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## Factors that Contribute to and Mediate Master'S Level Counseling Students' Interest in Working with Older Adults

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**FACTORS THAT CONTRIBUTE TO AND MEDIATE MASTER'S LEVEL  
COUNSELING STUDENTS' INTEREST IN WORKING WITH OLDER ADULTS**

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Presented to

The Faculty of the School of Education

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In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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by

Nathaniel J. Wagner

February 2018

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**FACTORS THAT CONTRIBUTE TO AND MEDIATE MASTERS LEVEL  
COUNSELING STUDENTS' INTEREST IN WORKING WITH OLDER ADULTS**

**ABSTRACT**

This research study served to examine factors that may contribute to and mediate masters-level counseling students interest in working with older adults. A review of literature on factors related to counselors' interest in working with older adults established potential relationships between Contact Knowledge of aging, Attitudes/Ageism (expected to be a negative correlation), Counseling Older Adult Self-efficacy (COASE) and Interest in working with older adults. Based on the Social Cognitive Career Theory, COASE was predicted to be impacted by Contact measures and correlated with Attitudes and Knowledge. A sample of 303 masters-level counseling students completed the Student Interest in Gerocounseling Scale (SIGS), Ambivalent Ageism Scale (AAS), Gerontological Counseling Competencies Scale (GCCS), and an adapted Contact Scale. Structural Equation Modeling (SEM) was used to examine the hypothesized relationships between the variables and revealed that Contact Quality, and COASE predict Interest in working with older adults. COASE was also found to partially mediate the relationship between Contact Quality and Interest. Additional findings were also discussed along with limitations, areas for further research, and implications for counselor education.

NATHANIEL J. WAGNER

COUNSELOR EDUCATION AND SUPERVISION

WILLIAM AND MARY

Factors that Contribute to and Mediate Masters Level Counseling Students' Interest in  
Working with Older Adults

## CHAPTER ONE

### **A Growing Older Adult Population**

The 2016 Federal Interagency Forum on Aging-Related Statistics (FIFARS; 2016) noted that between 2005 and 2015, the population of older adults (i.e., 65 years of age and older) grew by over 30% from 37 million in 2005 to 48 million in 2015. The report predicted a 1.6 million annual net increase, which has resulted in older adults making up approximately 14.9% of the population. One reason for this growth may be the size and age of the baby boomer generation which has begun to reach older adulthood and will continue to do so until 2030 (FIFARS). A second reason for this change is that the life expectancy for older adults has grown significantly over the past century. Those that reach 65 years of age still have an estimated 19.4 years of lifespan left. Similarly, the population of the old-old (i.e., 85 years of age and older) is expected to triple between 2015 and 2040 (FIFARS). The older adult population is also growing significantly in diversity. According to the FIFARS, 10.6 million or 22% of older adults will be racially or ethnically diverse, up from 6.7 million or 18% in 2005. By 2030, ethnically diverse older adults will make up 28% of the older adult population, further showing a shift in demographics among the older adult population that must be considered.

The baby-boomer population has created a substantial shift of the United States population into older adulthood. Although historically a significant number of older adults would benefit from mental health services, they have not utilized those services and have become the segment of the population that most under-utilizes mental health

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services generally (Myers & Harper, 2004; Taylor & Hartman-Stein, 1995). However, older adults' view on mental health services seems to be changing. Currin, Hayslip, Schneider, and Kooken (1998) reported that older adults born more recently tend to have a much more positive view of aging and mental health services than older cohorts. Consistent with these findings, the baby-boomer population has consistently used mental health services more frequently than older populations (Knight & Kaskie, 1995), and part of this increase may be explained by a reduction in stigma. Mental health among older adults is strongly correlated with successful aging and happiness; however, more mental health professionals are needed to work with older adults.

### **A Shortage of Gerocounselors**

The need for counselors to work with older adults is not new; the Administration on Aging collaborated with the American Counseling Association (ACA) in 1978 to develop educational and training opportunities to increase the number of qualified providers of services for older adults. Mental health fields have long recognized the need for work with older adults but have yet to successfully develop a system for increasing the number of mental health professionals willing to work with them (Cummings, Adler, & DeCoster, 2005). Both the psychology and social work fields have reported that fewer than five percent of their licensed mental health workers work with older adults (Scharlach, Damron-Rodriguez, Robinson, & Feldman, 2000) despite a need for as many as 24% of graduating mental health workers (Rosen & Zlotnik, 2002). There is a general lack of counselor training opportunities in work with older clients (Foster, Kreider, & Waugh, 2009) and counselors willing to work with this population (Jeste et al., Ryan & Agresti, 1999) resulting in a older adults being the most underserved population in mental

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health (Maples & Abney, 2006). According to a recent Institute of Medicine (IOM, 2012) report, the absence of counselors interested in working with older adults combined with a significant increase in numbers of older adults has led to an *all-hands-on-deck* urgent view of the need to increase the number of professionals working with older adults.

### **Individual, Organizational, and Professional Responses to the Problem**

Counseling programs have long struggled to prepare enough students to work with older adults. Salisbury (1975) found that only six percent of counselor education programs had formal training opportunities in gerocounseling. By 1984 this percentage had shown some increase to 37% and then leveled off to 31% in 1991 (Myers, Losch, & Sweeney, 1991); however, these latter two percentages may have been increased from Salisbury's finding because these findings included courses that in some way addressed older adults, whereas Salisbury's study required entire courses or specializations in gerocounseling to meet criteria for formal training opportunities in gerocounseling.

Mental health professionals that work with older adults have reported that much of their interest in the population developed as students during their graduate training program (Woodhead et al., 2013). Despite this, Ryan and Agresti (1999) found that especially within counseling programs, both counseling students and faculty lack interest in working with the older adult population. Ryan and Agresti suggested that although counselor educators had previously been more focused on older adults, they started to retire, and new faculty members have had a lesser interest in work with older adults. Whereas all mental health professions have experienced a deficit of members interested in work with this population, counseling trainees have generally expressed less interest than trainees in either social work or psychology (Ryan & Agresti, 1999).

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Problems with developing counselor interest are present at the professional organization level as well as the individual clinician level. Attempts by the National Board of Certified Counselors (NBCC) and the Council for Accreditation of Counseling and Related Educational Programs (CACREP) to increase awareness of counselor education through specializations and certifications in gerontological counseling have failed, each lasting less than a decade (Bobby, 2013). Since these previous attempts there have been few efforts by counseling organizations to recognize and develop an awareness of the need for further understanding and training in the unique aspects of counseling older adults.

Literature within the counselor education textbooks and counseling journals has largely ignored issues related to older adults. Fahr (2004) found that many textbooks used in counseling coursework have little or no mention of issues related to older adults. Major counseling journals publish few articles about older adults, leaving the majority of older adult literature in aging specific journals that have a much smaller readership.

There are a number of potential reasons for a deficit of counselors working with older adults, including cultural issues related to how people view older adults and aging and a lack of literature and educational materials to guide student counselors toward working with older adults. Much of the focus in counseling has been on increasing academic training, with little research focusing on individual factors that increase individuals' interest in and likelihood to pursue work with older adults. As such, the purpose of this study was to examine factors that contribute to or mediate counselors' interest in working with older adults.



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### **A Dearth of Research**

Lent and colleagues (1994) suggested that interest is directly related to career choice, and that interest impacts future behaviors. Students have typically reported that their interest areas are the primary reason for their career choice (Beggs, Bantham, & Taylor, 2008; Lent et al., 2002; Malgwi, Howe & Burnaby, 2005). Similarly, Myers, Losch and Sweeney (1991) have discussed the importance of interest in motivating counselors to work with older adults. Despite how clearly interest seems to be related to career choice, little research has been conducted on the influence of interest in the choice of counselors to work with older adults.

The degree of interaction or contact counselors have with older adults may influence interest in working with older adults. Some researchers have suggested increasing positive communication with and about older adults within counselor education programs may increase interest in working with older adults among master's-level students (Cummings & Galambos, 2002). Previous contact, especially in the form of work experience, has also shown to impact interest and desire to work with older adults (Eshbaugh, Gross, & Satrom, 2010) as well as to reduce levels of ageism. Allport (1954) found that contact with members of a minority group may impact the attitudes and behaviors of the more privileged over time. In this study the construct of contact was split into contact frequency (i.e. the quantity of interactions between the participant and older adults) and contact quality (i.e., how the individual views contact in terms of positive and negative). These two types of contact have been shown to be unique from each other, yet both are particularly important in gaining an understanding of how to stimulate students' interest in working with older adults. If contact frequency is the best predictor of interest,

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it would justify a focus in counselor education on facilitating a substantial number of interactions between students and older adults. If contact quality was the best predictor, then it might be more important for counselor education programs to concentrate on creating fewer but highly meaningful and positive interactions between students and older adults rather than to focus on quantity.

Ageism, as discussed by Butler (1969) involves discrimination based on age. This discrimination usually involves both attitudes and behaviors. Allport (1954) discussed how contact, when meeting certain criteria, has a significant impact on attitudes and beliefs. Within mental health, Kastenbaum (1964) and Butler (1969) suggested that attitudes and beliefs may impact interest in working with older adults. For example, counselors may lack belief in clients' ability to change because of the client's age. They may also hold beliefs about the questionable value of working with older adults (Kastenbaum, 1964; Packer & Chasteen, 2006). Negative views about older adults, such as viewing older adults as depressing may decrease counselors desire to work with that population (Roberts & Mosher-Ashley, 2000).

Knowledge about aging may be related to interest in working with older adults. In many ways, knowledge and ageism may be intertwined. Kastenbaum's (1964) suggestion that counselors' may believe working with older adults is pointless could be an example of ageism, or it could be an example of a lack of knowledge about the aging process and the benefits of mental health and aging in older adulthood. Ageism and knowledge seem to be related, such that increased knowledge can decrease ageism beliefs, although this may be the case only up to a point (Boswell, 2012; Cummings, Kropf, & DeWeaver, 2000). Kettlewell and Henry (2009) found that knowledge of what a career entails seems

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to increase interest in a field. Gordon (2007) and Cummings, Adler, and DeCoster (2005) found that knowledge was significantly related to interest in the field, even more so than attitudes and beliefs about older adults.

Lent, Brown, and Hackett (1994) found self-efficacy within the format of social cognitive career theory to influence interest directly. As a field, counselor education has studied counseling self-efficacy (CSE) at length (Larson & Daniels, 1998). Findings in CSE have supported Bandura's suggestions on self-efficacy and social cognitive theory (see Larson & Daniels, 1998). Counseling older adult self-efficacy (COASE) then is the belief a counselor has in being able to work with older adults effectively, and is a variant of CSE. COASE among professional counselors has been examined in one study by Wagner, Mullen, and Sims, (2017), and findings suggested that COASE was strongly correlated with Interest.

### **Justification for the Current Study**

Research into the construct areas of Contact, Attitudes, COASE, and Interest will provide counselor education programs additional information regarding potential methods for developing students' interest in work with older adults. For example, researchers have described efficient methods of developing CSE (Larson et al., 1992). Research that COASE is significantly related to interest among masters level counseling students would provide evidence for counselor education programs to increase focus on developing COASE within master's level programming. If Contact is related to Interest in working with older adults, counselor education programs may modify their level of encouragement of interactions between students and older adults. If Knowledge is the primary factor for developing Interest, then recommendations may focus more on the

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development of training modules to increase knowledge of aging and counseling techniques. Research suggesting Attitudes as the most important factor in generating interest may result in recommendations that include more of a focus on older adults within multicultural counseling classes (e.g., Constantine, 2001) and human growth and development, as well as in more practice oriented classes to address and challenge myths of aging.

A dearth of research has been conducted in Counseling regarding Interest in working with older adults. This study was a step toward being able to better understand the development of counselors interest in working with this population. Additionally, use of SEM allowed for examination of relationships between predictor variables. For example, Contact Quality, Knowledge, and COASE were examined to as possibly related to attitudes. Similarly, Contact, Knowledge, and Attitudes relationships with COASE were examined as well.

### **The Current Study**

This study included masters-level students from 13 universities that completed survey packets distributed by faculty alumna of William & Mary. The researcher developed a structural equation model [SEM] (Figure 1) based on a thorough review of literature. The final selected hypothesized structural equation model included Knowledge, Ageism, Counseling Older Adult Self-Efficacy (COASE), Contact Frequency and Contact Quality as factors that were expected to predict and mediate Interest. Use of SEM also allowed an examination of the paths and directionalities between exogenous and endogenous (e.g., between Contact Quality and COASE) variables and also provided indicators as to how well the proposed model fits (i.e., how

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well the model can consistently reproduce) the data. Additionally, as exploratory research, this study also examined the relationship between demographic variables (i.e., race and ethnicity, age, gender, percentage of program, and feelings of being prepared by the program to work with older adults) and the expected predictive factors of interest (i.e. Contact, Attitudes, Knowledge, COASE, and Interest).

Some of the findings from this study, especially that COASE and Contact Quality strongly predict Interest in working with older adults, should be particularly useful for counselor education programs to consider as the need for counselors to work with older adults continues to grow despite a current lack of interested counselors (e.g., Jeste et al., 1999).

In summary, this chapter discussed a problem facing mental health practitioners - growth in the older adult population and a shortage of Gerocounselors to work with this booming population. Next, current approaches to this problem were discussed along with problems with these approaches and the lack of current research related to work with older adults. Finally, a justification for this study was provided along with a brief overview of the study process, findings, and utility. Chapter two will provide a more exhaustive examination of the literature on the need for more counselors, how the field of counseling has been addressing that need, areas that current attempts have failed, and constructs that seem related to Interest.

## CHAPTER TWO

### Review of Literature

According to the 2016 Federal Interagency Forum on Aging-Related Statistics (FIFARS) Report, the number of older adults (i.e., those 65 years of age and older) increased by 30% from 2005 to 2015 (FIFARS, 2016). Furthermore, the population of older adults is expected to encounter a net increase of 1.6 million resulting in a population share of nearly 15 percent of the United States population by 2030 (FIFARS). This growth does not come as a surprise, as baby-boomers have been the largest generation with nearly 76 million births from 1946 to 1965, and they were only recently surpassed in number by millennials. The baby-boomer population has now begun to reach older adulthood and will continue to do so until 2030, at which point all baby-boomers will be older adults (FIFARS). Another reason for the growth in the older adult population is increased health care effectiveness; older adults have a much longer life expectancy now than they did in the past (FIFARS). This increased life expectancy continues to apply to the old-old, or those 85 years of age or older, and the population of old-old is consequently expected to triple by 2040 (FIFARS). In the past the older adult population was predominately made up of Caucasians; however, the ethnicity of those soon to be categorized as older adults is becoming increasingly diverse. In 2005 18% of older adults were racially or ethnically diverse, while in 2015 that number reached 22%, and by 2030 it is expected to grow to 28%. This change in population diversity brings light to the need to be aware of multicultural differences within this population.

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### **Mental Health Needs of Older Adults**

The growth of the older adult population corresponds with an increase in the mental health needs of that population (Bartels & Smyer, 2002). Older adults frequently experience mental health issues including significant rates of depression, substance use, suicide, and anxiety, among other mental health problems (Maples & Abney, 2006; Taylor & Hartman-Stein, 1995). The severity of mental health issues is of particular concern; given that mental health problems, including mood disorders, depression, anxiety, and substance abuse correlate with an increased risk of early death (Harris & Barraclough, 1998; Wahlbeck, Westman, Nordentoft, Gissler, & Laursen, 2011). On the other hand, older adults who are satisfied with their lives and view their lives as being close to optimal report above average levels of mental health (von Faber, et al., 2001). Similarly, those that receive mental health services exhibit fewer mental health and medical symptoms (Olfson, Sing, & Schlesinger, 1999), and older adults who use mental health services use fewer medical resources (Mumford, Schlesinger, Glass, Patrick, & Cuerdon, 1998).

Despite the benefits of using of mental health services, Wang and colleagues (2005), reported that older adults have historically used mental health services less frequently than other populations experiencing the same symptoms. Stigma (Maples & Abney, 2006), and a history of engagement with medical professionals who do not recognize the benefit of mental health services (Wang et al., 2005) may have influenced the past use of mental health services by older adults. Given that baby boomers have higher rates of use of mental health services than previous generations (Bartels & Naslund, 2013), mental health services utilization among this older population is

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expected to continue to increase rapidly (Maples & Abney, 2006; Myers & Harper, 2004). By 2020, approximately 15 million older adults, double the number from 2000, are expected to have mental health issues (ACA; 2003; Jeste et al., 1999). As a result, both the need for services for older adults and the need for mental health professionals serving this population are growing. These concerns, combined with the lack of mental health professionals, have made older adults the most underserved population in mental health (Maples & Abney, 2006; Taylor & Hartman-Stein, 1995). Because of the evidenced need for mental health workers in the coming years, the Institute of Medicine (IOM, 2012) recommended an urgent, “all hands on-deck” type of approach to working with older adults attempting to bring in as many workers as possible from a variety of settings.

### **Need for More Counselors Interested in Working with Older Adults**

In the coming years, the number of older adults will continue to rise (FIFARS, 2016). However, there is a lack of workers and interest in many health-related settings including mental health (e.g. counseling, and social work; Jeste et al., 1999). Literature is replete with the recognition of concerns about issues that may arise as baby-boomers age (e.g., Bartels & Naslund, 2013; IOM, 2012; Maples & Abney, 2006; Taylor & Hartman-Stein, 1995). As a result of the increased need for mental health counselors working with older adults, Bartels and Naslund (2013) described a recent shift in emphasis on the need to train more specialists to an emphasis on the need for *everyone* to be prepared to work with older adults. This coincides with Myers & Blake’s (1986) argument that specialist programs may never be enough to meet the demand by this population shift.



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Due to a dearth of literature describing specific estimates of the number of counselors needed to work with older adults, that number must be inferred from other mental health fields. In social work, a field closely related to counseling, the National Institute of Aging (NIA; 1987) reported a need for a total of 40,000-50,000 social workers to be trained to meet the future needs of older adults. More recently, Scharlach and colleagues (2001) have estimated a need for 24% of the social workers graduating each year to work with older adults; however, only 3% regularly specialize with the older adult population. Also, the Center for Health Workforce Studies (2006) and Ferguson (2012) have reported that only nine percent of social workers work regularly in gerontology, a percentage that is obviously much lower than the 24% needed.

Psychology, another related mental health field, has some information regarding expected need for their workforce geared toward older adults. The NIA (1987) projected a need for 5,000 doctoral level clinical or counseling geropsychologists to be working with older adults once the baby boomer generation becomes older adults. Estimates prepared for the White House Conference on Mental Health and Aging projected a higher need of 7,495 (Gatz & Finkel, 1995). In 1999 the American Psychological Association (APA) had membership of 86,969, which, according to need estimates, would require just under nine percent of psychologists to work primarily with older adults. According to Qualls (2002) as few as three percent of psychologists work primarily with older adults, although the majority (69%) of psychologists report working with older adults in some capacity. This suggests that although there is a gap between the need and the number of psychologists, the gap may not be quite as large as previously thought. On the other hand, despite greatly increased fellowships and insurance opportunities for work related to

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older adults (Hinrichsen & McMeniman, 2002; Karel, Molinari, Gallagher-Thompson, & Hillman, 1999), less than half of geriatric fellowships go filled each year, and only four percent of psychologists work with older adults (Bartels & Naslund, 2013).

Unlike psychology and social work, the field of counseling has not quantified its need for professionals in working with older adults. Counseling is one of the most rapidly growing areas in mental health with a expected 19% growth equating to 34,000 more jobs between 2014 and 2024 (U.S. Department of Labor, Bureau of Labor Statistics, 2017). Because of this rapid growth, the field of counseling will need to contribute to the mental health needs of the burgeoning older adult population.

In studies that specifically examined mental health profession's interest in working with older adults, the numbers seem to be relatively consistent. Within geropsychology, students seem more likely to indicate an interest in work with the geriatric population despite not having an intent to work with older adults. Hinrichsen (2000) found that 38% of his sample of 98 psychology interns described having at least some interest in working with the geriatric population. Similarly, Gordon (2007) conducted a study ( $N = 409$ ) using Hinrichsen's interest scale and found that about half of the respondents had at least some interest in receiving training to work with the geriatric population. Researchers have not examined how many students need to be interested in work with older adults to meet the expected future need for older adult mental health services. However, it is clear increased interest is needed, as there is still deficit of mental health professionals willing to work with this population (Bartels & Naslund, 2013).

From a counseling perspective, few researchers have studied the topic of interest in working with older adults. In one study, Foster, Kreider, and Waugh (2009) examined

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interest among masters level counseling students ( $N = 385$ ) with a self-report survey at six counselor education programs including school counseling, mental health counseling, and pastoral counseling programs. This study explored interest within areas related to gerocounseling (e.g. retirement, and grief work); work environments (e.g. nursing home, or hospice); and intent, desire, and willingness to pursue additional training in gerocounseling. Foster and colleagues did not report overall interest level, but they did note a moderate degree of interest in areas such as grief work (27% described interest) and retirement counseling (33% described interest). Nearly 30% of participants in this sample indicated a relative lack of interest by selecting “very disinterested” regarding working in nursing homes, geriatric hospital units, and hospice care. These numbers seem to be similar to percentages of previously reported interest found in social work and psychology, and although there is clearly some interest in working with older adults, among many trainees that interest is limited.

In a replication of the Foster et al. study, Nielsen (2014) sampled participants ( $N = 211$ ) from 44 counselor education programs in the north central region of the Association for Counselor Education and Supervision (ACES). Nielsen (2014) found no significant difference from Foster and colleagues’ with regard to levels of interest, although Nielsen (2014) reported that a higher level of reported preparedness to work with older adults than was described in the Foster et al., (2009) study. These studies had a number of limitations, one of which is that although examining certain aspects of interest, they did not consider counselors intent or any other aspects related to interest such as past or present work experiences with older adults or attitudes about older adults.

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Both Nielsen (2014) and Foster et al. (2009) have weaknesses in their research. First, both studies used a significant number of school counselors within a study of interest in work with older adults; in fact, school counselors made up the largest proportion of respondents for Foster and colleagues. In Nielsen's study school counselors made up the second largest sample size ( $n = 50$  vs  $n = 53$ ). Although school counselors may work with an older adult who is a parent or guardian, they are unlikely to have members of this population as a client. As a result of their unlikelihood of having an older adult for a client, school counselors are presumed to be less likely to be interested in working with this population, thereby creating potentially misleading results. Unfortunately, neither Nielsen (2014) or Foster and colleagues (2009) reported their participants' particular area of counseling specialization. This is relevant due to the fact that students' desired career choice could conceivably impact interest levels (e.g. students in school counseling programs may want to work with children).

### **Summary**

The need for mental health professionals to work with older adults is evident across mental health fields. The mental health field has assets that assist with serving older adults including: (a) a long history of working with this population (e.g. social work; Scharlach, 2000), (b) funding and fellowship opportunities (e.g., psychology; Hinrichsen & McMenemy, 2000), and (c) a growing mental health workforce (U.S. Department of Labor, Bureau of Labor Statistics, 2017). However, each of the major mental health professions has struggled to generate trained professionals to work with older adults leading to a continued deficit in older adult-related mental health services (Jeste et al., 1999). Despite the growing need for gerontological counselors, and a

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demonstrated deficit of gerontological counselors in the field, there is little research on how to best generate interest among counselors in working with older adults. Research aimed at better understanding and generating interest among counselors in work with older adults needs to be conducted in order to meet the growing mental health needs of the older adult population.

### **Current Approaches**

Current approaches to addressing the problem of a lack of gerontological counselors have focused on three primary areas including, (a) coverage in counselor education programs, (b) organizational efforts to support training, and (c) psychoeducational efforts designed to highlight the problem particularly within professional literature.

### **Coverage in Counselor Education Programs**

Research and interventions began in the 1970's to explore counselor education's role in creating a workforce prepared to work with older adults. Salisbury (1975) surveyed counselor education programs and noted that no programs had required classes in gerocounseling, and only six percent had an elective in gerocounseling. Myers (1984) replicated the Salisbury study and found that as many as 37% ( $n = 114$ ) of programs had coursework that attended to older adults in some manner. However, only 54 programs included a course unique to gerocounseling. The remainder ( $n = 60$ ) of the 37% of the programs that reported as attending to older adults achieved this simply by having coursework that discussed older adults at some point or providing an opportunity for students to take a gerontological course in another program. Myers, Loesch, and Sweeney replicated the study again in 1991 and found that programs with coursework in

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gerocounseling had dropped to 31% of programs that had coursework that addressed older adults. From these studies, it appears that within counseling departments, the earlier growth in older adult training has leveled off. Moreover, although 80% of programs reported *opportunities* for field experiences with older adults, only between one percent to five percent of students reported completing a practicum or internship with older adults (Myers et al., 1991). As a result, even when students have an opportunity and have indicated having an interest to work with older adults, few students choose to do so.

Salisbury's aforementioned study (1975) initiated a substantial interest among researchers on how to increase training in work with older adults among counselors. Four primary methods in counselor education were recommended to solve the problem regarding the lack of counselors entering the field. These four methods were: (a) a separate course model, (b) a specialization or area of concentration model, (c) an integration or infusion model, and (d) an interdisciplinary model (Myers & Blake, 1986; Stickle & Onedera, 2006; Zuccherro, 1998). Zuccherro (1998) developed the *unique model*, described as a combination of each of the other models, however there is no evidence of this model being utilized in counseling programs. Myers and Blake (1986) suggested that each of these models might be used individually or in combination with each other to increase counselor preparedness. The interdisciplinary model encourages students to take classes from different departments that are each offering courses related to working with older adults (Stickle & Onedera, 2006). The separate course model (Myers & Blake, 1986) includes the addition of one class to a program of study that would include what counselors need to know to work with older adults. The area of concentration model takes the separate course model and adds several courses making it a

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specialization or a cognate (Zuccherro, 1998). According to Stickle and Onedera (2006) the area-of-concentration model typically includes a practicum or internship experience. The integration model attempts to add to regular coursework to provide the necessary relevant information for working with older adults is included in a typical counselor education program (Myers & Blake, 1986).

### **Organizational Efforts to Support Training**

Counseling organizations have made concerted efforts to increase the number of counselors prepared to work with older adults through additional training opportunities. Many of these organizational efforts overlap with counselor education program efforts to increase counselors working with older adults and include efforts by: (a) the American Counseling Association (ACA), (b) the National Board of Certified Counselors (NBCC), and (c) the Council for Accreditation of Counseling and Related Educational Programs (CACREP).

**ACA.** ACA, the premier national organization in counseling, has long recognized the need for counselors to work with older adults primarily due to expected older adult population growth. In 1978 the ACA joined with the Administration on Aging (AOA) and Dr. Jane Myers to conduct five studies from 1978-1990 and to develop awareness of the need to expand services to older adults (Myers, 1995). Over one million dollars was invested to support the research. Each of the five studies provided insight into training procedures for older adults and helped form the next study.

