0.42**	0.39	0.27	0.31	0.34	0.32	**0.45**	**0.34**
Q53	0.71	**0.76**	**0.74**	**0.73**	**0.74**	**0.74**	**0.72**	**0.65**	**0.77**	**0.80**	**0.40**	**0.41**	0.28	0.30	**0.35**	0.33	**0.46**	0.32
Q55	0.74	**0.76**	**0.68**	**0.68**	**0.73**	**0.74**	**0.76**	0.62	**0.79**	**0.84**	**0.39**	**0.41**	0.28	0.32	0.31	0.31	**0.44**	0.29
Q56	0.73	**0.73**	**0.71**	**0.71**	**0.75**	**0.71**	0.74	**0.63**	**0.78**	**0.83**	**0.43**	**0.41**	0.25	0.32	0.33	**0.35**	0.39	0.31
Q57	0.71	**0.72**	**0.67**	0.66	**0.70**	0.68	**0.73**	0.61	**0.74**	**0.78**	**0.38**	0.37	0.25	0.29	0.30	0.33	0.40	0.32
Q58	0.79	**0.76**	**0.72**	**0.68**	**0.73**	**0.75**	**0.82**	**0.66**	**0.82**	**0.86**	**0.42**	**0.40**	0.28	0.33	0.32	**0.35**	**0.46**	0.32
Q59	0.77	**0.75**	**0.75**	**0.70**	**0.76**	**0.73**	**0.80**	**0.68**	**0.82**	**0.85**	**0.37**	0.36	0.26	0.29	0.30	0.32	**0.45**	0.32
Q64	1.00	**0.70**	0.66	0.63	**0.69**	**0.76**	**0.89**	**0.70**	**0.84**	**0.79**	**0.44**	0.39	0.27	0.32	0.34	**0.36**	**0.43**	**0.35**
Q54	0.70	1.00	0.68	0.67	0.74	0.72	0.71	0.62	0.74	0.78	**0.43**	**0.41**	0.26	0.32	0.33	0.34	**0.42**	0.29
Q60	0.66	0.68	1.00	0.82	0.80	0.71	0.67	0.67	0.73	0.75	0.37	0.35	0.25	0.29	0.29	0.30	**0.42**	0.28
Q61	0.63	0.67	0.82	1.00	0.82	0.72	0.66	0.69	0.74	0.74	**0.38**	0.36	0.23	0.30	0.31	0.31	0.39	0.28
Q62	0.69	0.74	0.80	0.82	1.00	0.77	0.71	0.67	0.75	0.78	**0.39**	0.35	0.23	0.30	0.30	0.34	**0.44**	0.30
Q63	**0.76**	0.72	0.71	0.72	0.77	1.00	0.75	0.71	0.79	0.80	**0.40**	0.37	0.26	0.32	0.33	**0.34**	**0.41**	0.30
Q65	**0.89**	0.71	0.67	0.66	0.71	0.75	1.00	0.75	0.90	0.83	**0.44**	**0.40**	0.28	0.34	0.34	**0.37**	**0.46**	0.34
Q66	0.70	0.62	0.67	0.69	0.67	0.71	0.75	1.00	0.82	0.70	0.34	0.32	0.21	0.31	0.32	0.30	0.39	0.28
Q67	**0.84**	0.74	0.73	0.74	0.75	0.79	0.90	0.82	1.00	0.88	**0.42**	**0.40**	0.25	0.33	**0.35**	**0.36**	**0.45**	0.31
Q68	**0.79**	0.78	0.75	0.74	0.78	0.80	0.83	0.70	0.88	1.00	**0.42**	**0.41**	0.26	0.32	0.33	0.32	**0.43**	0.32
Q69	0.44	0.43	0.37	0.38	0.39	0.40	0.44	0.34	0.42	0.42	1.00	0.64	0.37	0.54	0.67	0.44	0.47	0.45
Q70	0.39	0.41	0.35	0.36	0.35	0.37	0.40	0.32	0.40	0.41	0.64	1.00	0.49	0.54	0.57	0.47	0.44	0.39
Q71	0.27	0.26	0.25	0.23	0.23	0.26	0.28	0.21	0.25	0.26	0.37	0.49	1.00	0.41	0.34	0.34	0.41	0.43
Q72	0.32	0.32	0.29	0.30	0.30	0.32	0.34	0.31	0.33	0.32	0.54	0.54	0.41	1.00	0.59	0.42	0.42	0.38
Q73	0.34	0.33	0.29	0.31	0.30	0.33	0.34	0.32	0.35	0.33	0.67	0.57	0.34	0.59	1.00	0.55	0.46	0.39

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q64	Q54	Q60	Q61	Q62	Q63	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76
Q74	0.36	0.34	0.30	0.31	0.34	0.34	0.37	0.30	0.36	0.32	0.44	0.47	0.34	0.42	0.55	1.00	0.51	0.34
Q75	0.43	0.42	0.42	0.39	0.44	0.41	0.46	0.39	0.45	0.43	0.47	0.44	0.41	0.42	0.46	0.51	1.00	0.43
Q76	0.35	0.29	0.28	0.28	0.30	0.30	0.34	0.28	0.31	0.32	0.45	0.39	0.43	0.38	0.39	0.34	0.43	1.00
Q97	0.43	0.47	0.39	0.41	0.41	0.45	0.44	0.38	0.49	0.53	**0.56**	**0.51**	**0.37**	**0.45**	**0.54**	**0.47**	**0.52**	**0.42**
Q98	0.35	0.37	0.33	0.35	0.36	0.38	0.36	0.33	0.40	0.41	**0.51**	**0.43**	0.30	**0.42**	**0.48**	**0.42**	**0.44**	**0.38**
Q99	0.35	0.37	0.32	0.35	0.34	0.37	0.35	0.29	0.38	0.40	**0.54**	**0.45**	0.32	**0.46**	**0.55**	**0.41**	**0.48**	**0.46**
Q100	0.37	0.38	0.34	0.35	0.36	0.40	0.38	0.33	0.41	0.41	**0.54**	**0.46**	0.32	**0.45**	**0.51**	**0.40**	**0.46**	**0.42**