Study one focused on the lack of training opportunities that students have to work with older adults. Study two focused on developing training for paraprofessionals and peer level counselors to be able to provide minimal responses to work with older adults

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(Myers, 1995). Study three was a “train the trainer” project, in which 60 trainees met for two days to receive intensive training and then went to their locality to train residents using information and materials from the first two studies. Study four recognized the likelihood that all counselors will work with older adults and, therefore, should have some training. As such, study four focused on how to infuse work with older adults into the core CACREP competencies. Study five had two parts; the first part was aimed at developing expected competencies for counselors who graduate from a counseling education program, and the second part was aimed at the development of a proposal to advocate for the creation of a certification with the NBCC (Bobby, 2013; Myers, 1995).

Additionally, the ACA created a special committee on aging in the early 1970’s (Myers, 1995). The Association for Adult Development and Aging (AADA), chartered in 1986 as a division of ACA, has been a primary source of the ACA’s focus on older adults and the training of counselors in the aging process (Myers, 1995). The AADA presented a proposal for standards in gerontological counseling to CACREP in 1992 as part of an effort to encourage CACREP to adopt standards to prepare all counselors to work with older adults (Bobby, 2013). The AADA also runs an annual conference geared toward aging and development and publishes the *Adultspan* journal, a professional peer-reviewed research journal that puts out two volumes yearly.

The ACA *Code of Ethics* (2014) impacts the training of counselors. Six purposes undergird the ACA Code of Ethics including: (a) to set forth ethical obligations, (b) to identify ethical considerations, (c) to clarify the nature of ethical responsibilities, (d) to guide members in construction of a course of action, (e) to support the mission of the ACA, and (f) to serve as a basis for processing complaints and inquiries regarding ACA



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members (ACA, 2014). Two aspects of the ACA Code of Ethics speak to aging and older adults. The first is a function of non-discrimination on the basis of age, culture, ethnicity, and race among others. The second, embedded in multicultural issues and diversity, states: “Counselors recognize the effects of age, color, culture, disability, ethnic group, gender, race, language preference, religion, spirituality, sexual orientation, and socioeconomic status” (ACA, 2014, p. 12).

**NBCC.** The NBCC is the premier certifying board for counselors in the United States, and its efforts have begun to spread worldwide. The NBCC was petitioned by the ACA and Myers (1995) to create a certification for gerontological counselors. The AADA conducted a survey of their members, and nearly half of the respondents stated a commitment to the pursuit of a certification (Bobby, 2013; Myers, 1995). In 1990, the NBCC created the National Certified Gerontological Counselor certification in gerontological counseling competency (Myers, 1995). The NBCC has assumed a position advocating for a federal law to allow counselors to bill Medicare, thus further demonstrating its support for counselors who desire to work with older adults.

**CACREP.** In 1991, the AADA presented CACREP with standards for gerontological counseling, and in 1992 CACREP began a specialty for gerontological counseling as an emphasis under the umbrella of community counseling (Bobby, 2013). In the 2001 standards Gerontological Counseling became a specialization. CACREP is responsible for determining the knowledge and skills that students should minimally learn while in their counseling program. As an organization, CACREP has a significant influence on counselors in the field. CACREP standards require graduates of counseling programs to “demonstrate both knowledge and skill across the curriculum as well as

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professional dispositions” (CACREP, 2015, p.2). These standards set a baseline for each counselor and the profession of counseling as a whole. CACREP has at least indirectly addressed older adults within multicultural competencies that suggest counselors are expected to learn multicultural and pluralistic characteristics of diverse individuals, be understanding of multicultural competencies, and recognize help-seeking behaviors among others. Additionally, some of the CACREP standards focus specifically on issues that occur across the lifespan including the need to learn about individual and family development across the lifespan (CACREP, 2015). These standards require counselors to gain a greater insight and deeper knowledge of developmental issues that may impact older adults.

### **Psychoeducational Efforts in Professional Literature**

Efforts through psychoeducation have been made to emphasize the concern of a lack of counselors working with older adults. Myers et al. (1992), discussed organizational efforts such as the development of gerontological competencies in counselor education and the preparation of lay person providers through creation of training programs as a part of the five projects with the AOA and the ACA. Other psychoeducational efforts include articles in professional literature and texts that provide techniques and skills intended to improve counselors’ ability to work with older adults effectively.

The *Lifespan* journal is a counseling-specific journal focused on development across the lifespan including aging and older adulthood. Within mental health professions, other professional journals such as the *Educational Gerontologist* and *Aging and Mental Health* also focus on work with older adults. Each journal provides further

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knowledge about aging for those interested in pursuing research and practice in this area, although only the *Lifespan* journal is unique to the field of counseling.

The counseling field has developed literature and texts that discuss counseling techniques, specific areas of clinical concern, and areas of awareness for work with older adults (Myers, 1995). This literature has continued to grow since Myers' seminal paper, especially including books geared specifically toward counselors work with older adults (e.g. Fox & Wilson, 2011; Kampf, 2015; Knight, 2004; Orbach, 2003; Sorocco & Lauderdale, 2011). These books provide a helpful ideas about working with older adults, and the specific needs of older adults.

### **Summary**

The problem that there are too few counselors available to work with older adults remains. Much of the focus to this point in counselor education programs has been at an organizational support level. Professional literature has focused on additional training resources for those interested in working with older adults. Initially efforts focused on an increasing clinicians' training to work with older adults found a level of success (e.g., Hinrichsen, 2000; Myers, 1984); however, the benefits of those efforts appear to hve tapered off, and the problem of a lack of mental health professionals remains despite these modest gains.

### **Gaps in the Current Approaches**

Despite the efforts discussed in the previous section, the number of counselors in the field working with older adults has not kept up with demand for mental health services. Counselor education programs that prepare students to work with older adults have decreased over time in spite of an increasingly aging society (Ryan & Agresti,

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1999). The current approaches previously discussed are either not effective or not sufficient to recruit and retain counselors into the field. This section will examine the limitations in current practices, specifically noting limitations in: (a) counselor education programs, (b) current organizational efforts, and (c) psychoeducational efforts, particularly those related to professional literature.

### **Failures in the Coverage of Counselor Education Programs**

The number of programs that had training opportunities focused on counseling older adults grew from approximately six percent in 1975 (Salisbury, 1975) to 37% in 1984 (Myers, 1984) and then began to level off to about 31% in 1990. The last two percentages were calculated with much smaller samples of programs than those surveyed in 1975, and as such, there may have been an increased likelihood of error, if schools that provided training in work with older adults were more likely to respond. Even so, nearly one in three programs reported having at least some training opportunity in gerontological counseling. Despite CACREP's creation of a gerontological counseling specialization in 2001, only two programs ever applied to receive the specialization in gerontological counseling (Bobby, 2013). As a result, CACREP removed gerontological counseling from its specializations in the 2009 standards (Bobby, 2013). The failure of the specialization is perhaps unsurprising, given a suggestion by Myers and Blake (1986) that counseling specializations across the board are unlikely to grow significantly due to their significant cost, the need for faculty, and the need to find interested students.

The separate course model has likewise been difficult for many programs to maintain. Bobby (2013) reported that many faculty who had previously been interested in gerontological counseling are retiring, and new incoming faculty members seem to have

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little interest in continuing to teach such coursework. To examine student and faculty members' interest, Ryan and Agresti (1999) conducted a study surveying program directors of mental health training programs ( $N = 458$ ). These training programs included masters level CACREP counseling programs ( $n = 98$ ), APA accredited clinical and counseling psychology programs ( $n = 242$ ), and CSWE accredited social work programs ( $n = 118$ ). Ryan and Agresti suggested that counseling faculty exhibited significantly less interest than other related mental health faculty in teaching gerontology and aging-related coursework. Similarly, counseling students were reported as having less interest in learning about older adults than students in either social work or psychology. Lack of faculty and student interest adds complexity to the separate course model, as a separate course is less likely achieve the required numbers to "make." Myers (1994) suggested that fitting an additional class into an already packed program is also difficult. Both faculty members and students must have a sufficient level of interest for a non-required class to succeed (Myers). Each model within counselor education has focused on increasing training opportunities but has primarily ignored the need for interest. Myers et al.(1991) noted the importance of interest and the impact it may have on the success of particular models but then failed to identify models of training to deal with the lack of interest in students and faculty.

Efforts to increase gerontology training programs have not succeeded in two important metrics. First, training opportunities to counsel older adults have not proliferated (Bobby, 2013), and second, a lack of counselors working with older adults remains (Bartels & Naslund, 2013; Jeste et al., 1999). These failures suggest that current approaches are limited in their ability to meet the need for development of gero-

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counselors in counselor education. As was noted above, past efforts have focused on training in much the same way that counseling programs train counselors to work with any population. However, one aspect that counselor education has mostly ignored has been the individual characteristics of faculty and students' interest in learning about and working with older adults. This limited focus on the student's perceptions of older adults has restricted programs from innovating more efficient methods to develop counselors' interest in this area. Discerning how to advance graduate students' interest in working with older adults may be crucial, as many students have reported that their interest in this population originated while they were in graduate school (Woodhead et al., 2013).

### **Failures in Organizational Efforts**

Similar to counseling program efforts to increase counselors working with older adults, the premier organizations in counseling have failed to recognize the differences in working with older adults, specifically with regard to the individual interest of the counselors. CACREP as an accrediting agency is responsible for ensuring that students who come through its accredited programs have a minimal level of needed knowledge and ability in counseling to be effective (Bobby, 2013). CACREP developed the gerontological counseling emphasis in 1992 under the umbrella of community counseling, and then the specialization in 2001; nonetheless, the specialization was removed in the 2009 CACREP standards, as only two programs had ever applied for the gerontological counseling specialization (Bobby, 2013).

The ACA has demonstrated awareness of the needs of the older adult population as seen through development of the AADA and the list of gerontological competencies presented by the AADA in 1992 (Bobby, 2013). However, there is an absence of

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literature showing any continued effort by the ACA to address the need for counselors to work with older adults. As with CACREP, attention on the individual counselor variables that may be impacting counselors' willingness to work with older adults is needed.

The NBCC, an organization predicated on certifying counselors who have knowledge and skills to counsel, discontinued the national certified gerontological counselor (NCGC) certification in 1999 after having few applicants for the certification (Bobby, 2013). The NBCC has not provided further information on continued efforts to increase counselor training and interest in work with older adults. Despite reported efforts to get the NBCC to include questions pertaining to older adults as a part of licensure examinations (Myers, 1995), there is no evidence that this has become a regular part of either counseling licensure exam the NBCC currently distributes.

### **Failures of Psychoeducational Efforts in Professional Literature**

Literature specific to older adults primarily focuses on knowledge, techniques, and methods in working with older adults (e.g. Glicken, 2009; Kampf, 2015; Knight, 2004). Also, professional literature consistently cites the need to work with older adults (e.g. Maples & Abney, 2006; Foster et al., 2009; Myers, 1984; Myers, Loesch, & Sweeney, 1991. Myers & Schwiebert, 1996). Despite these recommendations, there is a dearth of literature specific to older adults. In a dissertation study examining how counselor education textbooks represent the elderly and support or negate ageism, Fahr (2004) surveyed the bookstore managers of 27 colleges/universities to find the most commonly used textbook from each of the eight CACREP core competency areas. Of the 27 schools surveyed, 11 participants responded, and based on these eleven responses, Fahr chose the most popular textbook from each of the CACREP core competency areas

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(e.g. counseling techniques, issues and ethics, multicultural counseling, etc.) and only allowed one text per author to be included to avoid potentially skewing the findings.

Upon choosing the most popular textbooks, Fahr (2004) then read and examined each textbook for responses to ageism, the extent of discussion on the elderly, and areas that the texts missed. Of the eight selected texts Fahr selected for the study, six virtually ignored older adults even in discussions of other diverse groups. In these six texts, there were a few, brief, mentions of older adults such as talking about young and old or indirectly talking about diverse populations. Fahr indicated that only two textbooks, one from the group counseling core and one from the multicultural diversity core, included information focused on older adults by devoting an entire chapter to older adults. However even these were limited in practical applicability to counseling. Fahr reported that only one text included a case study involving an older adult, although there were numerous examples of other diverse groups. Fahr also reported that that counseling textbooks upheld many commonly held societal beliefs and myths about aging such as physical and intellectual decline, mental illness, and apathy. Fahr's finding that textbooks include little information on older adults is consistent with Myers et al.'s (1991) conclusion that only human growth and development courses had more than a 50% likelihood of having a unit on older persons. Myers et al., also found career development had a 41% chance of including a unit on older adults, while the rest were each below 25%.

This minimal representation evidenced in textbooks and coursework clearly demonstrates a lack of movement in encouraging growth in interest to work with older adults. Fahr (2004) suggested that textbooks ignoring older adults serve to perpetuate



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their invisibility within American culture. A lack of awareness further reduces opportunities to address challenges and reduces the likelihood of student preparation to work with older adults.

Fahr's study was not without its' flaws. For example, Fahr's decision to survey bookstore managers rather than attempting to survey program directors and ask for course syllabi is questionable, especially considering that program directors would likely value this research more than a bookstore manager. Also, Fahr noted a lack of use of a journal to keep track of things noticed during readings of the book, and instead relied on remembrances from after reading, which may have impacted the accuracy of what information was recollected by the author (Curt & Zechmeister, 1984). However, even with the limitations of the study, efforts and knowledge gained from Fahr's examination of these texts are particularly relevant in that they speak to the current lack of focus within the counseling field on work with older adults.

Regarding peer-reviewed publications and literature, the ACA's adult development and aging division regularly publishes a peer-reviewed journal. However, the premier journals for counseling publications have a dearth of research pertaining to older adults. For example, in a keyword search of the *Journal of Counseling and Development*, and the *Journal of Marital and Family Therapy* there were no articles specific to older adults published within the last five years when using keywords including, age, ageism, old, older adult, gerocounseling, and elderly. Although articles about older adults appear in aging-specific journals such as *Lifespan*, people reading those journals already evidence an interest in older adults. As such, publishing within

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aging-specific journals is less likely to encourage new interest in the field of gerocounseling than publishing in a more mainstream counseling journal.

### **Summary**

In summary, each of these current approaches, although well-intentioned, have ultimately failed to produce an increase in counselors working with older adults. This stagnation is a common issue across similar disciplines (e.g., social work, and psychology; Jeste, 1999). Efforts may have failed due to a limited focus on efforts to stimulate interest. As a whole, counselor education programs, counseling organizations, and literature have been geared toward attacking the problem from a simple lack of training aspect, assuming that additional training opportunities would resolve the scarcity of gerontological counselors. Individual characteristics of counselors likely has a significant impact on counselor trainees' decisions to work with older adults.

Kastenbaum (1964) was one of the first to suggest that therapists are reluctant to work with older adults for reasons that include anxiety about aging, fear, social stigma, and poor outcome measures. While a clear need remains for more gerontological counselor training within counselor education, merely focusing on training without also examining the aspects that drive counselor desire to work with older adults is not sufficient.

Counselor education must examine interest in working with older adults and the factors that influence this interest to provide a more holistic view of changes that need to be made to begin mediating this longstanding struggle.

### **Areas of Study**

Content analysis of literature in counseling and other closely related fields has revealed several constructs consistently related to interest in working with older

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adults including: (a) contact, (b) ageism (c) knowledge and facts we know about aging and older adults, and (d) counseling self-efficacy. Each of these constructs has been shown to be significantly correlated with interest in previous research models with mental health professionals though not specifically in counseling (see Gordon, 2007; Lent et al., 1994; Sutton, 2013). Understanding the relationships of these factors with masters level counseling students could provide valuable information as the field of counseling takes strides toward reducing the deficit in practitioners prepared and willing to work with older adults.

### **Interest**

Interest or desire is an important early step to making a behavioral decision or change. According to the social cognitive theory of behavior, interest directly and indirectly impacts eventual behaviors (Bandura, 1977). Lent, et al. (1994) developed social cognitive career theory (SCCT) to explain how students make career choices and develop their educational and vocational interests. Lent et al. (2002) conducted a qualitative study at two different universities. A total of 31 students participated, 19 at Site one and 12 at Site two. Participants were those students who had already made at least tentative career plans. Students were asked about things that helped and hindered their career choice. The interviews were structured and developed through practice interviews and were based on SCCT as well as previous research on supports and barriers. Despite being a structured interview, the interviewers sought further detail and elaboration on participants' responses. The team at each site created their categories without the purview of the other site; once complete the two locations met and developed a single inclusive list. Lent and colleagues found that the top two predictors of career

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choice were interest and direct exposure to work-relevant activities. Research using quantitative methods have found similar results of interest predicting career choice among undergraduate students (e.g., Beggs, Bantham, & Taylor, 2008; Malgwi, Howe & Burnaby, 2005). These research findings provide additional impetus for examining interest as a factor relating counselors willingness to work with older adults. Each study (Beggs et al., 2008; Lent et al., 2002; Malgwi et al., 2005) has limitations that must be considered when making the inference to this study. For example, each study was conducted on students early in their undergraduate degree program as opposed to those that were in their master's program; each also studied people that had not yet finalized their career choice. Thus, although participants may have been interested in a topic and may have planned on working with that population, the studies did not provide evidence that the participants followed through. As the populations for these studies were undergraduate students, the responses may not generalize to the graduate students. Also, since the responses of each study were about broad majors and career choices, the results may not translate to a very specific subset of counselor education. For example, at a general level a participant may want to be a counselor, but at the more narrow level (e.g. a specific population) other aspects such as employment opportunities, salary, or advancement (Beggs, et al., 2008) may prevail over the very narrow preferred interest. Despite this possibility, research has clearly shown a connection between interest and career choice and has been recognized as important by writers within the field of gerontological counseling (Myers, Loesch & Sweeney, 1991).

Considering that interest seems to be a primary motivator when choosing a career, and based on the evidenced lack of mental health professionals that have elected to work

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with older adults, it seems clear that the majority of counselors lack an interest in working with older adults. Minimal research exists on interest in working with older adults, including only two articles (Foster et al., 2009; Nielsen, 2015) specific to counseling.

### **Contact**

Researchers in mental health have focused on contact, ageism, and knowledge in relation to their impact on work (and desire to work) with older adults. Allport (1954) initially suggested that contact with a minority group has the potential to impact the attitudes and perceptions of the privileged majority member over time. More recently, and within the field of mental health, Cummings and Galambos (2002) found that contact directly impacts interaction patterns and interest with older adults; thus, a relationship may also exist between contact and level of interest. Eshbaugh and colleagues (2010) in a study of undergraduates ( $N = 237$ ), found that previous contact, especially in the form of work experience with older adults, increased the likelihood of interest and future professional experience with this population. Research has predominately focused on two aspects of contact, contact frequency (i.e., the quantity of contact between the individual and the older adult), and contact quality (i.e., how positively or negatively the individual viewed his or her contact experiences).

**Contact frequency.** Contact frequency, defined as the frequency, and duration of contact with older adults, refers specifically to the quantity of the interactions and experiences that an individual has with the population of focus. Research in social work has found that students who have had more frequent contact with older adults were found to be more likely to have further involvement and interest in working with older adults

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(Cummings & Galambos, 2002; Gorelik, Damron-Rodriguez, Funderburk, & Solomon, 2000; Kane, 2004a). Other studies have also found that contact quality is a better explanation of interest in working with older adults than frequency (e.g. Robert & Mosher-Ashley, 2000).

**Contact quality.** Contact quality, is defined as the perceived quality, status, social quality, and perception of intimacy or closeness of an interaction with another individual or group. Regardless of frequency, the important aspect is whether the individual had a positive or negative experience of the contact experience (McKeown & Dixon, 2006). Robert and Mosher-Ashley (2000) found that positive personal experiences with older adults led to a higher level of desire and interest. Cummings and Galambos (2002) noted that although the quantity of contact seems to correlate with interest, interest level is also correlated positively with perceived quality of contact experiences.

### **Ageism**

Ageism is defined as discriminating and stereotyping specifically against the old (Butler, 1969). More recently, Palmore (1999) described ageism as the discrimination or prejudice for or against any age group based on their age. Counselor trainees' levels of ageism are likely to impact their desire to work older adults for a variety of reasons. Butler (1975) and Kastenbaum (1964) suggested that ageism may be a primary reason why mental health professionals do not want to work with older adults. For example, a counselor trainee may believe that older adults may not be able to change thus impacting their potential to benefit from therapy. Ageism as a theory would suggest that counselors may be wary of working with older adults because of attitudes or beliefs held due to the client's age or a discomfort in talking with older adults about certain

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issues (Kastenbaum, 1964; Packer & Chasteen, 2006). Those counselors that hold negative beliefs about older adults tend to be less likely to report interest in working with older adults after graduation (Anderson & Wiscott, 2003; Lawrence, Jarman-Rohde, Dunkle, Campbell, Bakalar, & Li, 2003). Robert and Mosher-Ashley (2000) reported that students who find work with older adults to be depressing were less likely to want to work with older adults. Kane (2004b) suggested that negative attitudes toward older adults may cause students to avoid work with older adults and may also reduce the quality of care that counselors provide older adults.

### **Knowledge**

Knowledge, is defined as the counselor's awareness of facts about aging and the aging process. Counselors who are not aware of the facts of aging and what counseling older adults as a career entails may be less likely to have an interest in entering the field. Nyamwange (2016), in a study of Kenyan university students ( $N = 296$ ), found that knowledge of what a career entailed strongly correlated with interest in that field. Kettlewell and Henry (2009) described knowledge as the background or lens through which students make sense of new information. Thus, accurate knowledge may increase the likelihood of developing interest and experience. Knowledge of aging is distinct from ageism, in that knowledge is focused on verifiable facts, whereas ageism is discriminatory and prejudiced based on beliefs and attitudes about others based on their age. Ageism is not necessarily based on fact, whereas knowledge is.

Cummings et al. (2005), in a study of masters social work graduate students ( $N = 382$ ) at three large southern U.S. universities investigated students' contact with older adults, their knowledge of aging and skills working with older adults, their

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perceptions of aging-related work, their interest in aging-related work, and their attitudes toward aging. For each of these categories, Cummings and colleagues (2005) used two instruments, the Facts on Aging Quiz (Palmore, 1988), and the Attitudes Toward Aging Inventory (Shephard, 1981). The other variables examined such as skills, contact, and career were measured using self-report single item questions that Cummings and colleagues developed.

Cummings et al. (2005), found that knowledge and other academic factors such as positive contact experiences while in the graduate program were more significant than ageistic beliefs in developing interest in working with older adults. Gordon (2007) found similar results suggesting that level of knowledge correlates with interest in working with older adults. The Cummings et al. findings seem to provide support for the idea that counselor education, through improved focus on training and experiences, can increase interest in working with older adults. There are concerns with this study, particularly around the fact that most of the items were developed by Cummings and colleagues and are not available for subsequent examination, and items measured by single item have unknown reliability or validity. The results of this study must be carefully considered in light of a limited understanding of these variables of measurement. Additionally, this research was conducted at three universities by professors at those universities, and the results are not generalizable to the population due to potential differences (e.g., cultural, geographical, educational) between students who attend those universities and all social workers. Considering the translation of this study to counseling, there may also be a qualitative difference between the roles and perspectives of counselors and social workers which may further challenge the usefulness



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of the study. Despite these limitations, there is a shortage of research on knowledge and interest specific to counseling and relatively little in this mental health fields in general. The knowledge that the educational setting may have an impact on interest may outweigh some concerns with the research design.

Findings of some research have connected knowledge with ageism, thereby suggesting that those who are unaware of the facts about aging are more likely to hold negative attitudes and beliefs about aging (e.g. Cummings et al., 2000). On the other hand, those who have a more accurate knowledge of what it means to age (e.g. that depression, though more frequent among older adults, is not normal) typically have a lower level of ageism (e.g. Alford, Miles, Palmer, & Espino, 2001). Boswell (2012) found that knowledge is correlated with ageism and may not directly interact with interest; instead it may act as a mediator between ageism and interest. However, research findings have not been consistent, as others (e.g. Carmel, Cwikel, & Galinsky, 1992) have found no correlation between knowledge and attitudes or interest toward the elderly.

### **Counseling Self-Efficacy**

Self-efficacy is defined by Bandura (1982, 1986) as the degree that an individual perceives himself or herself to be capable of performing an activity. *Counseling self-efficacy* (CSE), a counselors belief in his or her ability to work effectively with a client, has been studied extensively (Larson & Daniels, 1998; Lent et al., 1994). Similarly, *counseling older adult self-efficacy* (COASE) is a counselor's belief in his or her ability to effectively counsel older adults. CSE has been studied in depth, Larson and Daniels (1998) conducted a literature review of 32 studies that explored CSE among masters level counseling students. Lent, Brown and

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Hackett, suggested that self-efficacy may be related to interest, and specific to mental health, Cummings et al., (2005) and Kane, (2004b) similarly theorized that COASE may impact interest in working with older adults.

### **Need for a Hypothesized Model of Factors Related to Interest in Working with Older Adults**

The following section discusses a review of existing research that examining how interest is related to, (a) COASE, (b) Contact, (c) Ageism, and (d) Knowledge as well as how these four variables relate to each other. A scarcity of research exists specific to these variables and counselor interest in work with older adults; the studies that have been conducted have largely been conducted in social work, psychology, nursing and psychiatry; with undergraduate students; and with participants outside of the helping professions. Their applicability to the understanding of counselor interest in work with older adults must be considered with these limitations in mind. The 17 studies are listed individually in (Appendix A) to include a citation, scale information, and findings.

### **Interest and COASE**

Lent and colleagues (1994), used the basis of social learning theory to develop social cognitive career theory (SCCT) in order to examine the correlation of constructs such as self-efficacy, interests, and abilities within career choice. From 13 relevant studies, they found that career-relevant self-efficacy is at least moderately ( $r = .53$   $p < .001$ ) correlated with interest after converting to Fisher's  $z$  and then weighting based on degrees of freedom and converting back to Pearson's  $r$ . Rottinghaus, Larson, and Borgen (2003) followed up this study with a further examination of self-efficacy and interest based on a meta-analysis of 53 studies and found a similar result. Specifically, there was

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a moderate relationship ( $r = .59$ ) between self-efficacy and interest. Considering Holland's Realistic, Investigative, Artistic, Social, Enterprising, and Conventional ([RIASEC] Holland, 1997) domains, self-efficacy and interest shared between 24% and 46% of the variance.

Rottinghaus and colleagues (2003) found that the broad range of instrumentation used in the instruments was a significant moderator. Rottinghaus et al. also found that a connection between self-efficacy and interest may be stronger when a domain (e.g. counseling) is narrowly defined (e.g. counseling older adults). Rottinghaus and colleagues suggested that some domains may have high levels of interest with low levels of self-efficacy, and other areas may have low interest with high self-efficacy without impacting overall correlation; thus, it may also be important to examine the directionality between interest and self-efficacy.

In a sample of social work graduate students ( $N = 382$ ) Cummings et al. (2005) found that self-rated perceptions about skills and ability to work with older adults was related to interest. The large effect size ( $r = .596$ ) for Cummings et al.'s study with social workers was similar to the Lent et al. (1994) and Rottinghaus et al. (2003) studies that involved a wider variety of participants. Cummings & Galambos (2002) found nearly identical results with another sample of social work students ( $N = 148$ ,  $r = .596$ ). Similarly, Olson (2011) in a sample of social work students ( $N = 252$ ) found that self-efficacy greatly predicted interest in working with elders ( $\beta = .51$ ).