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q97	Q98	Q99	Q100
Q5	0.43	0.35	0.35	0.36
Q6	0.43	0.37	0.36	0.38
Q7	0.35	0.31	0.30	0.32
Q8	0.40	0.36	0.37	0.35
Q9	0.35	0.30	0.31	0.31
Q10	0.44	0.40	0.37	0.37
Q11	0.48	0.42	0.41	0.41
Q12	0.44	0.40	0.36	0.36
Q13	0.43	0.40	0.38	0.36
Q14	0.42	0.38	0.36	0.35
Q15	0.39	0.36	0.35	0.35
Q16	0.40	0.37	0.35	0.33
Q20	0.42	0.39	0.39	0.35
Q21	0.41	0.36	0.34	0.34
Q26	0.36	0.31	0.30	0.29
Q27	0.32	0.29	0.33	0.30
Q17	0.38	0.35	0.34	0.32
Q18	0.37	0.33	0.33	0.32
Q19	0.33	0.30	0.29	0.27
Q22	0.37	0.33	0.31	0.30
Q23	0.40	0.36	0.36	0.34
Q24	0.40	0.36	0.36	0.31
Q25	0.37	0.29	0.30	0.29

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q97	Q98	Q99	Q100
Q28	0.38	0.31	0.33	0.36
Q29	0.49	0.44	0.44	0.42
Q30	0.28	0.28	0.25	0.24
Q31	0.35	0.33	0.28	0.29
Q32	0.35	0.32	0.30	0.30
Q33	0.35	0.35	0.31	0.30
Q34	0.31	0.30	0.28	0.28
Q43	0.36	0.30	0.29	0.28
Q35	0.32	0.29	0.28	0.26
Q36	0.33	0.30	0.28	0.27
Q37	0.34	0.33	0.31	0.30
Q38	0.20	0.24	0.20	0.19
Q39	0.28	0.29	0.27	0.26
Q40	0.28	0.27	0.26	0.25
Q41	0.32	0.28	0.26	0.27
Q42	0.29	0.27	0.24	0.26
Q44	0.33	0.31	0.29	0.32
Q45	0.33	0.29	0.28	0.30
Q46	0.35	0.32	0.27	0.29
Q47	0.32	0.33	0.29	0.28
Q48	0.27	0.28	0.22	0.24
Q49	0.30	0.27	0.25	0.28
Q50	0.31	0.30	0.26	0.29

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q97	Q98	Q99	Q100
Q51	0.48	0.42	0.41	0.40
Q52	0.47	0.39	0.39	0.39
Q53	0.47	0.40	0.40	0.41
Q55	0.48	0.36	0.36	0.39
Q56	0.46	0.37	0.37	0.39
Q57	0.41	0.34	0.35	0.35
Q58	0.48	0.39	0.38	0.41
Q59	0.46	0.40	0.38	0.40
Q64	0.43	0.35	0.35	0.37
Q54	0.47	0.37	0.37	0.38
Q60	0.39	0.33	0.32	0.34
Q61	0.41	0.35	0.35	0.35
Q62	0.41	0.36	0.34	0.36
Q63	0.45	0.38	0.37	0.40
Q65	0.44	0.36	0.35	0.38
Q66	0.38	0.33	0.29	0.33
Q67	0.49	0.40	0.38	0.41
Q68	0.53	0.41	0.40	0.41
Q69	0.56	0.51	0.54	0.54
Q70	0.51	0.43	0.45	0.46
Q71	0.37	0.30	0.32	0.32
Q72	0.45	0.42	0.46	0.45
Q73	0.54	0.48	0.55	0.51

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.6 (cont'd)

	Q97	Q98	Q99	Q100
Q74	0.47	0.42	0.41	0.40
Q75	0.52	0.44	0.48	0.46
Q76	0.42	0.38	0.46	0.42
Q97	1.00	0.77	0.75	0.75
Q98	0.77	1.00	0.75	0.70
Q99	0.75	0.75	1.00	0.80
Q100	0.75	0.70	0.80	1.00

Note: Correlations that are higher between subscales are designated in **bold**.

Table A.7

Factors of Interest Overview

Code	Items	Description
GENDER	1	Male, Female, Transgender or Other
GPA	1	Multiple-choice item requesting cumulative GPA offered 9 options: below 2.25, 2.25 to 2.49, 2.50 to 2.74, 2.75 to 2.99, 3.00 to 3.24, 3.25 to, 3.49, 3.50 to 3.74, and 3.75 to 4.00
TURN	1	Intention to return to the RA position: yes, undecided, no (able to return, but choose not to), and no (unable to return graduate, transfer, etc.)
1SATCJE	8	Satisfaction that Clear Job Expectations Were Established
2TRAINSC	8	RA Training: Dealing with Student Concerns
3TRAINJR	9	RA Training: Dealing with Job Responsibilities
4EFFSRC	6	Effectiveness in Enhancing Students' Responsibility and Cooperation
5EFFSSMV	8	Effectiveness in Enhancing Students' Self-Management and Values
6EFFSA	7	Effectiveness in Enhancing Students' Awareness
7HDS	9	Hall Director/Supervisor: Supporting RA
8HDM	9	Hall Director/Supervisor: Management
9SATWLC	8	Satisfaction with the working and living conditions of the RA
10OVERSAT	4	Overall RA Satisfaction

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