While it may seem logical to suggest that if an individual has an increased amount of interest in a topic, he or she would likely feel more competent about completing a task or would work harder (thus resulting in more competence), this does not seem to be the

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case; individuals are good at many things (e.g. driving cars, walking, holding a glass of water) that they do not find interesting (Silvia, 2003). On the other hand, when tasks are at an appropriate level of challenge, individuals can find almost any otherwise tedious task interesting. It seems that interest is not required to create self-efficacy, but self-efficacy is likely to create interest when the challenge is at a reasonable level. In the event that individuals have fully mastered an activity, they tend to lose interest; however, Silvia has suggested that mastery leading to a reduction of interest in the field of counseling does not seem to be a concern. Furthermore, Silvia suggested that within the field of counseling, it is safe to claim that “self-efficacy increases interest” (p. 246). Additionally, the basis for SCCT (Lent et al., 1994) is that self-efficacy and outcome interests combined predict interest and then career choice. Based on these arguments, it is reasonable to investigate COASE as it relates to interest.

### **Interest and Contact**

Contact seems to be a strong predictor of interest in working with older adults. In the 17 studies examined as a part of the present literature review, 15 found contact to significantly predict or correlate with interest. Three of the fifteen samples that found significance came from outside of the mental health field (Bergman et al., 2014; Eshbaugh et al., 2010; & Gonçalves et al. 2010). Only one sample had a fully non-significant finding (Hughes & Heycox, 2006), however, that sample was quite small ( $N = 55$ ), and may have not found significance due to sample size.

Few measurements of contact exist, and of the 17 studies presently examined, only one study (Sutton, 2013) used a published measure, and it had to be adapted for use with older adults. The vast majority of the studies examined contact

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within demographic questions with little consistency between studies, except for a focus on either quality of contact or frequency of contact. In the studies examined, the relationships between contact and interest were typically significant and had a medium to large effect size ( $r = .20$  to  $.60$ ). Although relationship levels varied between contact frequency and quality, there were no significant differences in their interaction with interest. Some studies found quality to have larger effect sizes (e.g. Cummings & Galambos, 2002; Ferguson, 2012 & Gorelik et al., 2000), whereas others found frequency to be the stronger predictor (e.g. Anderson & Wiscott, 2003; Chonody & Wang, 2014). Sutton (2013) used SEM to predict factors of interest in psychology students and found that contact (quality and frequency combined) predicted interest in working with older adults.

### **Interest and Attitudes**

Sutton's model similarly predicted that attitudes influence interest with a beta of  $-.49$ . On the other hand, Gordon (2007) utilized path analysis in his dissertation (Appendix C) and provided the theoretical basis for suggesting that interest level predicts ( $r = .29$ ) attitudes and ageism in a sample of doctoral level psychology students ( $N = 409$ ). Within the present literature review, the 13 studies that examined interest and attitudes/ageism were examined for levels of significance, and 11 of these studies found significance and a medium to large effect size ( $r = .21$  to  $.56$ ). On the other hand, Sutton (2013) found that attitudes predict interest ( $r = .49$ ). As noted previously, this directionality has been consistent with theory, since Kastenbaum (1964) and Butler (1975) suggested that therapists may be less likely to work well with older adults due to their attitudes and beliefs.

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### **Interest and Knowledge**

Out of the ten studies that examined the relationship between knowledge and interest in the present literature review, five of the ten found a significant relationship between the two variables with small to medium effect sizes reported ( $r = .31$  to  $\eta .41$ ). Of the significant relationships found, most reported a positive relationship, suggesting that increased knowledge led to increased interest (e.g. Anderson & Wiscott, 2003; Gordon, 2007; Hughes & Heycox, 2006). However, (Gonçalves et al., 2010) found a negative correlation in a sample of undergraduate students ( $N = 460$ ); thus, directionality between interest and knowledge may go in both directions. Through coursework, students gain more information, and as such, they are also likely to increase their interest and competence level. Additionally, being interested in a topic is likely to increase an individual's desire to learn about this topic. Boswell (2012) found the former to be true in a study of 43 undergraduates, and a path analysis by Gordon (2007) found a better fit with interest predicting knowledge.

### **Self-efficacy and Attitudes/Ageism**

Three of the studies examined in the present review of literature explored the relationship between attitudes/ageism and self-efficacy. Each study (Kane, 1999; McBride & Hays, 2012; Olson, 2011) found significant negative relationships ( $r = -.14$ ;  $-.41$ ;  $\beta = .23$  respectively). From a theoretical perspective, it seems that self-efficacy and attitudes are correlated, but the directional relationship between these two variables is unclear at this time.

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### **Self-efficacy and Knowledge**

In a sample of 252 graduate social work students Olson (2011) found a significant correlation between self-efficacy and knowledge. From a theoretical perspective, this is unsurprising, inasmuch as SCCT holds that past knowledge and learning experiences are factors that influence self-efficacy (Lent et al., 1994). Conversely, Bandura (1986) suggested that increased self-efficacy will increase individuals' motivation and desire to increase their knowledge in order to increase their performance level. Thus there seems to be a relationship between self-efficacy and knowledge, but it is unclear which one causes the other, or if each predicts the other.

### **Contact and Attitudes**

Allport (1954) initially discussed the contact hypothesis in reference to racism; the hypothesis was that increased contact with marginalized populations could lead to a decrease in discrimination. Pettigrew and Tropp (2006) conducted a large meta-analysis of 515 studies of the contact hypothesis among a variety of population groups including older adults and agism and found supportive evidence for the contact hypothesis. Nine of the 12 studies examined presently that explored a relationship between contact and attitudes or behaviors toward the elderly found significance; most of them were at a medium effect size. However, it should be noted that of these nine studies that found significance, three studies (Bousfield & Hutchison, 2010; Drury, Hutchison, & Abrams, 2016; Schwartz & Simmons, 2001) split quality and frequency of contact apart, and each of these studies found that contact quality was a significant predictor of attitudes toward the elderly, whereas frequency was not. Studies that combined quality and frequency as a factor generally found significance (e.g., Chonody, Webb, Ranzijn, & Bryan, 2014;

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Sutton, 2013). Further research may need to be conducted to determine the potential relationship between contact quality and attitudes toward the elderly.

### **Knowledge of Aging and Attitudes/Ageism**

Each of the six studies in this literature review that examined the relationship between knowledge of aging and attitudes/ageism found significance. Gordon (2007) hypothesized and then found evidence to suggest that knowledge predicts attitudes. Similarly, Olson (2011), in a study of 252 MSW students, found that knowledge obtained from a gerontology course predicted a decrease in ageism and attitudes. Even though each study found significance, the effect sizes of each study were small to medium ( $r = .13$  to  $.44$ ), suggesting relatively little impact of knowledge on attitudes.

### **Summary**

There is a lack of mental health professionals and counselors working with older adults (e.g. Jeste, 1999). Counseling has focused on training (Myers, 1995) and has lacked a focus on interest and the specific needs of individual counselor trainees. There has been a dearth of research within counseling specific to interest in working with older adults. Researchers have found that there seems to be some, though not a lot, of interest in working with older adults (Foster et al, 2009; Nielsen 2014), and many of the students that report having interest rarely work with older adults even if they have the opportunity (e.g., Myers, 1984). According to SCCT (Lent et al., 1994) interest is correlated with career choice. Researchers have found that contact with older adults (e.g. Cummings & Galambos; 2002; Eshbaugh et al., 2010), ageism and attitudes about older adults (e.g. Lawrence et al., 2003, Anderson & Wiscott, 2003), and knowledge about older adults (Cummings, et al., 2005) may be correlated with interest. Counseling self-efficacy and



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competency have been correlated with interest level (e.g. Larson & Daniels, 1998), although not specifically within the narrow domain of older adults. Examining these areas will provide clarity as to areas that counselor education programs may focus on to inform future efforts to increase counselor interest in working with older adults.

### CHAPTER THREE

Research into counselor interest in working with older adults has focused on training programs, techniques, and skills (e.g., Myers, 1995) while ignoring the personal and interactional aspects of counseling older adults that may hinder counselors desire to work with this population (e.g., Chasteen & Parker, 2006; Kastenbaum, 1974). The purpose of this study was to examine factors that may contribute to master's level counseling students' interest in working with older adults, specifically with regard to the factors of counseling older adult self-efficacy (COASE), knowledge, contact, and ageism. This chapter will identify the research design used in this study, the target population and sample of participants, the procedures and measurement instruments used, and the methodology for data analysis. This chapter will also discuss limitations and ethical considerations.

#### Method

This research study was a cross-sectional, correlational study using survey methodology to examine factors that contribute to master's level counseling students' self- interest in working with older adults. This study utilized *structural equation modeling* (SEM) to examine the model described below.

#### Participants

The researcher chose target population of master's level counseling students because the factors being measured, such as counseling self-efficacy, have been shown to be impacted by educational experiences (Larson & Daniels, 1998). Additionally, it is likely

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that during counselor training is the most efficient time to reach future counselors before they spread out into their career occupations and become more difficult to reach as a group. An a priori power analysis was run with fit index values for root mean square error of approximation (RMSEA) of .05 and .08 for null and alternative values (MacCallum, Browne, & Sugawara, 1996). An alpha level of .05 with 78 degrees of freedom, and .95 desired power resulted in a minimum required sample size of 197 students to meet power requirements for the SEM. Additionally, Barrett (2007) recommended that journals unilaterally reject any SEM manuscript with fewer than 200 participants unless there is a restricted population size due to inadequacies of SEM with a small sample size. As such, the ideal sample size was over 200 participants.

Participants for this survey were obtained using a convenience sample selected from universities around the country. Each university sampled had a CACREP accredited master's degree program in counseling. Programs selected for participation were limited based on willingness of participating faculty and their departments to meet needed requirements to participate in this survey. Participating counseling master's degree seeking students were enrolled in counseling programs. Faculty at 13 universities agreed to participate in this study. Each faculty member was provided with envelopes containing the survey and an informed consent with a discussion of eligibility requirements, the participant rights, the study purpose, and contact information for the researcher. No incentive was provided to study participants.

Faculty were provided with a total of 455 survey packets; 325 were returned to the researcher, and of these, 17 packets were blank, and five did not complete multiple instruments, resulting in a total sample of 303 and a response rate of approximately 67%.

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It should be noted that 67% is a conservative estimate as faculty likely requested more packets than the number of students to whom they distributed packets.

### **Data Sources**

This research study utilized measures for each construct in the hypothesized model, including: (a) the *Student Interest in Gerocounseling Scale* (SIGS; Foster, Kreider, & Waugh, 2009), (b) the *Gerontological Counseling Competencies Scale* (GCCS; O’Conner-Thomas, 2012), (c) the *Ambivalent Ageism Scale* (AAS; Cary, Chasteen, & Remedios, 2016), and (d) the *Facts on Aging Quiz – Multiple Choice* (FAQ; Harris, Changas, & Palmore, 1996).

### **SIGS**

The SIGS is a self-report interest measure developed by Foster et al., (2009) to examine graduate counseling students’ interest working in a variety of gerocounseling environments and willingness to pursue further coursework to increase knowledge, skills, and preparation to work with older adults. The SIGS full scale consists of 29 Likert-scale items and five subscales. Foster et al. (2012) reported that the first two sub-scales (i.e. interest area, environment) factor to make one subscale they referred to simply as interest. This combined 9-item interest subscale is what was used in this research study to measure interest in working with older adults. Each item is measured on a five-point Likert scale. Participants were asked to rate their interest in topic areas such as “Grief Work” or their interest in certain environments such as “Hospice Care” ranging from *Very Interested to Very Disinterested*. In the present study, scores are calculated by summing the scores and then dividing by the number of items (9) to create a mean score. Neither Foster et al. (2009) nor Foster et al. (2012) provided evidence for reliability of

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this study; however, in a recent study of 956 professional counselors, Wagner (2017) reported a Cronbach's alpha of .89.

### **GCCS**

The GCCS (O'Connor-Thomas, 2012) is a self-report measure created to examine counselors' competencies to work with older adults. The GCCS is a 21-item instrument consisting of three factors including *Knowledge and Skills* (13 items), *Attitudes* (5 items), and *Bio-Cognitive Knowledge* (3 items). The Knowledge and Skills subscale consists of statements that recognize the participants' perceived knowledge of working with older adults; a sample statement is "I know about evidenced-based interventions with older adults." The Attitudes subscale measures participants' recognition of attitudes and ageism; a sample attitudes statement is "I understand how sociocultural factors can influence the mental health of older adults." The Bio-Cognitive Knowledge subscale measures self-perceived knowledge of biological aging processes and is measured by items such as, "I know about the normal cognitive changes in older adults (e.g., short-term memory deficits, slower processing speed)." Response choices are on a five-point Likert scale ranging from *Describes me well* to *Does not describe me at all*. In the present study we full scale scores as well as individual subscale scores were calculated. The individual subscale scores make up the observed variable scores for the latent variable "COASE" in the present hypothesized model (Figure 1). Each score is calculated by adding up each value and dividing by the number of items in the scale in order to create a scale mean. O'Connor-Thomas (2012) offered evidence for discriminate and construct validity based on similarities in variance accounted for between this scale and the Multicultural Counseling Inventory (MCI; Sadowsky, Taffe, Gutkin, & Wise, 1994).

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O'Connor-Thomas (2012) reported evidence for reliability with Cronbach's alpha scores in the excellent range on the full scale ( $\alpha = .91$ ) and evidence for good internal consistency on the subscales ( $\alpha = .84$  to  $.89$ ).

### **AAS**

The AAS scale was created by Cary et al., (2016). The AAS is a 13-item self-report instrument that measures participants' self-reported attitudes toward older adults as described in statements. The AAS consists of three subscales including (a) *hostile ageism*, a four-item subscale that measures negative responses due to a person's age; (b) *cognitive weakness*, a six-item subscale that measures benevolent ageism related to perceived cognitive weakness due to age; and (c) *unwanted help*, three items that account for benevolently providing unwanted help. As with the GCCS, for this study, the subscales from this instrument act as manifest variables that make up the latent variable "Attitudes". One sample item related to cognitive weakness includes, "It is good to speak slowly to old people, because it may take them a while to understand things that are said to them." A sample statement for hostile ageism is, "Old people are a drain on the health care system and the economy." Finally, a sample item for unwanted help is, "Even if they want to, old people shouldn't be allowed to work because they have already paid their debt to society." Response choices are on a seven-point Likert scale ranging from *Strongly Disagree* to *Strongly Agree*. The instrument is scored by summing the scores on each scale and then dividing by the number of items in each scale creating a mean. Cary et al. (2016), provided evidence for test-retest reliability with correlations from time one to time two ranging from  $.76$  to  $.80$ . Evidence for convergent and discriminate validity were offered based on correlations with the FSA, whereby subscales that were expected

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to correlate closely and those that were expected to react differently both did as expected. Evidence for reliability was measured through Cronbach's alpha for internal consistency; the full scale achieved an excellent Cronbach's  $\alpha$  of .91 with subscales that ranged from .84 to .89 (Cary et al., 2016).

### **FAQ**

The original FAQ (Palmore, 1988) is a true/false knowledge quiz created to measure individuals' knowledge of aging. The multiple-choice version of the FAQ used in this study is a 25-item multiple-choice quiz developed by Harris et al., (1996) that utilizes the same questions as the original Palmore version but added multiple choice options to reduce errors on results due to guessing. The FAQ covers facts and myths about aging in a wide range of domains. Participants respond to statements such as "The majority of old people feel miserable..." Response choices are comprised of four choices with one correct answer. The multiple-choice version is used to limit the likelihood of correct answers if an individual does not know the answer. The FAQ is the pre-eminent assessment used in measuring knowledge of aging; however Palmore (1988) indicated that the FAQ is an edumetric test rather than a psychometric test, and as such, although some questions are poor psychometrically, removing them from the test reduces comprehensiveness of the assessment. Thus, rather than removing questions, Palmore (1988) recommended use of the entire scale despite poor to occasionally adequate reliability measured by inter-item internal consistency with an alpha coefficient varying from .40 to .83 depending on the sample. It should be noted that respondents that have more education tend to do better on the FAQ, and their tests tend to have a higher internal consistency (Palmore, 1988)

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### **Contact Survey**

The questions used to assess a self-report of contact include 12 questions based on Islam and Hewstone's (1993) contact survey adapted to work with older adults. The contact survey includes three subscales including Contact frequency (5-items), Contact Quality (5-items), and Intergroup Contact (2-items). Each item is scored on a 7-point Likert scale with varying responses (e.g. *Not at all* to *A Great Deal*, *Definitely Not* to *Definitely Yes*, and *Not at all Typical* to *Very Typical*). Example items include, "How much contact have you had with older adults while in school or work experiences?" and "Were your interactions with older adults experienced as pleasant?"

### **Demographics Form**

A demographics form was utilized to capture other potentially relevant information. Examples of information requested in the demographics form included participants' age, race/ethnicity, gender and professional aspirations. Demographics information was used to examine exploratory research questions in the present study.

### **Data Analysis**

Data was collected using surveys distributed by the researcher or faculty members at participating universities. Each potential participant was provided an envelope with an enclosed survey packet. The top page of each packet included a document that disclosed the requirements of the study as well as the ability of each participant to freely choose not to take the survey or to stop at any time. Instructions were provided to participating faculty members regarding procedures for distribution of the survey. Additionally, participating faculty members were instructed to inform potential participants that if they did not wish to complete the survey, they were to place the blank survey back in the



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envelope rather than providing inaccurate responses. Faculty were encouraged to remain cognizant of the importance of anonymity of the data collection process, and as such, if any incentives were to be provided to participants, they were to be provided regardless of participation. Upon distribution of surveys participating faculty members were to return envelopes to the researcher who then coded all replies into Excel and then moved data into SPSS (Version 25) and the *Analysis of Moment Structure* (AMOS; Arbuckle, 2017) for data cleaning and analysis.

Data analysis began by analyzing missing data (Gaskin, 2016). Assumptions of normality of data were tested including normality, homogeneity of variance, and multicollinearity to verify this sample met the assumptions necessary for regression and SEM (Schumacker & Lomax, 2010). Data were analyzed based on research hypotheses. As noted previously, this study utilized SEM to examine primary research hypotheses. SEM was utilized because it (a) uses a confirmatory theory-driven approach, (b) assesses for measurement error, (c) utilizes both observed and latent variables, (d) allows for examining a hypothesized model through concurrent analysis of multiple structural relationships, (e) allows for estimation of indirect effects, and (f) allows for a better understanding of complex phenomena (Byrne, 2010). These features of SEM allow for a more comprehensive examination of factors related to interest in working with older adults. As such, SEM was chosen as the best method to address the hypotheses in the current study.

### **SEM Analysis Method**

The proposed hypothesized model in this study consists of manifest variables related to COASE and attitudes that are directly observable. It also consists of latent (or

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hypothesized) variables relating to Interest, Knowledge, Contact Frequency, and Contact Quality that are not directly observable but nonetheless quantifiable. For example, a person's level of happiness is unobservable but may be quantified by the measured variables of number of smiles and laughter. Latent variables in this study are identified as ovals in Figure 1. Manifest variables in this study are noted by squares in present hypothesized model (Figure 1) and include Directional arrows and curved lines in the diagram represent hypothesized relationships between variables. SEM consists of six steps including, (a) model specification, (b) model identification, (c) selection of measures, (d) estimation of model fit, (e) model re-specification or modification, and (f) results reporting (Kline, 2015).

**Model specification.** Model specification needs to be based on a thorough, intentional review of literature related to the topic areas specified (Kline, 2015). Within this study, attempts were made to be transparent and careful regarding relationships between constructs pertaining to interest in working with older adults. See Chapter 2 for a discussion on the literature review used to guide model specification for this study. Also, Appendix A provides the list of studies relevant for this model.

**Model identification.** Model identification examines whether or not there is a unique set of parameters for the given data (Byrne, 2010). For a model to be identified the parameters must be able to be tested. A model that cannot be identified is one in which the parameters may be arbitrary, and varying answers may all satisfy the parameter resulting in an answer that cannot be evaluated empirically. This is similar to being asked to determine a unique value for A and B if only given the information  $A + B = 23$  (Byrne, 2010). Instead, the goal in SEM is to find a model that is overidentified; that is, a model

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in which the number of estimable parameters is less than the number of data points (Byrne, 2010).

**Measure Selection.** Here the researcher operationalizes the construct to be examined and then selects instruments specific to that examination. The researcher is careful to select measures that are likely to provide responses that address the construct of interest and attempts to use measures that have been shown to have evidence for reliability and validity (Kline, 2015). This is also the point when collection, preparation, and screening of data occurs (Kline, 2015). For the present study, the FAQ was a concern from the outset, since previous research has described relatively poor evidence for reliability generally evidenced by low Cronbach's alpha.

**Estimation of model fit.** Model fit refers to how well the given model describes the sample data. It is recommended that multiple models of fit be examined for a given model (Kline, 2015). Table 1 below briefly describes the fit indices used for this study. After examining overall fit, the next step is to interpret parameter estimates followed by examination of other equivalent or near equivalent models (Kline, 2015). If the fit is poor the researcher will skip to the next step (respecification).

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Table 1

### *Description of Fit Indices*

Fit Indices	Description	Cutoff Criteria
Chi-Square	Comparison between predicted and observed covariance matrix. Sensitive to sample size where a larger sample size is likely to increase likelihood of a significant $\chi^2$ .	The model may be acceptable if $\chi^2$ is <i>not</i> significant. The ratio of $\chi^2$ to <i>df</i> should be $< \underline{2}$
Comparative Fit Index (CFI; Bentler, 1990)	The CFI is an incremental fit index and examines improvement of researchers model over baseline model. Because of critiques of baseline model recommended using CFI in combination with SRMR (Hu & Bentler, 1999).	$>.90$ is acceptable $\geq .95$ is a good fit.
Goodness of Fit Index (GFI; Joreskog & Sorbom, 1982)	The GFI is an absolute fit index that estimates the researchers model compared to no model at all. Mean values tend to increase with number of cases, though less so compared to the RMSEA.	$>.90$ is acceptable $\geq .95$ is a good fit.
Root Mean Squared Error of Approximation (RMSEA)	Scaled as a “badness-of-fit” with the value “0” is the best fit. This model does <i>not</i> approximate a central chi-square distribution. The RMSEA compares the fit of an independent model to the estimated model. Influenced by <i>df</i> , (Kline, 2015)	$<.10$ is a poor fit; .05 - .08 is acceptable $\geq .05$ is a good fit
Standardized Root Mean Square Residual (SRMR)	Considers covariance residuals. As with RMSEA, zero is best fit.	$\leq .08$ may be acceptable $\leq .06$ recommended

Chart adapted from Bloom, 2016; Hu & Bentler, 1999; Kline, 2015;

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**Re-specification.** If the researcher finds a poor fit with the hypothesized model, the next step is to modify the model based on a rational consideration of the literature as done in the initial model specification step. As with step two (model selection), a re-specified model needs to be identified (Kline, 2015). Upon re-specifying the model, the researcher will move back through step four (estimation of model fit) and then hopefully forward to step six, reporting the results. Because of the reliability concerns of the FAQ in this study, one anticipated re-specification was to create an alternate model without the FAQ due to poor reliability, specifically because according to Kline (2015) reliability is an assumption necessary for SEM.

**Reporting the results.** Upon completion of the previous steps, the final step is to describe the analysis in a thorough thoughtful manner specifically following guidelines set forth for reporting SEM findings in extant literature (Kline, 2015).

### **Primary Research Question**

This study examined the question, does the proposed structural model shown in *Figure 1* below fit the present sample of master's level counseling students? Specifically, does: (a) greater COASE predict a higher level of interest, and is COASE correlated with knowledge of aging and attitudes?; (b) is knowledge bi-directionally related with a greater level of interest, and negatively correlated with attitudes?; (c) does more frequent contact predict a higher level of interest and a higher level of self-efficacy?; (d) does perceived quality of contact predict increased interest and a lower score on attitudes?; and (e) does a higher score on the attitudes measure predict a lower level of interest?

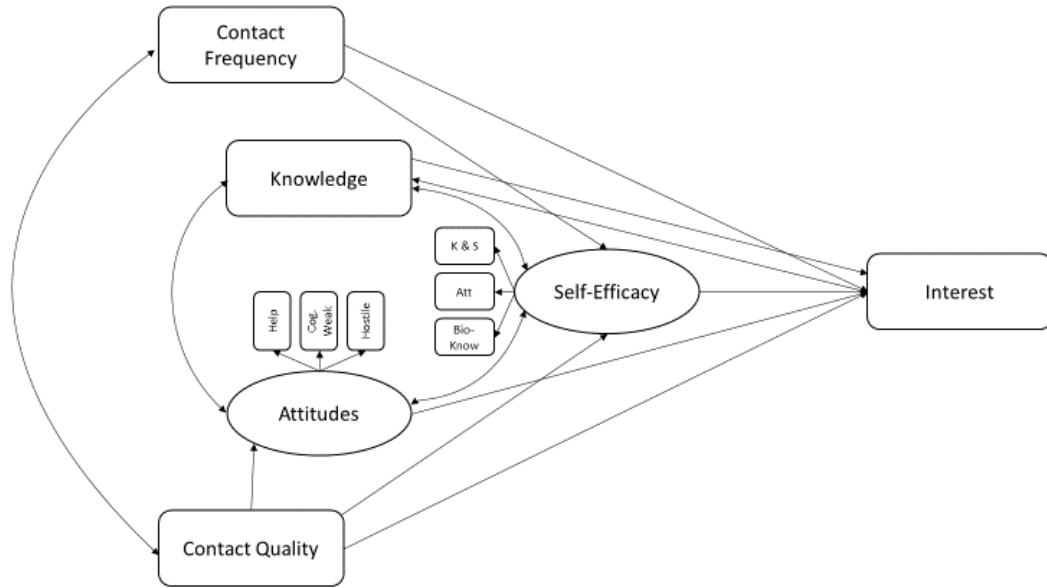


Figure 1. Present hypothesized model to be tested with SEM.

This model includes two latent constructs, *Attitudes* and *Self-efficacy*, identified in the diagram as ovals. To measure the latent construct *Attitudes*, subscales of unhelpfulness, cognitive weakness, and hostile ageism from the AAS were considered as indicators of attitudes toward older adults. Knowledge and Skills, Attitudes, and Bio-Cognitive Knowledge subscales from the GCCS were considered as indicators of *Self-efficacy*. *Knowledge*, *Contact Quality*, *Contact Frequency*, and *Interest* were all measured directly from scale scores, and as such, are considered to be observed variables and are identified as rectangles in the model.

**Exploratory Research Questions**

In addition to the primary research question, the study also sought to see if relationships existed between the counselor trainees’ demographic variables such as, age, gender, race or ethnicity, year in graduate school, and program type (e.g., school

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counseling, clinical mental health counseling and marriage and family therapy) and each of the primary variables in the proposed model. Specifically, this exploratory aspect of the study sought to determine if what (if any) relationships existed between the trainees' various demographic variables and: (a) interest in working with older adults (as measured by the SIGS), (b) COASE (as measured by the GCCS), (c) attitudes toward older adults (as measured by the AAS), (d) knowledge of aging (as measured by the FAQ), (e) qualitative contact, MEASURE? and (f) quantitative contact (e and f as measured by the adapted scale from Islam & Hewstone, 1993).

The following statistical analyses were used to analyze these exploratory research questions: (a) descriptive statistics, (b) Pearson Product-Moment Correlations, (c) Spearman Rank-Order correlations, (d) ANOVA, and (e) Independent-Samples T-Test. Descriptive statistics and scatter plots were used to test the data for assumptions of normality. ANOVA was used to assess for differences in groups of participants.

### **Exogenous and Endogenous Variables**

This dissertation study utilized a number of dependent and independent variables. Within SEM, variables that are not acted on by other variables and that predict other variables are exogenous variables, whereas variables that are acted on or predicted by at least one other variable are referred to as endogenous variables. Endogenous variables that are predicted by other variables may also predict other variables (Kline, 2015). Within this presented hypothesized model there were three manifest exogenous variables, *Contact Quality*, *Contact Frequency*, and *Knowledge*. There were seven endogenous variables, including the three subscale scores for the GCCS and the three subscale scores for the AAS as well as *Interest*. There were two unobserved endogenous variables,

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*COASE* and *Attitudes*, that were predicted by other variables (e.g., Contact Quality) and that were both expected to forecast other variables as well.

### **Ethical Considerations**

The following steps were taken to ensure that ethical considerations and standards are met within this research protocol.

1. This proposal was submitted to the College of William and Mary's Institutional Review Board (IRB) and was approved on August 12<sup>th</sup> 2017.
2. The researcher fully informed provided participants of the purpose of this study within the written consent form.
3. This researcher informed participants that participation was entirely voluntary, and that were able to they may cease participation at any time without consequence.
4. Participants were informed of the confidentiality of their responses during the introduction to the survey as well as on the consent form.

### **Limitations**

One of the first limitations of any correlational research study is the inherent fact that correlation does not constitute causality. Although factors can be predictive of other factors, this research cannot determine that the factors examined were a causal explanation for the findings. Secondly, this was a survey study using self-report measures and one knowledge scale. As such the study is limited based on the interest and fastidiousness of the participants as well as on the reliability and validity of the scales utilized. Moreover, there is a potential lack of representativeness of the sample to the population under study due to use of a convenience sampling method. Finally, nearly



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one-third of the potential participants sampled did not respond. Although this number is within a reasonable confines of survey research (e.g., Dillman et al., 2014), those that did not respond may be different than those that did choose to respond. As such, non-response limits generalizability of any findings from this study.

### **Summary**

This study examined the contribution of masters level counseling students COASE, Attitudes toward older adults, Knowledge of aging, Contact Quality, and Contact Frequency on their interest in working with older adults. To examine the proposed model the researcher utilized SEM using steps outlined by Kline (2015). In addition to presenting the hypothesized model for understanding counselor trainee interest in working with older adults, this chapter provided a discussion of SEM methodology, the exogenous and endogenous variables examined, some of the present study's limitations, and the primary and exploratory research questions. The following chapter will provide a detailed description of the research findings.

## CHAPTER FOUR

### Results

Chapter four is a presentation of the results of the research questions as delineated in Figure 1, as well as of the exploratory questions especially related to relationships between participants' reported demographic variables and their scores on the instruments. The purpose of this study was to examine predictive factors of masters level counseling students level of interest in working with older adults (those 65 years of age and older). Specifically, this study examined the presented hypothesized model that masters level counseling students' COASE (as measured by the Gerontological Counseling Competency Scale [GCCS]; O'Conner-Thomas, 2015) positively predicts Interest in working with older adult (as measured by the Student Interest in Gerocounseling Scale [SIGS]; Foster et al., 2009). Further, this study predicted that COASE would be correlated with Attitudes (as measured by the Ambivalent Ageism Scale [AAS] subscale scores; Cary et al., 2016) and Knowledge of aging (as measured by the Facts on Aging Quiz [FAQ]; Harris et al., 1996). COASE was also expected to act as a partial mediator between Contact Quality and Interest. Secondly, Knowledge was predicted to have a bi-directional relationship with Interest. Knowledge was hypothesized to negatively correlate with Attitudes. Frequency of Contact (as measured by an adapted scale from Islam & Hewstone (1993) was hypothesized to predict increased levels of COASE and Interest. Quality of contact (as measured by an adapted scale from Islam & Hewstone

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(1993) was expected to predict an increased level of interest in working with older adults, a decreased attitudes score, and an increased COASE. Finally, Attitudes was hypothesized to be negatively correlated with level of interest. Attitudes was included as a partial mediator and was predicted to mediate the relationship between quality of contact and interest in working with older adults.

To assess and analyze the primary research questions the researcher used Structural Equation Modeling [SEM] (Byrne, 2010; Keith, 2015; Schumacker & Lomax, 2010). Moreover, to examine the exploratory research questions, descriptive statistics, Independent Samples t-test, Pearson's Product Moment Correlations, and Analysis of Variance (ANOVA) were used. These results are laid out in the following order: (a) initial descriptive statistics of the sample, (b) data screening, (c) scale performance and statistical assumptions for SEM, (d) model specification and identification (e) estimation of model fit, (f) re-specification, and (g) analysis of research hypotheses.

### **Data Collection**

Survey packets were distributed to university faculty at 13 universities who agreed to distribute the survey packets to their students either personally or through an assistant. Faculty were provided with a total of 455 survey packets in individual envelopes for anonymity. Of these packets, 325 were returned to this researcher, and of these 17 packets were blank. Five packets were missing more than 15% of survey responses and were considered unusable resulting in a 64% response rate. However, it should be noted that 64% is a relatively conservative response rate, as faculty likely requested more packets than they needed, and some faculty did not return all packets. The researcher provided faculty with instructions on dissemination and also provided an

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informed consent with all necessary contact information on the top page of the survey to inform students of their freedom to not participate in this study. Despite the researcher's instructions, faculty members reported inconsistencies with their dissemination; at times the survey was distributed during or immediately after class, and other times students were encouraged to bring it home and return with the survey at a later time. This inconsistency may have impacted survey responses, and response rate.

### **Data Screening**

Data were input into excel and then transferred to SPSS (Version 25) for analysis. The researcher began the data cleaning process by performing validity checks of the responses. First, the researcher checked for blank packets and found that 17 of the 325 returned packets were completely blank. These packets were then removed from further data analysis. The researcher then examined data for unengaged responses, specifically, data for respondents that answered predominately the same answers (e.g., 1,1,1,1,1...) or who Christmas-treed answers (e.g., 1,2,3,4 or 1,1,2,2,3,3,4,4) by visually examining the protocols and through examination of the standard deviation of responses (not including demographic responses) (Gaskin, 2016). No issues were found when examining the data in this manner. Next the researcher checked data for entry errors that were likely a result of mis-typing (e.g., typing 23 instead of a 2 and then a 3, or typing 11 instead of a 1) (Gaskin, 2016). Several such issues were found, and the researcher clarified the results by examining the original packet (based on the ID number of the packet) to accurately correct these mistakes. After clarifying mistaken responses, the researcher then checked cases for missing data. There were five cases that failed to respond to at least 15% of the

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items. Due to the large portion of data missing combined with the relatively small number of cases missing data these cases were removed (Gaskin, 2016).

Prior to removal of cases for missing data there had been 325 packets returned to the researcher. Seventeen of these packets were blank, and 5 packets were missing more than 15% of responses and, as such, were also removed. This resulted in a new total of 303 cases with a combined 27 missing responses, or data that were 99.89% complete.

Analysis of Moment Structure (AMOS) requires that there are no missing data in order to run certain SEM processes such as modification of fit indices; consequently these missing values must be addressed. Choosing to remove cases that had a few missing items may have negative consequences such as eliminating a voice or demographic. For example, if multi-racial participants did not respond to certain items then removing the people who did not respond to certain items would diminish the overall results by not including multi-racial participants (Osborne, 2013). It is also important to examine whether the missing data are missing completely at random (e.g., a person was filling out the survey and completely missed a question at the bottom of a page) or if the data seems to have some thematic reason to be missing (the items that are missing may be correlated, or many people miss the same items). Little's Missing Completely at Random Test (Little, 1988) was used to examine missing values for each instrument. Little's test for the AAS ( $\chi^2 = 62.32$   $p = .95$ ), GCCS ( $\chi^2 = 122.54$   $p = .88$ ), FAQ ( $\chi^2 = 280.11$ ,  $p = .26$ ) and Contact scale ( $\chi^2 = 25.05$   $p = .16$ ) were not significant, meaning that data can be treated as missing completely at random and, as such, are appropriate to be imputed. As each variable is scored on an ordinal Likert-scale, the values used for data imputation were the median of all nearby points to maintain whole

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value numbers at each item. The SIGS on the other hand had a significant score on Little's test MCAR ( $\chi^2 = 32.651$   $p < .000$ ). However, of the nine items there were only 11 missing responses, where each item missed one response and one item (item 7) was missing three responses. Based on the sample size and the limited number of missing data, this difference was considered negligible (Gaskin, 2016), and as with the other instruments' items, missing data on ordinal measures (i.e. all measurements in this study) were imputed based on the median of all nearby points on a given item. Continuous data were examined for outliers, and no significant outliers were found. Age had three missing values; the researcher imputed the mean of age for these three participants due to the continuous nature of age. Imputation carries inherent risks including a decrease of variability and a potential of including information that may be inaccurate for the individual. However, the consequences of imputation for only three participants are particularly negligible and the potential costs of not imputing this data, specifically the need for casewise deletion, make imputation worthwhile.

Variables were then screened for normality of data, specifically skewness and kurtosis. For tests of means, skewness is particularly important, but for SEM kurtosis is the primary issue of concern, as kurtosis affects tests of covariance and variance (Byrne, 2010). Using a skewness and kurtosis rule of thumb as recommended by Gaskin (2016) (any value greater than  $\pm 3$  for the skewness or kurtosis statistic is considered skewed or kurtotic), only one item had a significant level of skewness. However, a total of seven items are kurtotic based on this rule of thumb. Five of these items were on the AAS. One item was kurtotic on the FAQ, and one on the GCCS. As these items are kurtotic and not-normal, the multivariate distribution cannot be normal (Byrne, 2010). Mardia scores were

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assessed and these data had a score of 30, where a score of  $>5$  is assumed to be a departure from normality, therefore this data is multivariate non-normal (Byrne, 2010).

Pearson's Product Moment Correlation ( $r$ ) is not robust to non-linear correlations (Schumacker & Lomax, 2010). Because of this the sample data were assessed for linearity visually through use of scatter plots. The scatter plots revealed no evidence of non-linear or curvilinear relationships. Lack of multi-collinearity is an assumption for SEM that variables should not have a high level of correlation with each other (Kline, 2011). Collinearity was assessed through use of the Variance Inflation Factor (VIF). There were no issues found, as all VIF values were below 2.5 which is well below the level of concern,  $VIF > 10.0$  (Kline). Outliers were examined by inspecting frequency distributions of z scores. Z-scores greater than three were considered extreme outliers. All outliers ( $n = 10$ ) were on the AAS subscales. Six cases on the Unwanted Help scale were considered outliers; of these two were nearly five standard deviations from the mean ( $Z = 4.74$ ). Hostile Ageism had three outliers, and Cognitive weakness had one outlier. Kline (2011) recommends adjusting the value of these outliers to the next most extreme score. However, due to the sample responses of the AAS scale being positively skewed, and the AAS Likert scale only having seven possible points, it seems likely these outliers may not be errors, and modifying the scores may reduce generalizability. Statistical measures using the AAS were run both with and without the outliers. No significant differences were observed.

### **Initial Descriptive Statistics**

After initial data screening, but prior to data analysis, the researcher examined the data broadly. For example, the researcher examined demographic data such as age,

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gender, and counseling program. The following section outlines these demographic variables. Toward the end of this section is a table describing these variables in an easier to read format.

### **Participant Demographic Information**

Completed data collection resulted in 325 returned packets. Seventeen of these packets were returned blank; similarly, five were returned with over 15% of the responses blank and were removed from analysis. The final usable sample size was 303. Regarding gender, most participants identified as female ( $n = 250, 82.5\%$ ) followed by males ( $n = 51, 16.8\%$ ) with two participants not responding to this item. Participants reported ranging in age from 19 to 61 years of age ( $M = 28.26, SD = 7.88$ ), and two participants did not report an age. Most participants identified as White ( $n = 191, 63.0\%$ ) followed by Hispanic or Latino ( $n = 56, 18.5\%$ ), Black ( $n = 28, 9.2\%$ ), Multiracial ( $n = 17, 5.6\%$ ), American Indian or Alaska Native ( $n = 4, 1.3\%$ ), and Asian ( $n = 4, 1.3\%$ ) Two participants identified as other (.7%), and one did not respond to this item (.3%). The majority of participants were enrolled in clinical mental health programs ( $n = 203, 67\%$ ) followed by school counseling programs, ( $n = 73, 24.1\%$ ) and marriage and family programs, ( $n = 20, 6.6\%$ ); six identified as being in other counseling related programs (2%), and one participant did not respond (.3%). The majority of participants reported having completed less than 25% of their coursework ( $n = 156, 51.5\%$ ). Additionally 76 participants (25.1%) reported having completed between 26-50% of their program, 46 (15.2%) participants had completed between 51 and 75%, and 16 (5.3%) reported having completed between 75 and 100% of their coursework, while nine participants (3%) did not respond to this item. Table 2 below outlines the demographics of study participants.



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Table 2

<i>Demographic Characteristics</i>		
Variable	n	Percentage
Gender		
Female	250	82.5
Male	51	16.8
Did not respond	2	0.2
Race		
Caucasian/White	191	63.0
Hispanic/Latino	56	18.5
Black	28	9.2
Multiracial	17	5.6
American Indian or Alaska Native	4	1.3
Asian	4	1.3
Other	2	0.7
School Attended		
University of Texas - San Antonio	81	26.7
College of William & Mary	50	16.5
Lynchburg College	29	9.6
University of North Carolina-Pembroke	27	8.9
University of Colorado at Denver	26	8.6
University of Louisiana-Lafayette	24	7.9
Youngstown State University	21	6.9
Northern Kentucky University	14	4.6
University of North Carolina – Charlotte	12	4.0
University of Central Florida	7	2.3
University of North Carolina – Chapel Hill	5	1.7
Virginia Commonwealth University	4	1.3
University of Iowa	3	1.0
Program Type		
Clinical Mental Health	203	67.0
School Counseling	73	24.1
Marriage and Family	20	6.6
Other	6	2.0
Percentage of Program Completed		
0-25%	156	51.5
26-50%	76	25.1
51-75%	46	15.2
76-100%	16	5.3

**Model Specification and Identification**

The use of SEM begins with the creation of a specific model to test. Prior to analysis of data and through a thorough review of literature, the researcher specifies a hypothesized model (Byrne, 2010). This researcher reviewed literature on interest in working with older adults, self-efficacy, knowledge of aging, attitudes toward older adults, and contact with older adults (see Chapter 2). Through this review of literature, this researcher built a model that specified predicted relationships between variables that were most consistent with past findings. This model is presented graphically in Figure 2.

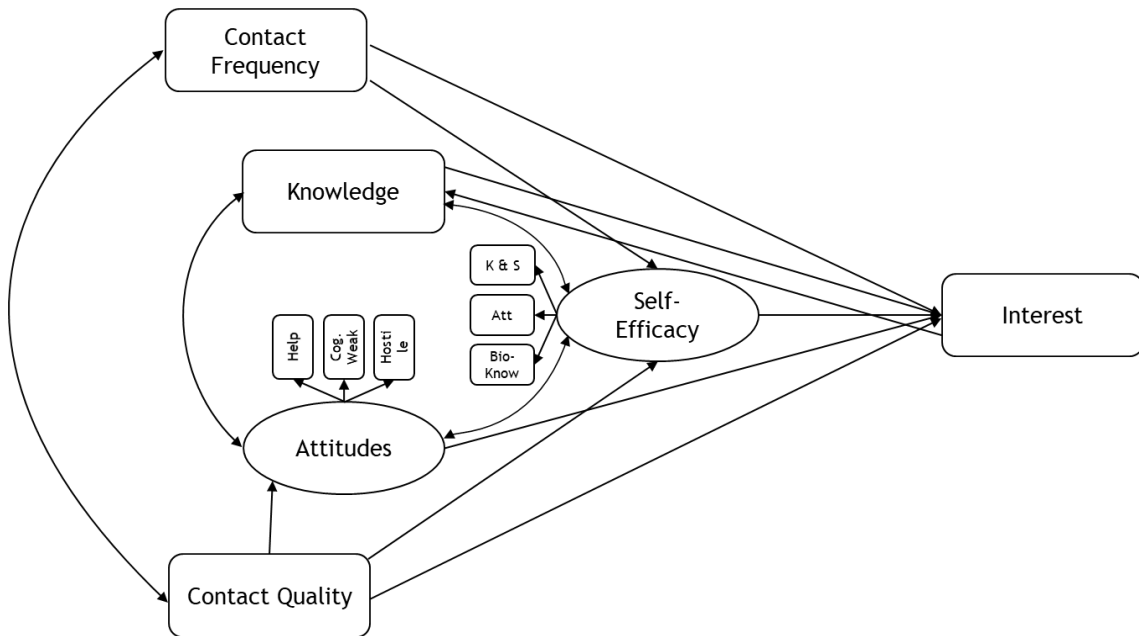


Figure 2. Full Hypothesized Structural Model

Two general rules for identifying SEM's are that degrees of freedom must be equal to or greater than zero, and every latent variable (oval) must be assigned a scale (Kline, 2011). These are met within the present model. Additionally, recursive models are always identified; however, this model, due to a feedback-loop between knowledge and

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interest, was non-recursive (Kline, 2011) As such, this researcher examined the model on the basis of the rank condition which is sufficient to satisfy identification (Kline).

After specifying the full structural model, it is imperative to examine the measurement model, or the instruments that make up the hypothesized model, prior to examining a structural model (Byrne, 2010). Thus, using Confirmatory Factor Analysis (CFA), this researcher examined the measurement model for each scale utilized within the full model including the FAQ, AAS, GCCS, SIGS, and the Contact scale. For any instruments where a CFA had poor results, the researcher examined the scale using Exploratory Factor Analysis to assess for a potentially better fitting model. For the present study, the only instrument that needed to be assessed in this manner was the FAQ. The following section will describe each scale (i.e., Knowledge/FAQ, Attitudes/AAS, COASE/GCCS, Contact, and Interest/SIGS) with regard to participants scores, the evidence for reliability for each scale, measures of internal consistency, reliability, and central tendencies.

### **Knowledge/FAQ**

The researcher used the Facts on Aging Quiz (FAQ; Harris et al., 1996) to assess for master's level counseling students' knowledge of aging. Because items were multiple choice, the researcher re-coded each item as correct or incorrect and then created an overall mean score. The FAQ is a 25-item questionnaire with possible scoring from 0-25; this sample had a range of 13 on the FAQ with a low score of four and a high score of 17. The mean score for this sample was 10.68 with a standard deviation of 2.52. Thus, for this knowledge of aging test, the average participant got less than 50% correct. Table 7 (see pg. 102) contains descriptive statistics for all measures utilized in this study.

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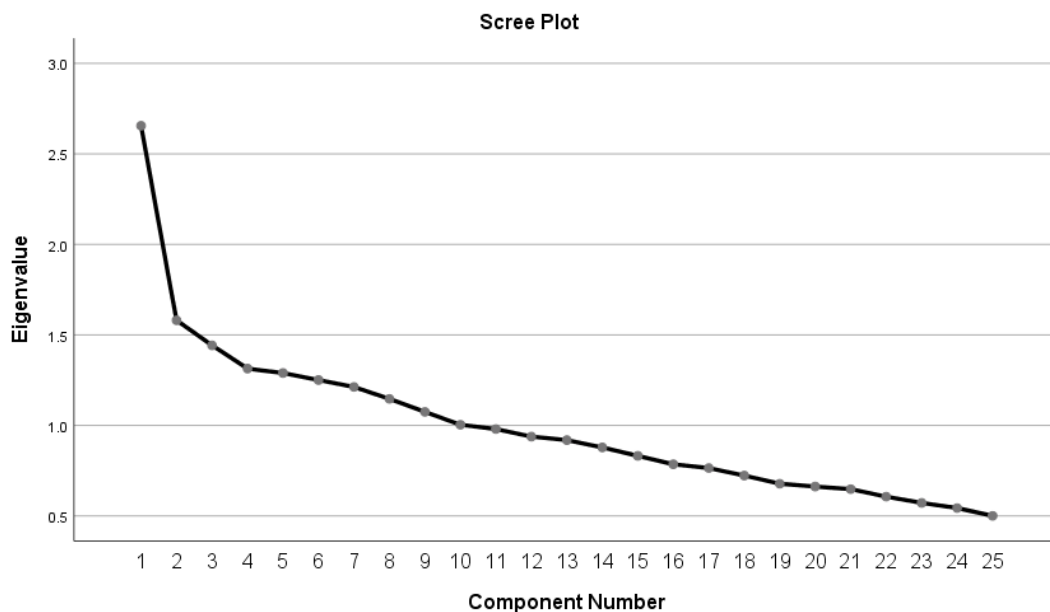
Past studies have reported low reliability for the FAQ (e.g., Goncalves, 2010; Norris, Tinsdale, & Watson, 1987; between .4 and .83), and this study was no exception ( $\alpha = .21$ ). The level of acceptable reliability depends on context; for example, scales that have few items are likely to achieve a low level of reliability. However, generally acceptable reliability seems to begin at .7 with usable reliability often beginning above .8 (Nunnally, 1994).

To further examine the FAQ's adequacy as a measure, this researcher conducted a confirmatory factor analysis (CFA) in AMOS. In this study, fit of a CFA is being measured by the Chi-Square (CMIN/DF < 3), GFI (>.90), CFI (> .90), RMSEA (<.8), and SRMR (<.8). There are arguments that the RMSEA may be acceptable up to .10; however, .8 seems to be a more universally agreed upon number for acceptable fit than .10. Also, ideally the Chi-square would be  $p < .50$ ; however, because of sample size and degrees of freedom, avoiding significance is unlikely, and ratio of Chi-square to degrees of freedom is used. A one-factor model as described by Palmore was fit to the data (Palmore, 1988); however, AMOS was unable to achieve minimization of the FAQ when run as a one-factor model suggesting that the data do not fit the model well.

Since the CFA was not successful, an exploratory factor analysis was conducted. The researcher began by examining correlations between items and found that very few had correlations above .3 resulting in concern about the factorability of the FAQ. A Kaiser-Meyer-Olkin Measure of Sampling Adequacy for the FAQ from this sample was a .635 which is considered adequate (Kaiser, 1974). Bartlett's test of sphericity was also significant ( $\chi^2(300) = 572.9, p < .05$ ). The researcher used principal component analysis for extraction and varimax rotation for the final solution. Eigen values of one and scree

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plots were used to determine the number of factors. Using Eigen values above one resulted in 10 factors, which on a 25-item resulted in approximately two to three items per factor. When examining these factors, reliability was markedly improved for some (e.g., items 9, 10, 11, 24 resulted in a Cronbach's alpha of .55); however, others (e.g., items 4, 6, 12, 13) resulted in similar alpha levels as the original or lower. More importantly, when examining the factors from the EFA there were generally few logical reasons to suggest that these items should be related, or that if a participant was likely to know one item, they would also likely know another. Because factor solutions must be interpretable and must not be chasing the statistics, the ten-factor solution was not maintained despite some improvement in statistical response. Figure 3 is the scree plot examined to identify the number of factors in the FAQ.



*Figure 3.* FAQ Scree plot

Visual examination of the scree plot indicated that there may be an “elbow” at component four, suggesting that this sample may fit better as a four-factor solution than a ten-factor solution. Re-examining the FAQ with variables constrained to four factors

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using principal component analysis with varimax rotation led to the same general problems as the previous 10-factor solution. For example, factor one (items 3, 9, 10, 11, 14, 24) had an improved, yet still poor, Cronbach's alpha (.37), but despite the increased reliability, the items do not seem to create logical factors when considering the items being combined (see Appendix G). Although the extracted factors are statistically improved, they do not make theoretical sense as individual factors. The researcher chose to leave the FAQ as a single factor solution and to follow the suggestion of Palmore (1988) who indicated this is an edumetric as opposed to a psychometric test. As such, the overall score is used as a measure of knowledge. The validity of this argument is in question, as others (e.g., Norris et al., 1987) hold that even an edumetric test like the FAQ should have stable psychometric properties.

### **Attitudes**

The researcher used subscales from the Ambivalent Ageism Scale (AAS) as a measure of counseling students' attitudes and ageism toward older adults. The ambivalent ageism scale consists of three subscales including: (a) Cognitive Weakness, a three item subscale, (b) Hostile Ageism, a 6 item subscale, and (c) Unwanted Help, a four item subscale, with ranges of 5.5, 4.75, and 4.67 respectively. It is unknown whether these are typical scores, as Cary et al. (2016) did not report typical values for the scales. Each subscale score was based on the mean score of responses to items. Items were on a Likert scale from 1-7, thus potential scores for each subscale ranged from 1-7. Participants from this sample had a minimum mean score of 1 with a maximum of 6.5, 5.75, and 5.67. The mean score on the three AAS scales were as follows: (a) Cognitive Weakness was 2.62 ( $SD = .96$ ), Hostile Ageism was 1.71 ( $SD = .83$ ) and Unwanted Help was 1.71 ( $SD =$

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.83). The Unwanted Help subscale also evidenced significant Kurtosis (4.14); as such, this will need to be considered in the SEM because the lack of Kurtosis and multivariate normality are major assumptions of SEM. Internal consistency was moderate for each of these scales as measured with Cronbach's Alphas (.77, .77, and .76 respectively).

The researcher conducted a CFA to assess the measurement model of the AAS subscales. A CFA of the AAS model was run as normal using maximum likelihood for estimation, and due to non-normal data, the researcher also used bootstrapping (Byrne, 2010). Bootstrapping is a method of sampling with replacement that allows the researcher to overcome certain obstacles that increased sample size may address. Both models had the same results, including a poor fitting Chi-square ( $\chi^2 = 275.58$ ,  $df = 62$  CMIN/DF 4.45  $p < .001$ ). Additionally, the Goodness of Fit Index (GFI) was .88 (acceptable fit is .90) and Comparative Fit Index (CFI) was .86. The Root Mean Square Error of Approximation (RMSEA) was a .11, with a Standardized Root Mean Square Residual (SRMR) of .068 and an Akaike Information Criterion (AIC) of 333.58 and a Bayesian Information Criterion (BIC) of 441.28. Two recommended modification indices had high values, specifically correlating the error values between item 8 and 9 (M.I. = 112.41) and the errors of items 4 and 7 (M.I. 33.14). The items were examined and found to be very similar (see Appendix F for items), suggesting that the error is likely correlated as suggested. As these changes were both theoretically and statistically sound, the researcher allowed for covariance between these errors, and the new model was estimated. Model 2 had a seemingly improved Chi-square ( $\chi^2 = 106$ ,  $df = 60$  CMIN/DF 1.77  $p < .001$ ) with the CMIN/DF of 1.77 within the ratio recommended by Hu & Bentler (1999). The GFI and CFI measures were a .95 and .97 respectively. The RMSEA of

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Model 2 is .05. Model 2 also had AIC and BIC of 168 and 283 respectively, both of which are lower than Model 1 showing an improvement. Because Model 2 is a nested version of Model 1, a Chi-square difference test was conducted and which provided evidence of a statistically significant difference ( $\chi^2 = 175.58$   $df = 2$ ) between the two models. Therefore, future uses of the AAS in this study will include use of Model 2. To note, although Model 2 has been changed from Model 1, these changes have no overall impact on the interpretation of the AAS, the subscales, or their creation. As a whole these findings support the basic configuration of the AAS. Figure 4 and 5 are Model 1 and Model 2. In each figure the weights listed are standardized regression weights. Table 3 below describes the fit indices for both models.



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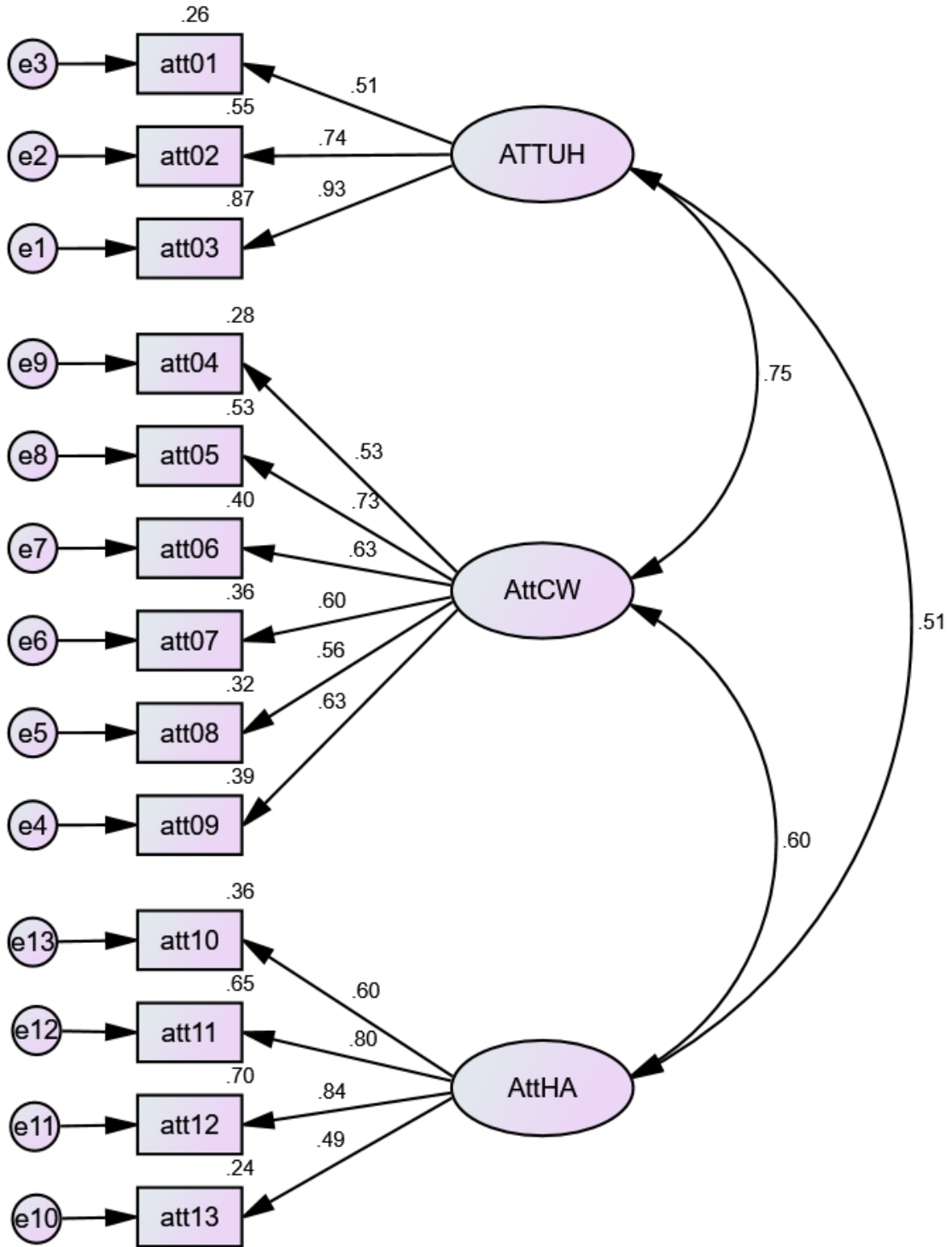


Figure 4. AAS First Model with Standardized Model Output

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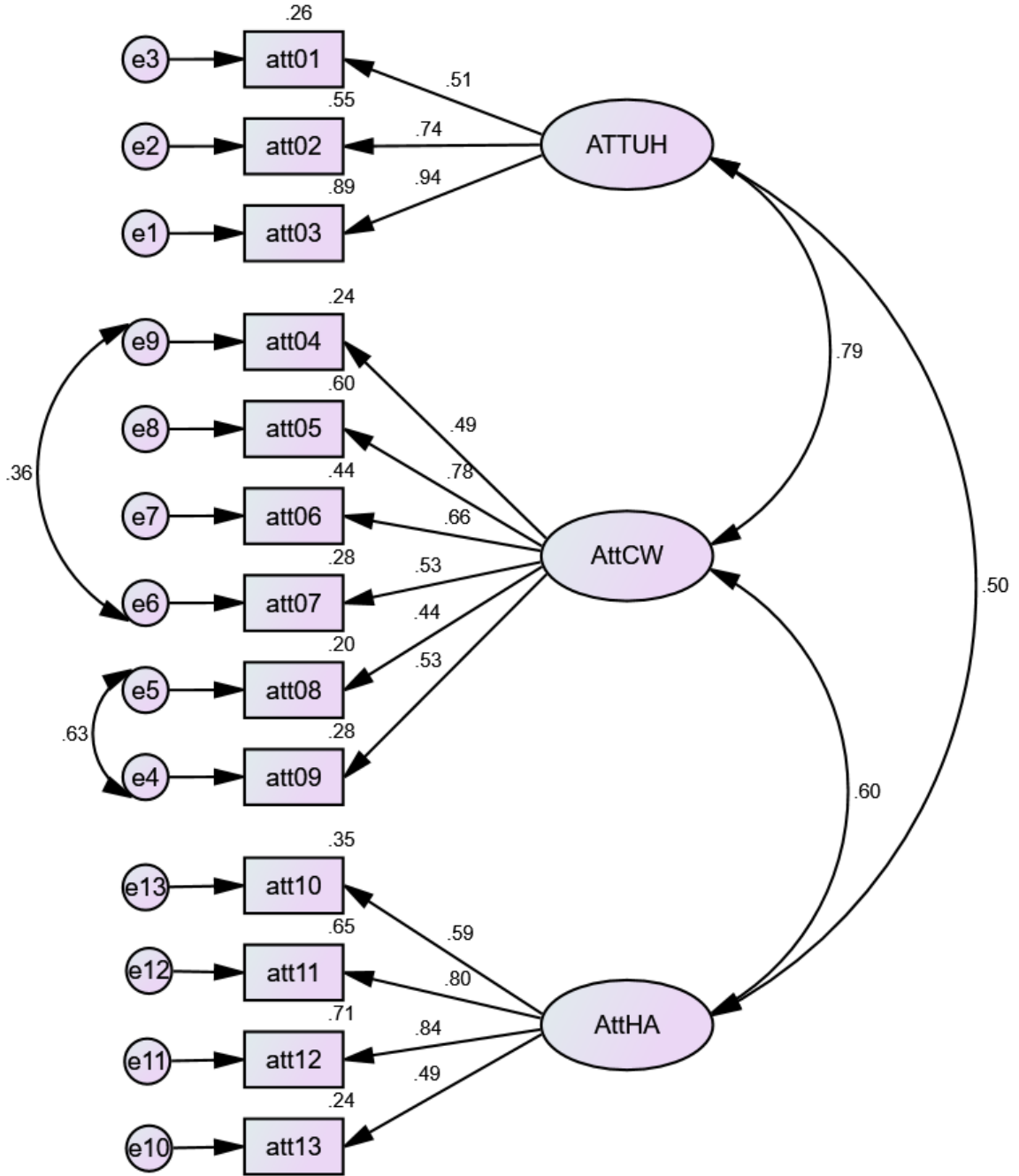


Figure 5. AAS Final Model with Standardized Model Output

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Table 3

*Fit indicators for AAS*

	$\chi^2$	df	$\chi/df$	GFI	CFI	RMSEA	SRMR
Model 1 (M1)	275.58	62	4.45**	.88	.86	.11	.07
Model 2 (M2)	106.00	60	1.77**	.95	.97	.05	.06
$\Delta$ M1 to M2	169.58**	2					

Note: \*\* =  $p < .001$  GFI = Goodness of Fit Index, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean-Square Residual

### COASE

The researcher used subscales from the Gerontological Counseling Competencies Scale (GCCS) as a proxy measure of masters level students' COASE. The GCCS has three subscales including: (a) Knowledge and Skills, (b) Attitudes, and (c) Bio-Cognitive Knowledge. The sample in this study had a range of four for each subscale, with a minimum score of one and a maximum score of 5. The means of the subscales were 2.07 ( $SD = .79$ ), 3.94 ( $SD = .82$ ), and 3.77 ( $SD = 1.02$ ). O'Connor-Thomas (2012) reported findings nearly a standard deviation different than the results from this sample; mean of 3.05 ( $SD = .92$ ) for Knowledge and Skills, Attitudes was 1.69 ( $SD = .6$ ), and Bio-cognitive Knowledge was 2.09 ( $SD = .77$ ). As such, this sample's scores seemed to vary highly from previous uses with similar (Masters level counseling students) samples. Skewness and Kurtosis on the GCCS were within normal limits, as each subscale was below two (.74, 1.19, .33 respectively). Internal consistency was high for each of these scales in this sample with Cronbach's Alphas of .93, .87, and .92.

As with the AAS the researcher utilized CFA to analyze the measurement model of the GCCS. This model had a significant Chi-square ( $\chi^2 = 539.37$ ,  $df = 186$  CMIN/DF 2.9  $p < .001$ ), but the CMIN/DF is within acceptable limits. Other indicators of fit included the GFI (.84), CFI (.91), RMSEA (.08) and SRMR (.06). Due to GFI below .9,

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modification indices were examined with three values over 20 being observed. These included correlating the errors of items 3 and 4 (M.I. = 53.68), items 1 and 4 (M.I. = 39.16), and items 1 and 3 (M.I. = 23.72). Examination of items 3 and 4 revealed that these items were asking similar questions about assessment techniques for older adults. Because of the similarities in test items and question form the researcher found it theoretically consistent that the error of these items may covary. Thus the researcher allowed the errors of items 3 and 4 to covary creating Model 2. Model 2 had an improved Chi-square ( $\chi^2 = 481.66$ ,  $df = 185$  CMIN/DF 2.60  $p < .001$ ). As Model 2 is a nested model of Model 1, a Chi-square difference test was conducted ( $\chi^2 = 57.71$   $df = 1$   $p < .001$ ) revealing significant improvement of Model 2 over Model 1. Additionally, the GFI and CFI improved to .86 and .93 respectively. The RMSEA became a .07, and the SRMR was .06. These values are generally within the acceptable range, although the GFI was low. Because the GFI remained low modification indices were examined once again. As with the first assessment of modification indices, the errors of items 1 and 4 had values larger than 20 (M.I. = 23.70) These questions, regarding theoretical approaches and evidenced based interventions seemed theoretically similar in item topic and question construction and as such the errors were allowed to covary resulting in Model 3. As with Model 2, Model 3 had an improved Chi-Square ( $\chi^2 = 455.37$ ,  $df = 184$  CMIN/DF 2.48  $p < .001$ ) a Chi-square difference test revealed the improvement was significant ( $\chi^2 = 26.29$ ,  $df = 1$   $p < .001$ ). The GFI (.87) was still relatively low, but the CFI (.93), RMSEA (.07), and SRMR (.06) remained in the acceptable to good range. Once again, modification indices were evaluated because of the GFI, as when the modification indices were initially run, there was a value over 20 between the errors of item 1 and 3 (M.I. = 23.99). The items

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indicated by the modification indices were examined, and found to be conceptually similar and the researcher chose to allow the errors to covary resulting in Model 4.

Results of the CFA for Model 4 revealed a smaller Chi-square ( $\chi^2 = 421.36$ ,  $df = 183$  CMIN/DF 2.30  $p < .001$ ). Model 4 was a significant improvement as evidenced by a Chi-square difference test ( $\chi^2 = 34.01$ ,  $df = 1$   $p < .001$ ). Fit indices were examined with the GFI (.88) showing improvement, the CFI (.94), RMSEA (.07) and the SRMR (.06) all in an acceptable to good range. Modification indices were examined one more time, but no values merited being addressed further.

At this point there were no more large modification indices. Additionally, this model is close to a good fit, and as such, an EFA was not indicated. Therefore, the GCCS was represented with Model 4 within the SEM. Figure 6 and Figure 7 are representative of the first and final models examined for the GCCS. Table 4 describes the fit indicators for the GCCS.

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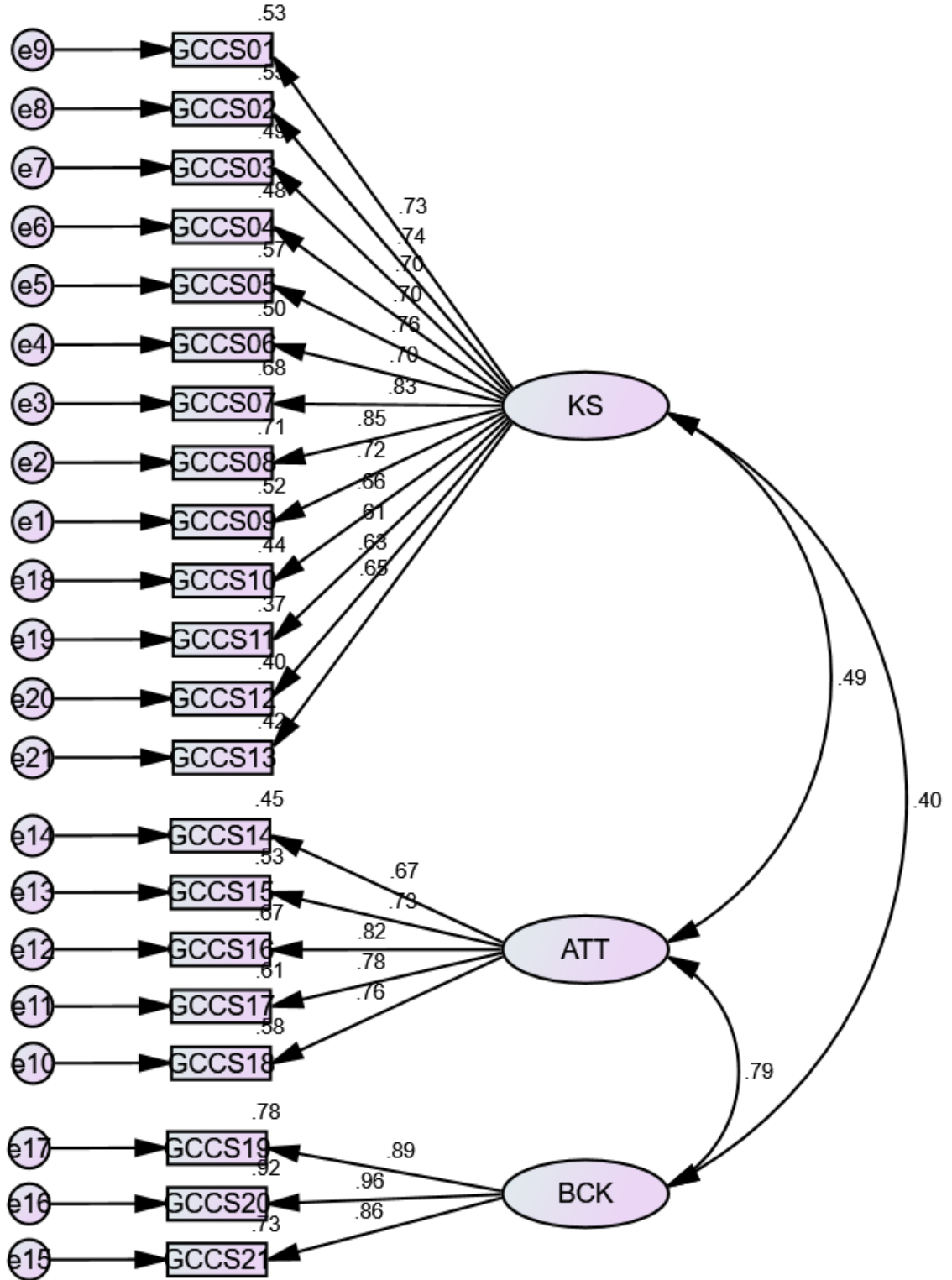


Figure 6. GCCS First Model with Standardized Model Output

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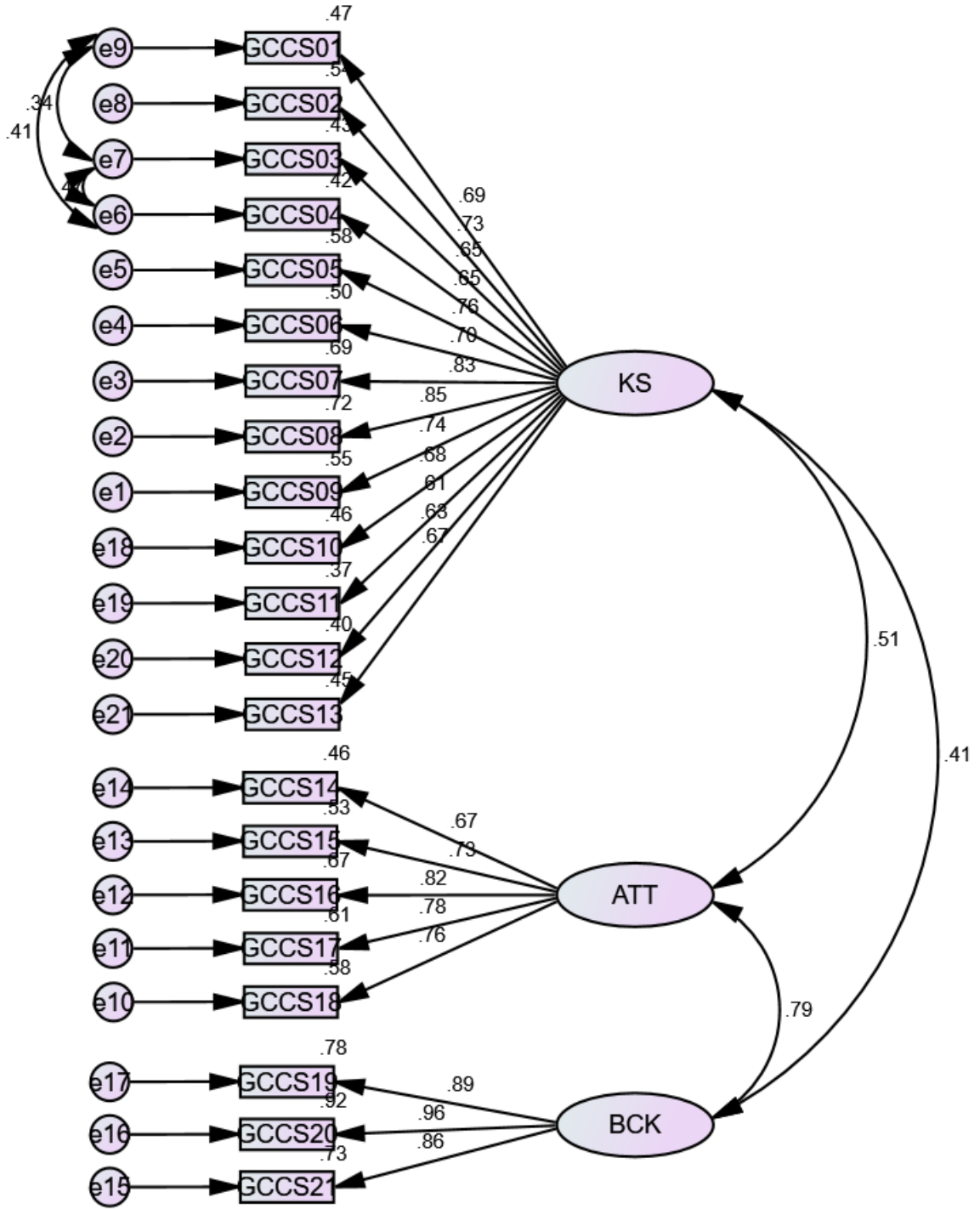


Figure 7. GCCS Final Model showing Standardized Weights

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Table 4

*Fit indicators for GCCS*

	$\chi^2$	df	$\chi/df$	GFI	CFI	RMSEA	SRMR
Model 1 (M1)	539.37	186	2.9**	.84	.91	.08	.06
Model 2 (M2)	481.66	185	2.60**	.86	.93	.07	.06
Model 3 (M3)	455.37	184	2.48**	.87	.93	.07	.06
Model 4 (M4)	421.36	183	2.30**	.88	.94	.07	.06
$\Delta$ M1 to M2	57.71**	1					
$\Delta$ M2 to M3	26.29	1					
$\Delta$ M3 to M4	34.01**	1					

Note: \*\* =  $p < .001$  GFI = Goodness of Fit Index, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean-Square Residual

### Contact

The Contact measure used to assess the level of contact master's students have with older adults was an adapted measure from Islam and Hewstone (1993). The measure focused on Allport's necessary conditions for change, and as an adaptation, has not been used in other studies. The Contact measure is made up of two subscales, Contact Frequency ( $M = 4.15$ ,  $SD = 1.38$ ) and Contact Quality ( $M = 5.17$ ,  $SD = .99$ ). In the present study, contact Frequency and Contact Quality had ranges of 5.8 and 6 respectively, with minimum scores of 1.2 and 1, and both had maximum scores of 7 which was the maximum possible for this scale. Skewness and kurtosis for both measures were within normal ranges thus providing evidence for normality of the sample on this scale. Both Contact Frequency ( $\alpha = .85$ ) and Contact Quality ( $\alpha = .76$ ) had acceptable levels of internal consistency, although Contact Quality was lower than ideal.

To assess the performance of the two contact subscales, the researcher conducted a CFA of the Contact scale. The factor loadings of the items were all reasonable (all above .4), In terms of fit, although this model had a significant Chi-square ( $\chi^2 = 64.95$ ,  $df = 34$  CMIN/DF 1.91  $p < .001$ ), the Chi-square ratio of under 3 was within acceptable



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limits. The GFI for the contact scale was .96, the CFI was a .97, the RMSEA was a .06, and the SRMR was a .04. As all of the fit indices other than the chi-square were within good fit standards, modification indices were not examined. See Table 5 for the fit indicators for the contact scale and Figure 8 for a graphical representation of the scale.

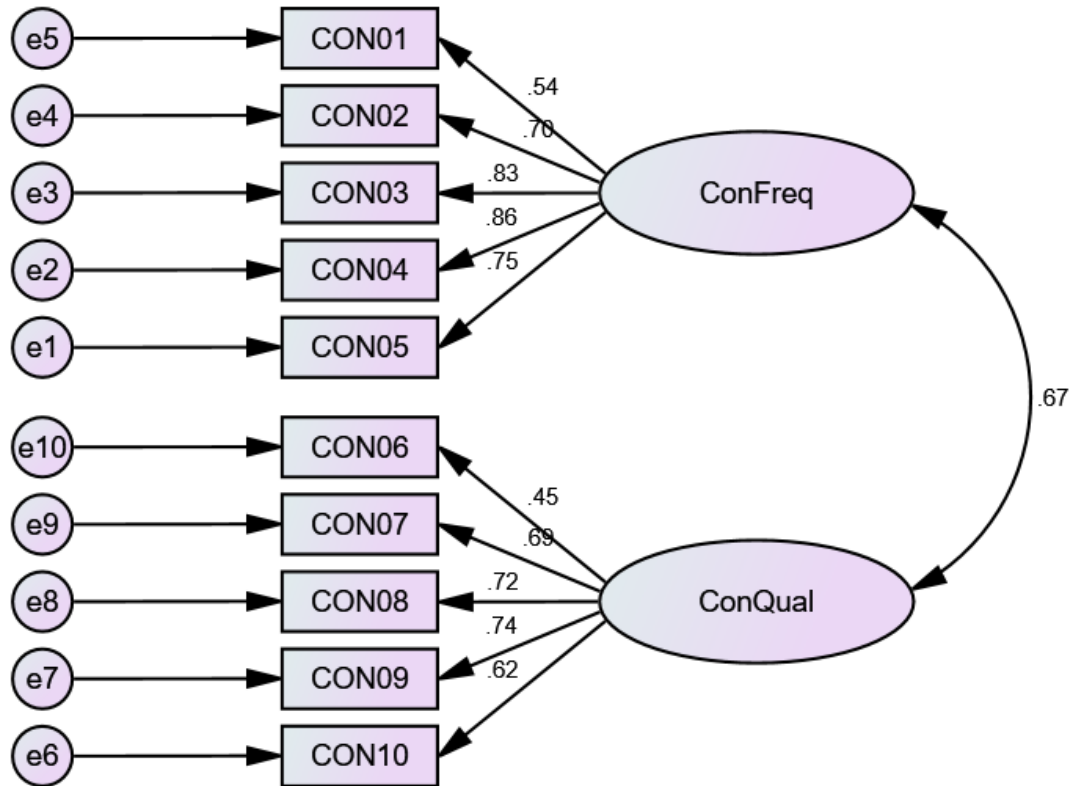


Figure 8. Contact Model with Standardized Model Output

Table 5

*Fit indicators for Contact*

	$\chi^2$	Df	$\chi/df$	GFI	CFI	RMSEA	SRMR
Model 1 (M1)	64.95	34	1.91**	.96	.97	.06	.04

Note: \*\* =  $p < .001$  GFI = Goodness of Fit Index, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean-Square Residual

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### **Interest**

The Interest subscale from the SIGS measure was used to assess the level of Interest master's level counseling students have in working with older adults in a variety of situations and environments. Measures of central tendency for the Interest measure included a mean of 3.05 with a standard deviation of .91. The Interest scale also had the maximum possible range (1 to 7) while maintaining skewness and kurtosis within normal levels (-.19 and -.39 respectively). Internal consistency of the interest subscale was measured by Cronbach's alpha ( $\alpha = .85$ ) with factor loadings between .54 and .74.

A CFA using bootstrapping and maximum likelihood for estimation showed a significant Chi-square ( $\chi^2 = 209.06$ ,  $df = 27$  CMIN/DF 7.74  $p < .001$ ); the Chi-square ratio was well above the acceptable limits of 3 which suggests the need for additional modification. The GFI, CFI, RMSEA, and SRMR were .86, .85, .15, and .07 respectively. Due to GFI and CFI being below .9 and RMSEA being above .8, modification indices were examined. Modification indices revealed three instances of covariance with values above 20, specifically, these included the error variances of items 8 and 9 (M.I. = 68.28), items 5 and 6 (M.I. = 33.57) and items 3 and 4 (M.I. = 22.24). However, it is important to only make one change at a time, therefore upon reviewing items 8 and 9 and finding it makes intuitive sense that their residuals are related, the researcher allowed items 8 and 9 to covary. The resulting Model 2 had an improved Chi-square ( $\chi^2 = 131.41$ ,  $df = 26$  CMIN/DF 5.05  $p < .001$ ). Based on a chi-square difference test Model 2 was a significant improvement over Model 1 ( $\chi^2 = 77.65$ ,  $df = 1$ ,  $p < .05$ ) despite a CMIN/DF ratio above 3. The GFI (.91), CFI (.91), RMSEA (.12), and SRMR (.06) all showed improvement. However, as the fit indexes did not reveal good model fit, modification indices were

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examined revealing a modification index between the errors of item 5 and item 6 (M.I. 23.66). Items 5 and 6 asked about interest in working in hospice and interest in working at the geriatric unit of a hospital. Because it is likely these items were viewed as similar responses to respondents, the researcher allowed the errors to covary. The resulting Model 3 had an improved Chi Square ( $\chi^2 = 103.19$ ,  $df = 25$  CMIN/DF 4.13  $p < .001$ ). A chi-square difference test revealed that Model 3 was a significant improvement over Model 2 ( $\chi^2 = 28.22$ ,  $df = 1$ ,  $p < .05$ ). Additionally the GFI (.93), CFI (.94), RMSEA (.10), and SRMR (.05) all showed improvement. Because the RMSEA was still at .10 and the CMIN/DF was still above 3 modification indices were examined once again. This time, only the errors of item 6 and 7 had a modification index over 20. Items 6 and 7 ask about interest in working in a Geriatric Unit of a Hospital, and Nursing Home, once again, it is likely students are not sure about the differences in these two environments which may have resulted in correlated errors. As such, the researcher allowed these errors to covary resulting in Model 4. The resulting Model 4 once again had an improved Chi-Square ( $\chi^2 = 79.53$ ,  $df = 24$  CMIN/DF 3.13  $p < .001$ ). The Chi-square difference indicated a significant improvement in Model 4 over Model 3 ( $\chi^2 = 23.66$ ,  $df = 1$ ,  $p < .05$ ). The GFI (.95), CFI (.95), RMSEA (.09), and SRMR (.05) all showed improvement. Modification indices were examined due to CMIN/DF being slightly above the ideal ratio of 3. However, there were no large modification indices, as such, the fit indices were reconsidered. Because the CMIN/DF ratio was close to the rule of thumb of 3, the CFI and GFI and SRMR are in the “good fit” range, and the RMSEA is “acceptable” the researcher chose to accept the model at this point. See Figures 9-10 for the first and final

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model, as well as Table 6 for a description of fit indexes for each model and the change between each model.

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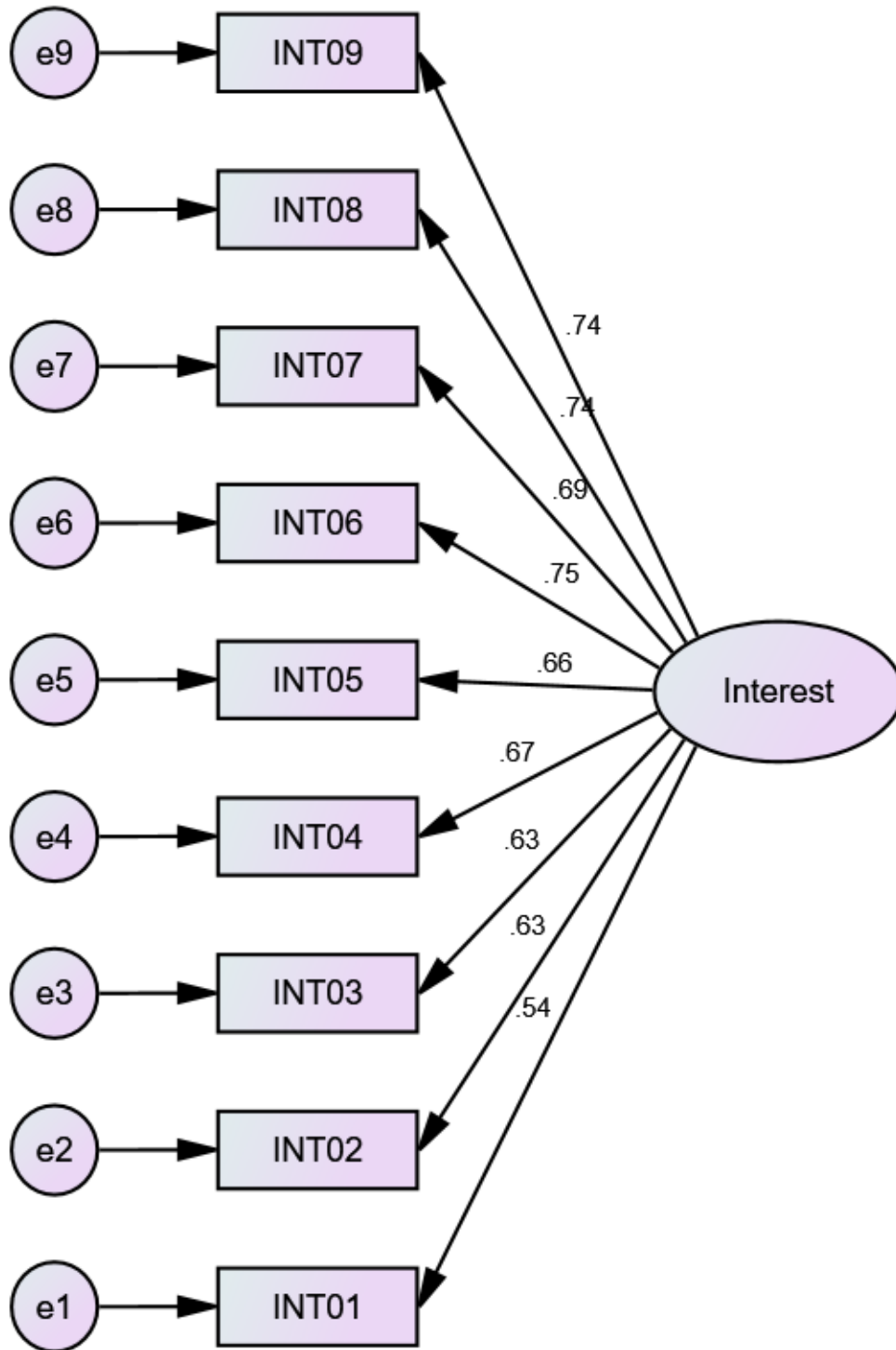


Figure 9. Initial SIGS CFA with Standardized Model Output

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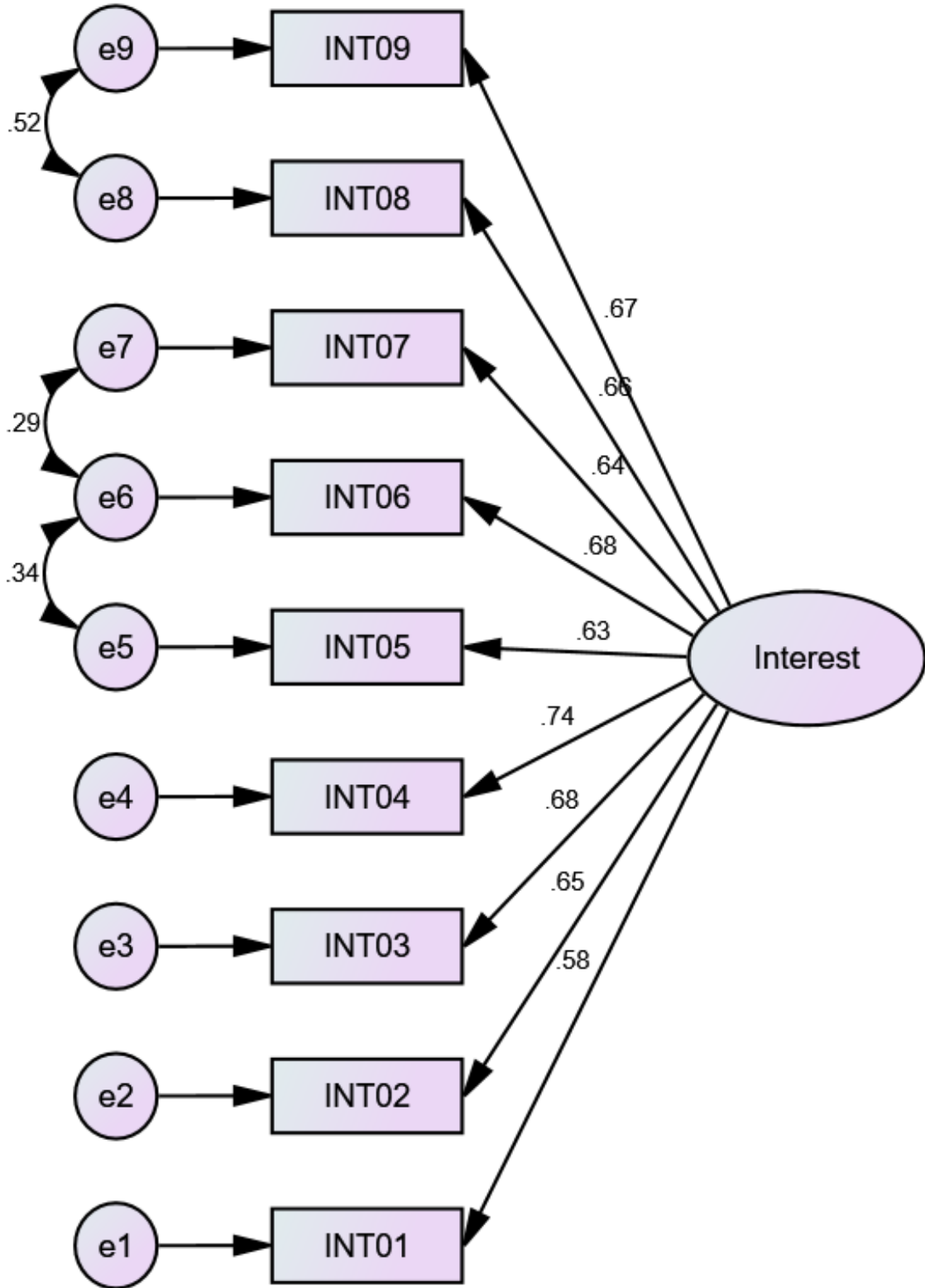


Figure 10. Final SIGS CFA with Standardized Model Output

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Table 6

*Fit indicators for SIGS/Interest*

Model	$\chi^2$	df	$\chi/df$	GFI	CFI	RMSEA	SRMR
Model 1 (M1)	209.06	27	7.74**	.86	.85	.15	.07
Model 2 (M2)	131.41	26	5.05	.91	.91	.12	.06
Model 3 (M3)	103.19	25	4.13	.93	.94	.10	.05
Model 4 (M4)	79.53	24	3.13	.95	.95	.09	.05
$\Delta$ M1 to M2	77.65**	1					
$\Delta$ M2 to M3	28.22**	1					
$\Delta$ M3 to M4	23.66**	1					

Note: \*\* =  $p < .001$  GFI = Goodness of Fit Index, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean-Square Residual

### Summary of Measurement Model Analysis.

All scales utilized were examined for measures of central tendency, reliability, and then examined for evidence of validity through use of CFA. Kurtosis was primarily an issue with the AAS scale and specifically the Unwanted Help subscale; however, despite its slightly non-normal data, the AAS fit the sample well. A summary of the measures of central tendency, skewness, kurtosis, range and reliability are listed below in Table 7.

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Table 7

*Descriptive Statistics of All Measures*

Measure	Min/ Max	M	SD	Skew		Kurt		Alpha
				Stat	SE	Stat	SE	
Knowledge	4/17	10.68	2.52	.14	.14	-.31	.28	.20
GCCS	1/4.95	2.76	.70	.33	.14	.24	.28	.93
Knowledge and Skills	1/5	2.07	.79	.83	.14	.74	.28	.93
Attitudes	1/5	3.94	.82	-.99	.14	1.19	.28	.87
Bio Cognitive	1/5	3.77	1.02	-.83	.14	.33	.28	.93
AAS	1/6.08	2.32	.77	.70	.14	1.43	.28	.85
Cognitive Weakness	1/6.5	2.62	.96	.49	.14	.28	.28	.77
Unwanted Help	1/5.67	1.71	.83	1.75	.14	4.14	.28	.76
Hostile Ageism	1/5.75	2.28	.94	.67	.14	.44	.28	.77
Contact	1.4/7	4.66	1.05	.12	.14	-.48	.28	.86
Frequency	1.2/7	4.15	1.38	.25	.14	-.70	.28	.85
Quality	1/7	5.17	.99	-.42	.14	.19	.28	.76
Interest	1/5	3.05	.91	-.19	.14	-.49	.28	.88

Initial concerns regarding the FAQ were confirmed by poor reliability, and a poor model fit was indicated by the inability of AMOS to estimate the measurement model. Additional factorings were considered based on EFA assessment but did not create logical factors. Each measure except for the FAQ achieved acceptable to good model fit with few modifications. The one exception to this is the GCCS which achieved a .8 on the GFI; however, each other fit indicator used suggested an adequate fit. In Table 8 below is a presentation of the final model fit of each measure examined.



Table 8

*Fit indicators for Final Model of all Measures*

Model	$\chi^2$	df	$\chi/df$	GFI	CFI	RMSEA	SRMR
Knowledge	-	-	-	-	-	-	-
AAS	106	60	1.77**	.95	.97	.05	.06
GCCS	421.36	183	2.30**	.88	.94	.07	.06
Contact	64.95	34	1.91**	.96	.97	.06	.04
Interest	79.53	24	3.13	.95	.95	.09	.05

Note: \*\* =  $p < .001$  GFI = Goodness of Fit Index, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean-Square Residual. Knowledge was not able to be assessed using a CFA

**Analysis of Primary Research Question**

The researcher specified three structural models based on research hypotheses and the measurement models (see figures 4-10). The original hypothesis included Contact Quality, Contact Frequency, and Knowledge as observed exogenous variables. Interest was an observed endogenous variable. Attitudes was a latent variable made up of manifest subscale scores (Unwanted Help, Cognitive Weakness, and Hostile Ageism) from the Ambivalent Ageism Scale. The latent variable COASE was made up of manifest subscale scores (Knowledge and Skills, Attitudes, and Bio-Cognitive Knowledge) from the Gerontological Counseling Competencies Scale. COASE and Attitudes were entered as partial mediation variables; they were examined as both independent and dependent variables. The researcher hypothesized that attitudes and ageism would correlate negatively with knowledge and COASE, would negatively predict level of interest in working with older adults, and would be predicted by Contact Quality. The researcher also predicted that COASE would partially mediate the impact of Contact Quality and Contact Frequency on interest, and that COASE would be correlated with Knowledge.

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Contact Quality and Contact Frequency were expected to correlate with each other and predict interest.

To assess these research questions the researcher created several models based on the hypothesized structural model. Model 1 followed the initial hypothesized structural model fully. Thus, subscale score indicators were measured as recommended by their creators without consideration to this researcher's adjustments made during measurement model analysis. As a result, errors that were allowed to covary during measurement model analysis did not impact these results. Moreover, Model 1 assumed that all scores contributed fully to the factor to which they were assigned.

Model 2 took the same structure as Model 1, except that each scale score was weighted based on item weights from the measurement model assessment. For example, an item that had a .603 item weight in the measurement model was re-scored in SPSS as that item score multiplied by .603. This researcher rescored all items based on weighting from measurement model CFA's. Scale scores were then recalculated based on item weights from the measurement model.

Model 3 modified the scale based on the assumption that only items participants specifically responded to were the truly manifest variables. The one exception to this is the variable Knowledge of Aging which did not have a successful CFA solution. Thus, Model 3 included Contact Frequency, Contact Quality, and Interest as latent variables. Further, the subscales that had been used as indicators for COASE and Attitudes in Model 1 and Model 2 were also treated as latent variables. Therefore, COASE and Attitudes became second-order latent factors. Model 3 held that all variables that are

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observed variables in Model 1 and Model 2 are actually latent variables made up of manifest items.

Due to non-normality of data and the complexity of the model, bootstrapping and maximum likelihood were used to assess each hypothesized model (Byrne, 2010). Each model is summarized in Table 9. Model 1 had a significant Chi-Square and a CMIN/DF ratio of over 3 (CMIN/DF = 3.21). Model 1 had a good fit according to GFI (.95), CFI (.92), and SRMR (.05). RMSEA was barely acceptable with a .09. AIC and BIC were 143.58 and 254.99 respectively and are being included as a method of comparison between models since the models are not nested. AIC and BIC indicate better models with lower values. Model 2 had a slightly higher CMIN/DF (3.35), a similarly good fit on the GFI (.95), CFI (.92), and SRMR (.06), and an RMSEA of .09 (in the questionable but possibly acceptable range). The AIC and BIC were slightly higher than Model 1 (145.08 and 252.78), and as such, reveal a worse fitting model than Model 1. Model 3 is nearly a reverse of Model 1 and Model 2 regarding model fit. Specifically, the CMIN/DF was a good fit (1.50), the GFI was poor (.81), the CFI (.92) and RMSEA (.04) were good, and the SRMR was acceptable (.07). The AIC and BIC were substantially higher than Model 1 and Model 2 (2288.70 and 2797.48 respectively). The increased AIC and BIC numbers are likely due to the much more complex nature of Model 3 due to all items being included (Lin, Huang & Weng, 2017). Model 1 and Model 2 were nearly equal, and, based on both AIC and BIC measures, Model 1 was the best model. However, both Model 1 and Model 2 failed to meet an acceptable RMSEA, and both had a CMIN/DF of over 3. On the other hand, Model 3 had a good CFI, a good RMSEA and CMIN/DF, with only the GFI indicating a poor fit. Additionally, Sharma, Mukherjee, Kumar, and Dillon

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(2005) suggest the GFI should be used with caution when assessing for model fit.

Consequently, ignoring the lack of fit of the GFI may be acceptable, especially as it is the only fit index indicating a poor fit for Model 3. Although the Model 3 AIC and BIC scores are high, they are not global measures of fit. As such, Model 3 is chosen as the final model that most closely describes the data with the best fit. Table 9 describes fit indices of each Model. Figures 11-13 graphically describe Model 1, 2, and 3 including the standardized weights of relationships between variables. Table 10 provides the unstandardized regression weights of the final model, Model 3.

Table 9

### *Fit Indicators of Structural Models*

Model	$\chi^2$	df	$\chi/df$	GFI	CFI	RMSEA	SRMR	AIC
Model 1	83.58	25	3.34**	.95	.92	.09	.05	143.58
Model 2	87.08	26	3.35**	.95	.92	.09	.06	145.08
Model 3	2014.70	1348	1.50**	.81	.92	.04	.07	2308.2

Note: \*\* =  $p < .001$  GFI = Goodness of Fit Index, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean-Square Residual. Knowledge was not able to be assessed using a CFA



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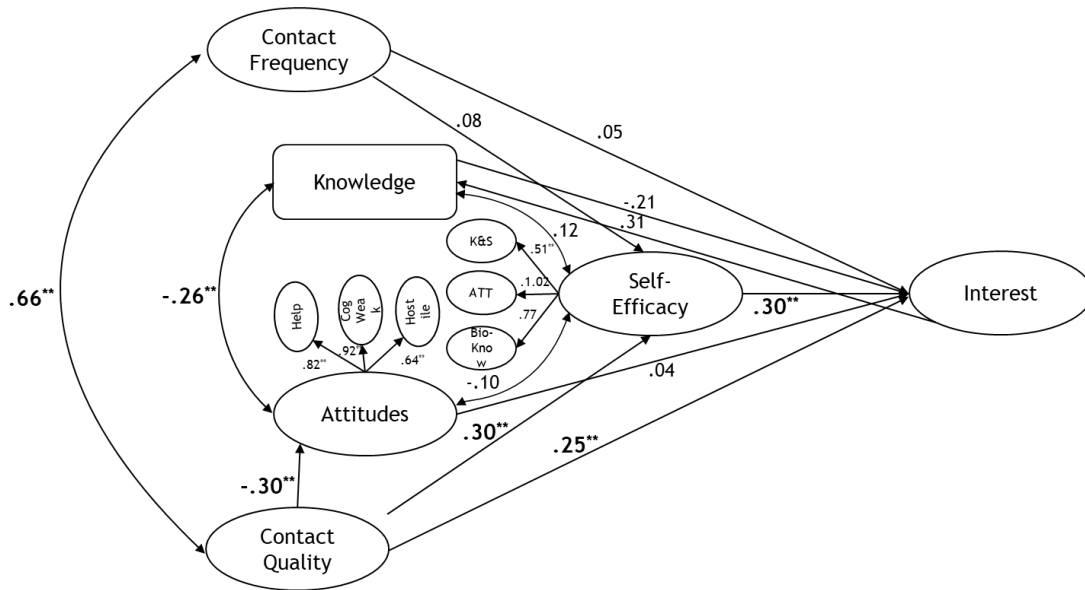


Figure 13. Model 3 – Final Retained Model - Weights are standardized regression weights, Bold case and \*\* denote significance at  $p < .05$  or below.

Table 10

Regression weights for Final Model, Structural Model 2

Path	Estimate	S.E.	<i>p</i>
Contact Quality ↔ Contact Frequency	.49	.09	<.001*
Contact Quality → Interest	.21	.09	.03*
Contact Quality → Attitudes	-.24	.07	<.001*
Contact Quality → COASE	.28	.10	.004*
Attitudes → Interest	.04	.09	.65
Attitudes ↔ Knowledge	-.40	.12	<.001*
Attitudes ↔ COASE	-.04	.03	.18
Contact Frequency → COASE	.07	.07	.38
Contact Frequency → Interest	.03	.07	.63
Knowledge → Interest	-.06	.05	.24
Knowledge ← Interest	1.15	.68	.09
Knowledge ↔ COASE	.21	.14	.12
COASE → Interest	.27	.07	<.001*

\* Is used to note significance at  $p < .05$  level or lower. Estimate is unstandardized, standardized regression weights are listed in Figure 13

**Results of Research Hypothesis**

This section outlines the results based on the initial research hypotheses.

Regarding the first research hypothesis, COASE was predictive of Interest in working

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with older adults (standardized coefficient = .31,  $p < .001$ ). Additionally, COASE was not correlated with either Knowledge of aging or Attitudes. COASE was found to mediate the relationship between Contact Quality and Interest (estimand = .075  $p < .01$ ). COASE did not mediate the positive relationship between Contact Frequency and Interest. As to the second research hypothesis, knowledge did not bi-directionally predict Interest in working with older adults, but as hypothesized, was found to have a significant negative relationship with Attitudes ( $r = -.26$ ,  $p < .001$ ). As to the third research hypothesis, Contact Frequency did not predict Interest; nor did Contact Frequency predict COASE. To the fourth hypothesis, Perceived Quality of Contact predicted level of Interest (standardized coefficient = .18  $p < .001$ ) and Attitudes (standardized coefficient =  $-.30$ ,  $p < .001$ ). Contrary to this research hypothesis (e), Attitudes toward older adults did not predict Interest.

### **Near Equivalent Models**

As discussed within the measurement model analysis, Knowledge as a scale is unreliable, and because of this, the final model was re-examined with removal of the knowledge scale to see if this created an improved model due to the error brought in from knowledge. Bootstrapping with maximum likelihood was used due to non-normal data. Figure 14 graphically displays the final model with removal of knowledge. This alternative model had a significant chi-square ratio (CMIN/DF 1.54  $p < .001$ ) with a slightly increased CMIN/DF ratio likely due to a decreased number of degrees of freedom. Fit index measures of GFI (.80) was poor, but the CFI (.92) and SRMR (.07) and RMSEA were a were a good fit (.04). The fit index of the alternative model with knowledge removed was a similar fit to the final hypothesized model as seen in Table

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11. Figure 14 provides a graphical representation of Final model with knowledge removed.



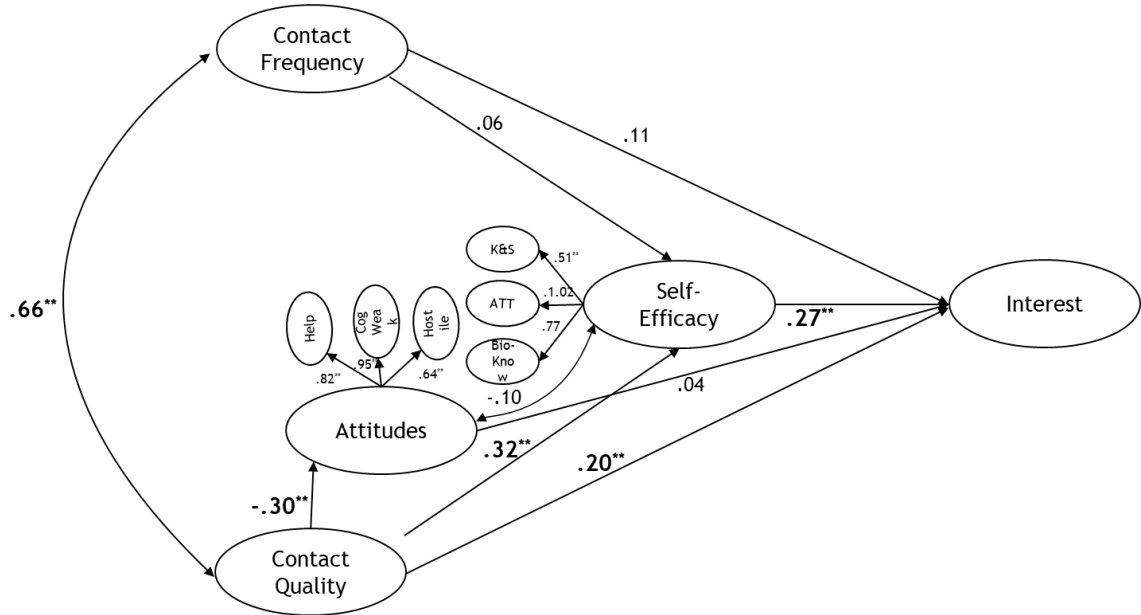


Figure 14. Final model with knowledge removed - Weights are standardized regression weights, items in bold are significant at  $p < .05$  or below.

Table 11

*Fit Indicators for Alternative Model*

Model	$\chi^2$	df	$\chi/df$	GFI	CFI	RMSEA	SRMR
Knowledge Removed	1999.85	1302	1.54**	.80	.92	.04	.07
Final Model	2014.70	1348	1.50**	.81	.92	.04	.07

Note: \*\* =  $p < .001$  GFI = Goodness of Fit Index, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean-Square Residual. Knowledge was not able to be assessed using a CFA

**Exploratory Research Questions**

Although the primary purpose of this study was to examine the presented hypothesized model, a secondary purpose was to explore potential relationships between the predictive variables (e.g., Interest, COASE, Attitudes toward aging, Knowledge of Aging, Contact) and demographic variables such as age, race, gender, percentage of graduate studies complete, and program specialization.

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**Interest.** Participants on the interest survey had a mean score of 3.05 with a standard deviation of .91. In this sample, age had a significant positive relationship with interest ( $r = .17, p < .01, R^2 = .03$ ), where older participants reported higher levels of interest than younger participants. Males also reported more interest in working with older adults than females ( $r = .14, p < .05, R^2 = .02$ ). Participants reported that feelings of preparedness from their counseling training was positively correlated to level of interest in working with older adults ( $r = .28, p < .001, R^2 = .08$ ). Additionally, there was no difference reported interest in working with older adults with regard to the percentage of the academic program participants had completed or race and ethnicity. A one-way ANOVA identified a statistically significant difference in level of interest based on participants' specialty ( $F(3,299) = 5.26, p \leq .001, \eta^2 = .05$ ) with a medium effect size. Specifically, a Tukey post-hoc test revealed that participants in Clinical Mental Health programs ( $M = 3.1, SD = .90$ ) and Marriage, Couples and Family programs ( $M = 3.5, SD = .80$ ) were more interested in working with older adults than School counselors ( $M = 2.73, SD = .91$ ). Clinical mental health and Marriage, Couples, and Family did not differ from each other.

**COASE.** The GCCS was used as a proxy measure to examine COASE in this study because of the lack of a self-efficacy measure for counseling older adults. In contrast to the hypothesized model which explored each subscale of the GCCS, the full-scale of the GCCS ( $M = 2.76, SD = .70$ ) was used to examine relationships between the GCCS and demographic variables of age, race/ethnicity, gender, perception of preparedness, percentage of program completed, and program specialization.

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In this sample, age, race/ethnicity and gender had no relationship with participants' GCCS score. Feelings of preparedness from the counseling program had a strong positive relationship with their scores on the GCCS ( $r = .54, p < .001, R^2 = .30$ ), and this had a large effect size. Additionally, those that had completed more of their program had higher scores on the GCCS ( $r = .25, p < .001, R^2 = .06$ ). A one-way ANOVA revealed with a small effect size ( $F(3, 299) 3.15, p < .05 \eta^2 = .03$ ) that participants had a significant difference in their GCCS depending on their program specialization. A Tukey post-hoc test revealed that Clinical Mental Health Counselors ( $M = 2.83, SD = .69$ ) reported higher GCCS scores than School Counselors ( $M = 2.55, SD = .72$ ).

**Attitudes toward older adults.** As with COASE, the full AAS scale ( $M = 2.32, SD = .77$ ) was used in examining the exploratory research questions rather than the AAS subscales that were used in the primary research question. Participants reported that age was negatively correlated with attitudes toward older adults ( $r = -.29, p < .001, R^2 = .08$ ) with a medium effect size (Sink & Stroh, 2006), such that younger participants reported higher levels of ageist type attitudes toward older adults than older participants. Percentage of the program had completed, gender, counseling specialization, and feelings of preparedness to work with older adults had no relationship with attitudes. A one-way ANOVA revealed a significant difference in participants' attitudes toward older adults based on their race and ethnicity with a small to medium effect size ( $F(4, 298) = 3.01, p < .05 \eta^2 = .04$ ). However, a Tukey post-hoc test revealed no differences between racial/ethnic groups regarding attitudes toward older adults. Findings in an ANOVA followed by lack of findings in a post-hoc analysis are often the result of a small effect

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size. The Tukey post-hoc test approximates error in the case of unequal sample sizes-- error that is present in the race/ethnicity responses of this sample. It may be that this approximated error and the relatively small effect size created the significance found in the ANOVA with no significance based on the post-hoc test. As such, within this sample there were no findings to report with regard to race and attitudes toward older adults.

**Knowledge of aging.** Participants scored an average score of 10.68 (out of 25) with a standard deviation of 2.52 on the FAQ, and their scores were comparable to scores reported in previous research (e.g., Gellis, Sherman, & Lawrence, 2003). Participants' scores on the FAQ were not related to any of the demographic variables examined (e.g., age, gender, perception of preparedness, specialization, percentage of the program completed, race/ethnicity).

**Contact frequency.** Participants completed the contact frequency scale ( $M = 4.15$ ,  $SD = 1.38$ ) as a measure of the quantity of interactions they have had with older adults. Scores indicated that contact frequency had a significant positive relationship with age at a medium effect size ( $r = .23$ ,  $p < .001$ ,  $R^2 = .05$ ) and with feelings of preparedness to work with older adults at a medium to large effect size ( $r = .33$ ,  $p < .001$ ,  $R^2 = .11$ ) (Sink & Stroh, 2006). However, there was no difference in Contact Frequency based on percentage of program completed, specialization, or gender. A one-way ANOVA revealed a significant difference based on race and ethnicity with a small to medium effect size ( $F(4,298) = 3.19$ ,  $p < .05$ ,  $\eta^2 = .04$ ). A Tukey post-hoc test revealed that participants who identified as Black ( $M = 4.94$ ,  $SD = 1.55$ ) reported more contact with older adults than those that identified as Hispanic/Latino ( $M = 3.84$ ,  $SD = 1.25$ ) and White ( $M = 4.11$ ,  $SD = 1.35$ ).

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**Contact quality.** The contact quality instrument, a 7 point Likert-scale, was completed by participants ( $M = 5.17$ ,  $SD = .99$ ) as a measure of their positive or negative perceptions of past interactions with older adults. Contact quality had no relationship with gender, race/ethnicity, specialization, or percentage of program completed. Participants contact quality scores positively correlated with their perceptions of preparedness to work with older adults ( $r = .25$ ,  $p < .001$ ,  $R^2 = .06$ ) and with age ( $r = .23$ ,  $p < .001$ ,  $R^2 = .05$ ) at a medium effect size (Sink & Stroh, 2006). The findings from the experimental research questions are displayed in Table 12 and Table 13. As a whole the findings, with the exception of the correlation between preparedness COASE, convey relatively small effect sizes, meaning that although perhaps significant, they may have relatively little real world meaning.

Table 12

*ANOVAs Involving Demographic and Predictive Variables*

	SIGS		COASE		Attitudes		Knowledge		Contact Freq		Contact Qual	
	<i>M(SD)</i>	F	<i>M(SD)</i>	F	<i>M(SD)</i>	F	<i>M(SD)</i>	F	<i>M(SD)</i>	F	<i>M(SD)</i>	F
<b>Ethnicity</b>												
Black	3.28 (.91)	1.84	2.72 (1.03)	.65	2.59 (1.03)	3.01 <sup>*a</sup>	10.04 (2.56)	1.48	4.94 (1.55)	3.19 <sup>*</sup>	5.37 (1.23)	1.20
Hispanic/Latino	3.16 (.85)		2.71 (.61)		2.53 (.84)		10.32 (2.84)		3.84 (1.26)		4.94 (1.07)	
Multi-Racial	3.27 (1.07)		2.75 (.52)		2.36 (.60)		11.28 (1.96)		4.22 (1.45)		5.34 (.92)	
White	2.95 (.88)		2.80 (.05)		2.22 (.68)		10.77 (2.44)		4.11 (1.35)		5.18 (.94)	
Other	3.05 (.91)		2.76 (.70)		2.12 (.98)		11.70 (2.75)		4.30 (1.19)		5.28 (.98)	
<b>Specialization</b>												
Clinical Mental Health	3.12 (.91)	4.06 <sup>*</sup>	2.83 (.68)	2.78 <sup>*</sup>	2.33 (.81)	.65	10.77 (2.50)	1.54	4.11 (1.38)	1.06	5.18 (1.00)	.58
Marriage and Family	3.52 (.79)		2.84 (.75)		2.08 (.66)		11.70 (1.72)		4.39 (1.63)		5.40 (1.08)	
School	2.74 (.87)		2.56 (.71)		2.32 (.71)		10.23 (2.62)		4.12 (1.28)		5.06 (.98)	
Other	3.07 (.79)		2.75 (.55)		2.36 (.36)		10.33 (3.61)		4.77 (1.61)		5.40 (.63)	

Note: \*  $p < .05$  <sup>a</sup> denotes that although finding was significant, Tukey post-hoc did not reveal significance at .05

Table 13

*Correlations Between Demographic and Predictive Variables*

	<i>M(SD)</i>	Range	Interest	COASE	Attitudes	Knowledge	Contact Freq	Contact Qual
Age	28.04 (8.19)	40	.17**	.09	-.26**	.05	.23**	.26**
Preparedness	4.30 (1.25)	7	.28**	.54**	.00	.02	.33**	.25**
% of Program Completed	28.83 (29.08)	100	.10	.25**	-.09	.01	.07	.02
Gender <sup>a</sup>	-	-	.12	.06	.07	.02	-.04	-.03

Note \*\* denotes significance at  $p < .05$  <sup>a</sup> Gender was scored Female = 1, Male = 2,

### **Chapter Four Summary**

In this chapter, the researcher described data screening procedures including assumptions for SEM and exploratory research questions. The researcher also provided the demographic variables of the participants, and discussed each step of the SEM procedure including model specification and identification, measurement model analysis, model fit, and analysis of similar alternative models. Finally, the researcher explored the exploratory research questions using: (a) descriptive statistics, (b) Pearson correlations, (c) ANOVA, and (d) Tukey post-hoc tests. As noted previously the exploratory research questions all had relatively small effect sizes, suggesting that the findings may have limited real world practicality. Chapter Five will include a discussion of these results, potential causes for concern, limitations, and implications for the counseling field, as well as areas for future research.



## CHAPTER FIVE

### Review of Research Purpose and Questions

This study was conducted in order to examine an increasingly serious social problem. Because of the rapidly increasing number of adults in the baby-boomer generation reaching older adulthood (FIFARS, 2016) and increased mental health service utilization by baby-boomers as opposed to previous generations (Maples & Abney, 2006), there is an increasing need for mental health professionals working with older adults. Despite this need, researchers in mental health professions, including counseling, have described an overall lack of mental health professionals specializing in work with this population (e.g., Cummings and Galambos, 2002; Ferguson, 2012; Hinrichsen, 2000; Jeste et al., 1999; Sutton, 2007). Furthermore, researchers have reported a lack of interest among mental health professionals in working with older adults (Ferguson, 2012; Ferguson, 2015; Kane, 2004; Ryan & Agresti, 1999). Extant research has revealed connections between interest and occupational choice (e.g., Lent et al., 1994; Malgwi et al., 2005), yet, zetetic investigation in counseling has not examined factors that may predict interest in working with older adults. Silvia (2001) suggested that counseling self-efficacy, or a counselor's belief in his or her ability to counsel effectively, is positively correlated with interest. This aligns with Lent and colleagues' (1994) claim that self-efficacy, along with past experiences and outcome expectations, predicts level of interest. Inferring this to work with older adults, *counseling older adult self-efficacy* (COASE)

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was expected to predict increased level of interest in working with older adults.

Researchers in social work have found that perceptions of skills in working with older adults seem to be aligned with level of interest (e.g., Cummings et al., 2005; Kane, 2004b; Olson, 2011). Moreover, Lent et al. (1994), argues that an individual's past experiences impact COASE which in turn impacts Interest. Thus, if Contact is an example of the past experiences to which Lent et al. referred, then COASE should mediate the impact of Contact on Interest in working with older adults.

Writers and researchers have long suggested that counselors' beliefs, such as a fear that older adults only think about death, may lead to avoidance of work with older adults (Kastenbaum, 1964; Packer & Chasteen, 2006). As such, studies have examined ageism both in attitudes and beliefs about older adults as well as knowledge of the aging process as variables that may impact work with older adults. Knowledge is often connected to ageism research, because those with increased knowledge of the aging process are expected to succumb to fewer myths about aging (Anderson & Wiscott, 2003). Similarly, numerous researchers have found that knowledge and attitudes are negatively correlated, such that increased knowledge coincides with decreased ageism (e.g., Olson, 2011). Researchers in social work have found that interactions with older adults seem to be correlated with interest in working with older adults; however, the type of contact varies based on the study. Generally, social work students' perception of the quality of their contact (e.g., Cummings & Galambos, 2002) and frequency of contact (e.g., Anderson & Wiscott, 2003) with older adults were perceived as being related to the students' choice to work with older adults. Allport (1954) developed a hypothesis that increased contact with a group that is different from one's own group leads to decreased

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prejudice and discrimination. In a meta-analysis, Pettigrew and Tropp (2006) examined this “contact hypothesis” and reported findings that suggested that quality contact over the course of time correlates with decreased ageism.

With consideration of the aforementioned research, this study examined the relationships between the factors of COASE, Contact Quality, Contact Frequency, Attitudes, and Knowledge with regard to their impact on Interest. The study examined a sample ( $N = 303$ ) of masters-level counseling students from 13 universities spread throughout the United States. Specifically, the present study used structural equation modeling (SEM) to address the following primary research questions:

1. Does greater COASE predict a higher level of interest? Is COASE correlated with knowledge of aging and attitudes? Does COASE mediate the relationship between Contact (both quality and frequency) and Interest?
2. Is knowledge bi-directionally related with a greater level of interest? Is Knowledge negatively correlated with Attitudes?
3. Does more frequent contact predict a higher level of Interest and an increased COASE?
4. Does perceived Contact Quality predict increased Interest and a lower score on Attitudes?
5. Does a higher score on Attitudes predict a lower level of Interest?

### **Discussion of Primary Research Questions**

The following sections discuss the research questions and the findings as they relate to the final structural equation model presented in Chapter Four. Although various models developed during the research process found different variables to be significant,

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this section focuses primarily on the findings of the final structural model discussed in Chapter Four (see Figure 13) that best fit the data. The final model for master's level counseling students revealed that:

1. COASE:
  - a. Had a direct, positive impact on Interest in working with older adults.
  - b. Did not correlate with Knowledge about aging.
  - c. Did not correlate with Attitudes about older adults.
  - d. Partially mediated the relationship between Contact Quality and Interest in working with older adults.
  - e. Did not mediate the relationship between Contact Frequency and Interest in working with older adults.
2. Knowledge:
  - a. Was not bidirectionally related to Interest in working with older adults.
  - b. Had a significant negative correlation with Attitudes about older adults.
3. Contact Frequency:
  - a. Did not predict Interest in working with older adults.
  - b. Did not predict students' level of COASE.
  - c. Was significantly positively correlated with Contact Quality.
4. Contact Quality:
  - a. Had a significant positive direct effect on counseling students' level of Interest in working with older adults.

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- b. Had a significant positive impact on master's level counseling students' reported COASE.
- c. Had a significant, negative, direct effect on Attitudes toward older adults.

### 5. Attitudes toward older adults:

- a. Did not predict interest among masters-level counseling students.

Each of the above findings are discussed below considering extant literature in counseling and other mental health professions. Considerations as to the impact, strength, and potential explanations for these findings are discussed. Additionally, similarities and differences from outside research are explored, and recommendations for future research are discussed.

### **Discussion of Findings Related to COASE**

**COASE as a predictor of Interest.** As hypothesized, COASE was found to have a significant direct positive effect on Interest in working with older adults. Thus, masters-level counseling students that reported an increased belief in their competency and capability to work with older adults were more likely to also rate themselves higher regarding their interest level in working with older adults across a variety of topics and environments. In counseling, Wagner, Mullen, and Sims (2017) reported that COASE was strongly correlated with Interest in working with older adults among professional counselors. Similarly, the results from this finding are consistent with other researchers in social work who have found that self-efficacy predicts interest in working with older adults (Cummings et al., 2005; Cummings & Galambos, 2002; Olson, 2011). Wagner and colleagues' finding that COASE is a strong predictor of interest was supported by the

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findings from the present study; in both studies COASE was found to be one of the strongest predictors of Interest.

**COASE correlation with Knowledge.** Based on the final SEM model, COASE was not found to be correlated with knowledge. These findings failed to provide additional support for previous research (e.g., Boswell, 2011; Olson, 2011) and theory (e.g., Bandura, 1986; Lent et al., 1994) that suggest a relationship between individuals' knowledge and perception of own ability. As will be discussed in more detail later in the chapter, findings in this study involving knowledge are suspect in light of a lack of evidence for reliability found in the FAQ for this sample. Due to the FAQ's low reliability, a significant relationship between COASE and Knowledge may not have been detected in the findings even if it existed. Similarly, the findings, which approach significance, cannot be extrapolated to suggest that if the instrument had increased reliability a significant relationship would have existed.

Of interest when considering the lack of a relationship between Knowledge and COASE is that two of the three subscales in the COASE, specifically, Knowledge and Skills, and Bio-Cognitive Knowledge relate to participants' perceived knowledge about working with older adults. Thus, the failure to find a significant relationship between Knowledge and COASE allows for several possibilities. First, as noted previously, the failure to find significance could be because of a lack of reliability on the FAQ. Second, use of SEM may decrease the likelihood of finding a significant relationship due to multiple variables competing for accounted variance. Finally, there may not be a relationship between what masters-level counseling students know about aging and what they believe they know about working with an aging population. If this last point is the

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case, it may speak to a lack of cultural competence (Sue & Sue, 2012), particularly if counseling students believe they can work well with a population they know little about.

The present study was cross-sectional and, thus, limited regarding findings that speak to any change over time. Therefore, longitudinal research, may provide additional insight into the lack of relationship found in this study. A future study, perhaps similar to one conducted by Olson (2011), that fulfills Bandura's (1986) identified conditions to develop and enhance self-efficacy while maintaining a focus on knowledge of aging may serve to further flesh out any relationship between Knowledge and COASE.

**COASE correlation with Attitudes.** The final model of the SEM in this study revealed that COASE was not correlated with attitudes toward older adults. This finding was contradictory to the initial hypothesis that COASE and Attitudes were correlated, and the finding is also inconsistent with substantial research that has described a relationship between COASE and attitudes toward older adults (e.g., Kane, 1999; McBride & Hays, 2012; Olson, 2011). However, many of these previous studies have exhibited relatively small effect sizes. For example, Wagner et al. (2017) found that professional counselors' COASE had a positive relationship with positive ageism but with a small effect size. In social work, other researchers have similarly found significance between Attitudes and self-efficacy at small effect sizes (Kane, 1999; Olson, 2011). As in the case of Knowledge, it should be noted that within this study, the Attitudes Scale (AAS) violated assumptions of normality due to highly kurtotic responses. That is, there was little variance, and most respondents scored in a small segment of the assessment. The lack of variability may have impacted the likelihood of

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finding significance, and even if the anticipated relationship between COASE and Attitudes existed, it could not be detected in this sample.

**COASE as a mediator.** In the final model, the endogenous COASE variable acted as an independent variable, a dependent variable, and a mediator. COASE was found to be a partial mediator for the relationship between Contact Quality and Interest. The final model examined COASE as a partial mediator, whereby Contact Quality has a direct effect on Interest, whereby increased Contact Quality indicates increased Interest, but also, increased COASE indicates an even stronger relationship between Contact Quality and COASE. If, for example, Counselor Education programs were able to address and increase COASE by following Bandura's (1986) methods, students who have a history of positive Contact Quality will likely be even more likely to be interested in working with older adults. COASE was not found to be a mediator between Contact Frequency and Interest; the relationship between Contact Frequency and Interest was not significant. This finding highlights the importance of Contact Quality and provides yet another glimpse into the importance of focusing on COASE in Counseling programs.

### **Discussion of Findings Related to Knowledge**

As previously noted, the instrument used to measure knowledge of aging (the FAQ) was an unreliable instrument. Assessments must be reliable to have potential of being valid (Kiess & Green, 2011). As such, any results from this SEM model related to Knowledge should be approached with caution. On the other hand, the FAQ was written as an "edumetric" test that included factually verified test items (Palmore, 1988). Thus, although students did not respond in a reliable manner, their overall scores may be reflective of how much students know about a certain aspects of aging, however, because



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of a lack of validity judgements of student knowledge should not be made. Also, because the reliability of this instrument was poor, the current findings do not convincingly speak to the validity of the construct of Knowledge; future research should develop psychometrically sound measures of Knowledge.

**Knowledge relation to Interest.** Contrary to hypothesis, within the final SEM model in this study (Figure 12) Knowledge was not bidirectionally related to interest. The findings from the present study contradict numerous studies that have found relationships between Interest and Knowledge (e.g., Anderson & Wiscott, 2003; Boswell, 2012; Gordon, 2007). However, similar to the present study, some researchers have found no significance (Bergman et al., 2014; Dobbin, 2012; Paton et al., 2001). If there is no real relationship between Knowledge and Interest, it may be because many people find aging to be a scary process and thereby want to avoid it (e.g., Packer & Chasteen, 2006). Thus, it could be that increased knowledge may further entrench their fear of working with older adults. From a statistical standpoint, a lack of relationship between Knowledge and Interest may be the result of other variables such as Contact Quality and COASE accounting for the variance between Knowledge and Interest. It may be that Knowledge is a predictor of Interest, but when examined in combination with Contact Quality and COASE, the variance accounted for by Knowledge is also accounted for by the stronger variables of Contact Quality and COASE. Thus, a lack of significance in the final SEM model may not mean Knowledge is not a predictor; instead, it could mean that it was not a significant predictor when considering all of the variables in this model. It should be noted that each of the previous researchers who did not find a significant relationship between Knowledge and Interest had also used the FAQ as their measure of Knowledge.

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However, even those researchers that did find a significant relationship between Knowledge and Interest using the FAQ found a small effect size, suggesting there may be little practical relationship between these two variables. Despite its apparent weakness, the FAQ is used frequently and is considered a gold standard of measuring Knowledge (e.g., Palmore, 1998). Consequently, the limitations of the FAQ may account for the small effect size in many of those studies. It seems unlikely for future research to find strong results when considering Knowledge until an improved Knowledge scale is constructed.

**Knowledge correlation with Attitudes.** Despite the unreliability of the knowledge scale, Knowledge and Attitudes were significantly and negatively correlated in the final SEM model. This finding was consistent with other researchers' findings (e.g., Allan & Johnson, 2008; Cummings et al., 2005; Gellis et al., 2003; Gordon, 2007), even though many also used the FAQ as their measure of knowledge. Two explanations may account for the high level of consistency between these two constructs, and the first may be is how the constructs are measured. Attitude and belief measures assess how people respond to older adults, and they usually include questions that refer to stereotypes and myths about older adults. Knowledge tests, including the FAQ, typically consist of questions where wrong answers are based on myths about aging. The similarity of question construction between Knowledge and Attitudes instruments may be one reason that those that do well on the knowledge measure also report fewer ageist attitudes. It may be that participants who do better on a knowledge scale also score lower on an ageism/Attitudes scale, because they know the *right answer* on a questionnaire. On the other hand, Knowledge may allow participants to challenge their own viewpoints. Thus,

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those that know more about aging may be better able to reflect on and change their attitudes and beliefs about aging. In this latter scenario, learning more about the aging process may help normalize the experience of aging, thereby reducing misperceptions about the myths of aging.

### **Discussion of Findings Related to Contact**

**Contact Frequency as a predictor of Interest.** Within this sample, in the final retained model Contact Frequency was not a significant predictor of interest. Researchers have reported mixed findings when examining the relationship between Contact and Interest. In most cases Contact, when assessed as a whole, seems to be correlated with Interest (e.g., Cummings & Galambos, 2002; Eshbaugh et al., 2010; Wagner, Mullen, & Sims, 2017). However, when researchers examine specific attributes of Contact, findings became mixed. For example, some researchers have found Contact Frequency to be a significant predictor of Interest (e.g., Chonody & Wang, 2014), but most existing literature points to Contact Quality as a stronger predictor (e.g., Ferguson, 2012; Gonçalves et al. 2010). In practical applications separating Contact Quality from Contact Frequency is challenging, because the two are closely correlated, and efforts to increase either Contact Quality or Contact Frequency are likely to also increase the other. Despite this, the findings of the present study suggest that Contact Frequency, by itself, may not be enough to increase Interest. Therefore, in future research Contact Frequency should be considered in relation to the *context* of participant's contact experiences. Specifically, future research should continue to focus on Contact Quality. Additionally, expansion on studies into Contact Quality may also include study of the individuals' investment into

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the contact experience (Harwood, 2010) to further increase the impact and meaning of their contact experiences.

**Contact Quality as a predictor of Interest.** The final SEM selected in this study found that Contact Quality predicted interest. As noted previously, the findings from this study are consistent with the extant literature, where researchers typically report that Contact Quality, even when assessed on its own and apart from any other aspect of Contact is related to Interest. The measure for Contact Quality included questions asking about perceptions of the experience of interacting with older adults and whether these interactions were positive. The hypothesis that Contact Quality is correlated with Interest therefore suggests that viewing interactions with older adults as positive or enjoyable is predictive of likelihood to have Interest in working with older adults.

Allport's (1954) four necessary conditions of contact speak to the contact criteria that are required to make Contact effective in influencing change. Those factors, which were also addressed within the Contact Scale, will be important for counselor education programs to consider. The current findings support the importance for Counselor Education programs to carefully design interaction experiences between older adults and students as a means of generating student interest in work with older adults. However, as McKeown & Dixon (2017) have noted, requiring careful implementation of Contact experiences with older adults may be impractical for use outside the classroom. Whereas contact that meets Allport's (1954) conditions may be constructed in classes, students lived experiences of contact with older adults is unlikely to meet these conditions. Therefore, when examining the efficacy of increasing Contact Quality experiences, researchers in Counselor Education should consider potential negative experiences

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students may have while in the counselor education program. For example, researchers may ask participants about current experiences with older adults that occur outside of the research to increase accuracy in assessing findings.

**Contact Frequency as a predictor of COASE.** In the final SEM model, Contact Frequency did not predict any variables, although it was correlated with Contact Quality. Contact Frequency was hypothesized as predicting COASE based on the SCCT model that suggested past experiences predict Self-efficacy (Lent et al., 1994). However, the findings from this sample did not bear this out for Contact Frequency. If there is no relationship between Contact Frequency and COASE, then one possible explanation could be that some participants who encountered older adults regularly did not have positive experiences (e.g., Contact Quality). Thus, although frequency may provide an opportunity to gain experience around older adults, negative experiences are likely to suppress mastery experiences and feelings of encouragement. As mastery experiences and encouragement are two of the prevalent methods to develop self-efficacy, negative contact experiences may inhibit self-efficacy (Larson & Daniels, 1998).

**Contact Quality as a predictor of COASE.** Although Contact Frequency did not predict COASE, the final SEM Model revealed that Contact Quality was a significant predictor of COASE. This fits with the previous discussion of taking the context of Contact into account, and supports the need for counselor education to address Contact Quality to increase COASE among students. Furthermore, these findings were similar to those of Wagner et al. (2017) who reported that Contact and COASE were strongly correlated with each other among professional counselors. Contact Quality includes such features such as viewing interactions positively and having closeness or intimacy in a

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relationship with older adults. It seems understandable that a person who views interacting with older adults positively and who has had close relationships with older adults will be more likely to believe that he or she can also maintain an effective counseling relationship in which close relationships are anticipated.

**Contact Quality as a predictor of Attitudes.** Allport's *Contact Hypothesis* (1954) suggests that contact between individuals of two groups that (a) view each other as equals, (b) cooperate across groups, (c) share common goals, and (d) are supported by social and institutional authorities results in decreased prejudice and discrimination over time. Based on the Contact Hypothesis, this study examined the hypothesis that Contact Quality predicts Attitudes toward older adults. In the present study, as hypothesized, Contact Quality was a significant negative predictor of Attitudes. Those who reported increased Contact Quality also reported lower Attitude scores. This finding was consistent with other research (e.g., Pettigrew & Tropp, 2006; Schwartz & Simmons, 2001; Wagner et al., 2017). As a whole, the finding seems relatively intuitive. For example, if one is emotionally close with a person, enjoys experiences with them, and wants to be with them, then one is less likely to view them negatively or hold values against them because of their age.

### **Discussion of Findings Related to Attitudes**

**Attitudes as a predictor of Interest.** The hypothesized relationship between Attitudes/ageism and Interest was not supported in the final model of the SEM selected in this study. The finding from this study was consistent with some recent research (e.g., Chonody & Wang, 2014; Ferguson, 2012). However, the findings contrast with most other findings that have found significance and a small to medium effect size (e.g.,

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Dobbin, 2012; Gordon, 2007; Meija et al., 2016; Sutton, 2013; Wagner et al., 2017). One possible reason for the lack of relationship between Attitudes and Interest is that the Ambivalent Ageism Scale was highly kurtotic and had a dissimilar shape from Interest which did not allow for the possibility of a large correlation (Goodwin & Leach, 2006). However, even this is unlikely, as the findings in this study did not even approach significance. Because Attitudes, and ageism are forms of prejudice, being able to potentially impact students' Attitudes and thereby reduce their prejudice is important to creating multiculturally competent counselors in a multiplistic society (e.g., Sue & Sue, 2012). The findings in this study support the hypothesis that increased perceptions of Contact Quality, and increased Knowledge may decrease this form of prejudice, and future research should continue to examine this hypothesis in longitudinal or quasi-experimental forms of research to provide further evidence of this relationship.

### **Discussion of Exploratory Research Questions**

A secondary purpose of this study was to examine relationships between participants' demographic variables including: (a) race and ethnicity, (b) age, (c) gender, (d) specialization (i.e., Clinical Mental Health, Marriage and Family, or School), (e) how prepared they believed they were to work with older adults, and (f) how much of their counseling program they had completed, and their responses to the FAQ, SIGS, GCCS, AAS, and Contact Scale. These exploratory questions were intended to provide context to the findings from the primary research questions and to help guide and develop future research as appropriate. The following sections describe results from these demographic variables with regard to how they relate to Interest, Contact, COASE, Knowledge, and Attitudes.

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### **Race and Ethnicity**

In contrast to recent findings where race and ethnicity were correlated with Interest, COASE, Ageism, and Contact (e.g., Wagner et al., 2017); race and ethnicity were only correlated with Contact Frequency and Attitudes within this research sample. However, as with the Wagner et al. finding, participants identifying as Hispanic/Latino had the lowest indicated Contact Frequency for any race or ethnic group while also having one of the highest (though not significant) scores for Interest. One possible reason for this lack of contact among Hispanic/Latino participants may be that despite being a more collectivistic culture, participants may not have had as many opportunities to interact with their older relatives if their families were recent immigrants (E. Gonzalez, Personal Communication, January 18, 2018). Significant findings between race/ethnicity, Contact, and Attitudes such as those found in this study along with findings from the previous study by Wagner et al. (2017) demonstrate a likely connection between the race, and ethnicity of counselors and variables related to counseling older adults. Additionally, the population of older adults in the United States, though predominately Caucasian, is becoming more diverse (FIFARS, 2016). Therefore, researchers in Counselor Education should examine the impact of race and ethnicity in research related to work with older adults. Specifically, researchers should expand on the exploratory findings to further consider how race and ethnicity may influence Contact and Attitudes, as well as if the race/ethnicity of the older adult plays into perceptions of Contact or Attitudes.

### **Age**

As with previous research (e.g., Wagner, et al., 2017), Age had a significant relationship with the majority of the predictive variables, where increased age was



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positively correlated with increased Interest, Contact Frequency, and Contact Quality; and Age had a negative relationship with Attitudes. The negative correlation between age and attitudes and positive correlation between age and contact seem consistent with the theory behind Kastenbaum's (1964) suggestion that younger counselors may be concerned about death and have anxiety about older adults. These attitudes and beliefs about older adults may decrease their desire to interact with older adults, thereby also reducing their contact experiences. These findings were opposite the findings of Wagner et al. (2017) who reported that age positively correlated with both positive and negative forms of ageism. Though not present in this sample, Bodner, Bergman, & Cohen-Fridel (2012) suggested there may be a curvilinear relationship between age and attitudes, where middle-aged men reported higher levels of avoidance and ageism toward older adults than any other age group. Kite and colleagues (2005) indicated that this might be due to those in middle age nearing old-age and fearing becoming an older adult themselves. If Attitudes are related to age due to fear or anxiety of aging, such as in Kastenbaum's theory about younger counselors, then it may be important for counselor education programs to encourage reflective practice, especially as it relates to the counselor's thoughts and feelings about their mortality. One possible way counselor education programs could address this would be through a class on trauma and bereavement. Additionally, counselor education programs may encourage students to consider their own mortality and loss during discussions of triggers that may impact them in counseling situations.

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### **Gender**

In this sample, Gender correlated with Interest such that males reported more interest than females. This is contrast to other researchers (e.g., Rupp, Vodanovich, & Credé, 2010; Wagner et al., 2017) who have reported that women have higher levels of interest in working with older adults than men. The finding, while statistically significant, may have little practical value due to its small effect size. Regarding gender, this sample contrasted with the finding of other researchers, in that women did not have more contact than men (Kalavar, 2001), and women were not less ageist than men (e.g., Fraboni et al., 1990; Rupp et al., 2010; Wagner et al., 2017). As such, these findings may be due to a particularly unique sample. Therefore, additional research should be conducted prior to generating any conclusive recommendations about Gender in relation to Interest.

### **Specialization**

Counseling specialization in this study primarily consisted of three groups including Clinical Mental Health, School, and Marriage and Family. In consideration of whether to include school counselors in this study, the researcher recognized that the students in school counseling may already have selected themselves out of working with older adults and would consequently be more likely have a low level of interest in working with that population. This consideration was born out in the findings, such that students in both Clinical Mental Health programs and Marriage and Family reported higher levels of interest than School Counselors. Similarly, the finding that school counselors reported lower levels on the COASE than Clinical Mental Health counselors was unsurprising, because most practical experiences school counselors have in their counselor education programs would have been with younger populations. Mental Health

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Counselors, on the other hand, are more likely to have some experience counseling older adults in their varied practicum and internship sites, thereby providing an opportunity for mastery experiences (Bandura, 1986) and building feelings of competence.

There was no relationship between with Knowledge of Aging, Contact Frequency, and Contact Quality, and Specialization. The findings related to Knowledge of Aging are unsurprising for two primary reasons. First, the FAQ scale was unreliable and was unlikely to reveal significance even if significant change had occurred. Second, the FAQ is focused on Knowledge of Aging and not related to mental health aspects of aging; therefore, students are unlikely to have learned information in their classes that would help them achieve higher scores on the FAQ. Nonetheless, the current findings seem to provide a useful direction for future research; if there is no difference in Contact between specializations, then school counselors may serve as an optimal control groups for research examining the impact of Contact on COASE since they are unlikely to have significantly increased Contact or have coursework that addresses COASE.

### **Perception of Preparedness**

Among the variables discussed on the demographics form, the item with the most substantial correlations on Interest, COASE, Contact Frequency, and with the second highest correlations on Contact Quality was participants' feeling prepared by their program to work with older adults. Among Clinical Mental Health students, those who felt more prepared by their program were increasingly interested in working with older adults. Unfortunately, this survey did not follow up with specific questions about their feelings of preparedness to examine if those that scored higher on preparedness also had any opportunities within their counseling program to increase contact or COASE. Future

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research in Counselor Education might explore factors that predict students' feelings of preparedness. Counselor education researchers could also attempt to increase feelings of preparedness through efforts to build COASE, and increase Contact. One way to increase feelings of preparedness may be to include discussions on techniques, developmental changes, and bereavement specifically in context of work with older adults during class lectures and discussions. Additionally, courses could include additional opportunities to increase Contact such as counseling experiences with older adults and role-play scenarios.

### **Percentage of Program Completed**

Percentage of the program completed was included in this study to examine if time in a counseling program influenced factors related to working with older adults. The only predictive variable from this study that was associated with the percentage of program completed was COASE. Specifically, masters-level counseling students with an increased percentage of their program completed reported higher COASE. Due to the cross-sectional nature of this study, it is unclear if participants with more experience in counselor education programs simply feel more comfortable counseling clients than counselors at the beginning of their program, or if programs are enhancing students COASE over the course of the program. However, one take-away from this finding for counselor education is that even with a current lack of focus in classes on work with older adults, students still seem to leave counselor education programs with more COASE than they came in with. Future research is recommended in order to better understand this phenomenon and to determine effective means for further promoting COASE development during graduate counselor training.

### **Limitations**

The following section includes a discussion of some of the limitations and potential concerns present in this study. The section will focus primarily on limitations related to: (a) survey design, (b) sampling method, (c) measurement model, and (d) results. The following discussion will include examples of these limitations as well as explanations for how or why they may be concerns. Additionally, a number of these limitations also lead to future research opportunities which are discussed in the next section.

### **Survey Design**

One limitation present in all SEM analyses, and all correlational studies in general, is that despite the use of terms such as “predict,” correlation still does not equate with causation. For example, although COASE predicts Interest, this study did not provide evidence to suggest that COASE creates or causes Interest. In this sample COASE seems to predict Interest, and these two variables seem to be related in some way, but we cannot say that one causes the other. The limitation of correlational design leads to another limitation of this study--the use of a cross-sectional design in which data was collected at a single moment in time thus providing no evidence of change over time. As a result, this research does not provide information as to whether increasing Contact with older adults increases Interest in working with older adults. It also leaves open the possibility that participants who reported higher Contact were actually influenced by a third variable impacting Contact and Interest that was not considered in the present study. To be able to claim causality, an experimental study would need to be conducted that sets

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a baseline level for Contact and Interest and then manipulates Contact while holding all other variables constant. A longitudinal study is a logical next step.

Another limitation of the survey design was that except for the FAQ/Knowledge scale which was a knowledge quiz, all of the measures were self-report. Self-report studies may be problematic, as they rely on the trustworthiness and perception of those taking the survey. To account for this limitation in this study, participants were provided with anonymity to increase veracity of responses (Ong & Weiss, 2000).

### **Sampling Method**

Related to study design, a limitation of this study was the use of convenience sampling. Faculty from 13 universities from a variety of states agreed to participate by asking students to participate in the study. However, the faculty was sampled based on convenience of those who were alumni of William & Mary, and this could limit the generalizability of these findings as there may be a unique factor to William & Mary professors and where they work. Students were provided a paper-based survey that was distributed in their class. This method resulted in students at fewer universities responding, and a smaller number of students participating than may have been accessed through other means, such as email solicitation which may reduce generalizability. However, use of a paper-based survey likely increased response rate (64%) thus resulting in responses from students who likely would not have responded in an email based survey. Moreover, some counseling students surveyed had just begun their program a few weeks before completing the survey. As such, it is possible that these new students had not yet developed a counseling identity or taken any classes that would have facilitated their development of COASE. Therefore, their results may not be indicative of student

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counselors that have had more opportunity to adopt a counseling identity. Additionally, school counseling students were included in the sample which, as noted, previously comprise a population that has likely selected itself out of working with older adults based on their chosen specialization.

### **Measurement Model**

There were several limitations in this study related to the measurements used. For example, in this study the Gerontological Counselor Competency Scale (GCCS) was used as a proxy measure for self-efficacy. Wagner et al., (2017) reported that the GCCS was highly correlated with a self-developed self-efficacy scale that followed Bandura's requirements for self-efficacy scales. However, despite apparent similarities between self-reported competence with older adults and self-reported belief in their ability to work with older adults, there may be differences that have not been considered. It is, thus, possible that what has been described throughout this study as COASE may, in fact, be self-perceived competence to work with older adults. Practically, this may not matter, since self-perceived competence and COASE are similar; however, the development of a scale to specifically examine COASE is recommended for future research.

A second limitation of the measurement model was that findings related to Attitudes were highly kurtotic, in that most respondents scored within a small range. Kurtosis, as described previously (see chapter 4) is primarily a concern in variance related statistics including SEM. This violation of normal data is frequent among SEM research projects (Byrne, 2010), and it was addressed through bootstrapping in this study.

Likely, the most substantial limitation of this study was lack of reliability in the Knowledge/FAQ. Because reliability is a pre-requisite to a scale being considered a valid,

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the low reliability of the FAQ from this sample brings into question the usefulness of the measure. Additionally, the FAQ does not seem to assess a single factor which is a requirement for an SEM indicator (Kline, 2011). Thus, based on this sample, the FAQ may not be considered a valid measure of knowledge of aging despite its having the face validity of its questions being clearly about older adulthood. Whereas all questions on the FAQ focused on the aging process, they were from a wide variety of topic areas within aging. As such it is understandable that different participants taking the exam might know certain questions based on past experiences and not know other questions. While specific items seemed particularly challenging, the test likely varied based on test takers' unique past experiences, thereby leading to unreliable responses from item to item.

### **Results**

Another limitation of this study is that the final model, although fitting the data reasonably well, had mostly small standardized regression weights. These small weights suggest that although a finding may be significant, the effect size (i.e., the practical significance of the finding in everyday life) may be minor. Examination of the results of this model suggest that a number of the factors (i.e., COASE, Contact Quality, and Age) are predictive of interest and are, thus, in keeping with previous studies (e.g., Wagner et al., 2017). However, because the results have such small regression weights, their usefulness in establishing prediction is brought into question. Two potential explanations for the small regression weights were discussed previously in this section, specifically sampling error (described above) and error due to deficits of the measures (i.e., measures not being reliable or valid). A third possible explanation is that this model did not include other variables that, if included, might have better explained interest.



### **Future Research**

Many of the limitations of this study also speak to potential areas for future research. For example, no scale exists as a measure of COASE. Development of a scale to measure COASE would aid in efforts to develop a clearer understanding of COASE. Also, based on the apparent predictive qualities of COASE on Interest, research should strive to cultivate COASE especially among counseling students as well as among practicing counselors.

The present study was a cross-sectional design. Future research should examine these variables longitudinally, especially with efforts made to increase the Knowledge about older adults, Contact Quality experiences among counseling students, and COASE. Longitudinal study will hopefully provide additional evidence as to the efficacy of these responses to increasing Interest.

Future research should build on the findings from this study. For example, research should examine the impact of intentionally increasing Contact Quality experiences with older adults in counseling program courses in an effort to increase COASE and Interest and reduce student Attitudes/ageism. Moreover, research may also examine additional constructs that were not considered in this study. For example, Lent et al. (1994), suggested that outcome expectations when combined with self-efficacy may predict Interest. Although interest was the focus of this study, future research may also need to examine the *intent* of students to work with older adults, thereby changing the research question from “Is work with older adults something that the participants *might consider?*” to “Is work with older adults something the participants *plan on?*”

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Finally, researchers should develop a better Knowledge scale. A Knowledge scale specifically developed with careful consideration of its psychometric properties such as reliability and validity (e.g., concurrent validity, construct validity and content validity) would provide researchers an opportunity to effectively examine the relationships between knowledge and other variables such as Interest, Attitudes, and COASE. Knowledge has regularly been correlated with other variables in previous research, and a valid and reliable measure would strengthen the trustworthiness of these findings.

### **Conclusion**

This present study examined whether masters level counseling students' Interest in working with older adults contributed to, or was mediated by COASE, Knowledge, Attitudes, Contact Quality and Contact Frequency. Structural equation modeling revealed that Contact Quality and COASE contributed significantly to Interest. Additionally, COASE partially mediated the impact of Contact Quality on Interest, and Knowledge was revealed to have a significant negative relationship with Attitudes, while Contact Quality predicted Attitudes.

Although many of the findings in this study had small effect sizes, the results provided numerous areas for further research into the area of gerontological counseling. Moreover, these results point to considerations such as a focus on COASE and Contact Quality for counselor education programs to consider as the population of older adults continues to grow and the need for counselors to work with this population intensifies.

The present study provided insight into predictors and mediators of Interest, and offered suggestions for future research in this area. From here it is up to us as counselors

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and counselor educators to continue this research and to inspire student counselors' interest and intent in providing desperately needed mental health services to older adults.

APPENDICES

**Appendix A: Studies Measuring Factors Related to Older Adults**

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Variable 1	Variable 2	Study	Findings	Sample and Instruments used
Interest				
	Self-efficacy			
		Olson, 2011	$F(1,250) = 90.32, p < .01, \beta = .51$	252 MSW students SE – Author Interest - Author
		Cummings, Adler, & DeCoster 2005	Adjusted $\beta = .271 p < .001 r = .60 p < .01$	382 MSW students Interest – Author SE – Self-rated
		Kane, 2004b	$r = .22 p > .05$	SE – Perceptions of Adequacy to Practice with Elders Interest - Author
		Cummings & Galambos, 2002	$r = .60 p < .001$	136 MSW students Interest - Author
	Contact			
		Chonody & Wang, 2014	Freq $t(58.97) = 5.01 p < .001$ Qual $\chi^2 = 4.27(2) p = .29$	1042 social work students Interest – Author Contact - Author
		Bergman, Erickson, & Simons, 2014	Qual $r = .39 p < .001$ Freq $r = .29 p < .001$	300 college students Interest – Author Contact - Author
		Sutton, 2013	Adjusted $\beta = -.26, p < .01$	266 Masters and Doc psych students Interest – Qualls Contact – CDP –

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		(Yuker & Hurley, 1987)
Dobbin, 2012	$r = .40$ $p < .001$	98 grad psych students Contact – Author Interest - Author
Ferguson, 2012	Qual $r = .33$ $p < .05$	454 BSW,MSW students Interest – Author Freq/Qual Contact-Author
Gonçalves et al., 2010	Formal Contact Odds Ratio 1.83 $p = .01$	460 undergraduate students Interest – Author Contact - Author
Eshbaugh, Gross, & Satrom, 2010	past work $r(236) = .56$ , $p < .01$ qual $r(236) = .06$ , $p < .01$	237 college undergrads Interest – Author Contact - Author
Hughes & Heycox, 2006	Non-significant relationship statistics not reported further	55 BSW students Interest – Author Contact – author
Curl, Simons, & Larkin, 2005	Volunteer $r = .25$ $p < .01$ Friends $r = .20$ $p < .01$	126 MSW students Contact author Interest author
Cummings, Adler, & DeCoster, 2005	adjusted $\beta = .14$ $p < .01$ $r = .49$	382 MSW students Interest – Author Contact - Author
Kane, 2004b	$r = -.28$ $p < .05$	333 BSW/MSW studentes Interest – Author Contact - Author
Anderson & Wiscott, 2003	Freq $r = .45$ , $p < .001$ Qual –	157 social work and gerontology students

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	$r = .26, p = .001$	Interest – Author Freq – Author Qual – Author based on Turner, Frankel, & Levin, 1983
Cummings & Galambos, 2002	Freq $r = .329, p < .001$ Qual $r = .20-.46$	136 MSW students Interest – Author Contact - Author
Paton, Sar, Barber, & Holland, 2001	Freq $t(168) = .028 p < .978$ Work $t(152.57) = 5.53 p < .001$	175 Graduate Students Contact - Author
Gorelik, Damron- Rodriguez, Funderburk, & Solomon, 2000	Freq $r = .16 p < .01$ Qual $r = .45 p < .001$	450 undergrad students - Interest – Aging Course Contact - Author
Kane, 1999	$r = .32 p < .001$	333 BSW,MSW students Interest – Author Contact - Author

### Attitudes

Meija, Hyman, Behbahani, & Farrell- Turner, 2016	Negative Ageism $r = -.51, p < 0.001$ Positive Ageism $r = .22, p = 0.03$	104 psychology trainees ROPE– (Cherry & Palmore, 2008) Interest - Author
Chonody & Wang, 2014	Negative ageism $t(57.32) = .394 p = .25$ Positive ageism $t(57.21) = -1.5 p = .14$	1042 social work students Attitudes – ROPE – (Cherry & Palmore, 2008) Interest - Author



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Bergman, Erickson, & Simons, 2014	$r = -.56 p < .001$	300 college students Attitudes – FSA - (Fabroni, 1990) Interest - Author
Sutton, 2013	$\beta = -.49 p < .001$	266 Masters and Doc psych students Interest - Qualls Attitudes – R-ASD, KAOP - (Kogan, 1961), FSA - (Fabroni, 1990)
Dobbin, 2012	$r = .23 p < .05$	98 grad psych students Attitudes – FSA - (Fabroni, 1990) Interest - Author
Ferguson, 2012	Stereotypes $\beta = .051$ Personal anxiety $\beta = -.027$ Social Value $\beta = -.127$ All $p > .05$	454 BSW,MSW students Interest – Author Attitudes - ASD
Gonçalves et al., 2010	$F(2, 457) = 302.07, p < .001$	460 Portuguese undergraduate students Interest – Author Attitudes – Attitudes toward hospitalized older people
Gordon, 2007	$r = .29 p < .001$	409 psychology doc students Attitudes – KAOP - (Kogan, 1961) Interest - Hinrichsen
Gellis, Sherman, &	$r = .1 \text{ to } .21 p < .05$	96 MSW students Attitudes – ASD

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Lawrence, 2003		Interest - Author
Anderson & Wiscott, 2003	$r = -.27, p = .001$	157 social work and gerontology students Interest – Author Attitudes - Author
Cummings & Galambos, 2002	$r = .21 p < .05$	136 MSW students Interest - Author Att. ATAI
Hinrichsen, 2000	Positive $r = .22, p < .05$ Negative $r = .30, p < .01$	Knowledge – FAQ2 and FAMHQ (Palmore, 1988) Attitudes – KAOP (Kogan, 1961) Interest - Author
Dunkle & Hyde, 1995	$r = .52 \text{ to } .56 p < .05$	176 Nursing and physical therapy students Entire questionnaire - Author
Knowledge		
Gordon, 2007	$\beta = .31 p < .001$	409 psychology doc students Interest – Hinrichsen Knowledge – FAMHQ (Palmore, 1988)
Dobbin, 2012	$p = .32$	98 grad psych students Interest – Author Knowledge – FAQ (Palmore, 1988)
Bergman, Erickson, & Simons, 2014	$\beta = .02$	300 college students Knowledge – FAQ- (Palmore, 1988)

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		Interest - Author
Boswell, 2012	$r = -.02$ $p > .01$	43 undergraduate students Knowledge – FAQ - (Palmore, 1988) Interest - Author
Ferguson, 2012	$r = .20$ $p < .05$	454 BSW/MSW students Interest – Author Knowledge - KAE
Gonçalves et al., 2010	$\beta = .12$ $p < .05$	460 undergraduate students Knowledge – FAQ - (Palmore, 1988) Interest - Author
Hughes & Heycox, 2006	$\beta = 0.41$ , $p < 0.01$	55 BSW students Knowledge – Olson Interest - Author
Olson, 2007	$p > .05$ no further detail provided	252 MSW students Attitudes – KAOP - (Kogan, 1961) Knowledge – Gerontology course
Anderson & Wiscott, 2003	$r = .33$ , $p < .001$	157 social work and gerontology students Knowledge – FAQ - (Palmore, 1988) Interest - Author
Paton et al., 2001	$p > .05$ , no further detail provided	175 Graduate Students interest – Author Knowledge – FAQ - (Palmore, 1988)
Camel, Cwikel, & Galinsky, 1992	$p < .05$ no further detail provided	First year medical students Third year SW students in Israel –

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Knowledge–FAQ  
(Palmore, 1988)  
then translated to  
Hebrew  
Interest – measured  
by preference in  
work setting

Self-  
efficacy

Attitudes

McBride & Hays, 2012	Multicultural counseling competency with attitudes $r(359) = -.41, p < .01$	361 masters and doctoral level counselors Attitudes – FSA - (Fabroni, 1990) Multicultural Counseling SE - MCKAS
Olson, 2011	$\beta = .23 p < .05$	252 MSW Students – SE – Olson, Attitudes - Author via modified KAOP – (Kogan, 1961)
Kane, 1999	$r = -.14 p < .05$	333 BSW,MSW students Attitudes – Author Self-Efficacy - Author

Knowledge

Olson, 2011	$\beta = .22 p < .05$	252 MSW students - Self-reported knowledge – SE – Author
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Contact

Attitudes

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Drury, Hutchison, & Abrams, 2016	Contact quality $\beta = .39 p < .001$ Contact frequency $\beta = .14 p = .22$	3 studies, (N=70,110, 95) Study 1 & 2 London university students, Study 3 82% employed, 18% students Contact – based on Turner et al., 2008 (as cited in Drury et al., 2016) Attitudes - Author
Chonody, Webb, Ranzijn, & Bryan, 2014	$r = -.14 p < .001$	441 grad students and faculty at one university in Australia Attitudes – ROPE – (Cherry & Palmore, 2008)
Sutton, 2013	$\beta = .36 p < .001$	266 Masters and Doc psych students Contact – CDP (Yuker, & Hurley, 1987) Attitudes – R-ASD, - (Polizzi, 2003) KAOP - (Kogan, 1961), FSA - (Fabroni, 1990)
Bousfield & Hutchison, 2010	Qual $r = .42 p < .01$ Freq $r = .15 p > .05$	55 London university students Contact – Author Attitudes – Rowland & Shoemake, 1995 as cited in Bousfield & Hutchison, 2010
Lee, 2009	Freq – pos Ageism $F = 11.17 p < .01$	125 university students

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	Freq – neg ageism $F = 4.19 p < .05$	Attitudes – KAOP - (Kogan, 1961) Contact (communication) - Author
Pettigrew & Tropp, 2006	Contact generally relates negatively and significantly to prejudice/attitudes (not specifically about older adults)	Meta analysis – 515 studies, mean rs from -.205 to -.214
Harwood, Hewstone, Paolini, & Voci, 2005	$r = .32 p < .001$	100 university students Contact(qual) – Inclusion of Other in Self Attitudes – ATOA (Wright et al., 1997)
Gellis, Sherman, & Lawrence, 2003	$r$ 's ranging from .00 to .05 $p > .05$	96 MSW students Attitudes – ASD - (Rosencranz & McNevin, 1969) Contact – Author
Ohanlon & Brookover, 2002	$p > .05$	55 students in gerontology courses Attitudes – ASD (Rosencranz & McNevin, 1969) Contact – Life history interview
Schwartz & Simmons, 2001	Qual $F(1,57) = 6.43 p$ $< .05$ Freq $F(1,57) = .05 p > .05$	62 undergraduate students Questionnaire - Author
Hale, 1998	$t(48) = 2.64, p < .01$	100 participants (50 young 50 “elderly”) Contact – based on

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			Peterson et al., 1988 as cited in Hale, 1998 Attitudes - Author
	Knox, Gekoski, & Johnson 1986	Qual $r = .21$ to $.49$ $p < .001$	Attitudes – ASD (Rosencranz & McNevin, 1969)
Knowledge			
	Hughes & Heycox, 2006	$p > .05$	55BSW students Knowledge – (Olson, 2007) Contact - Author
Knowledge			
Attitudes			
	Allan & Johnson, 2008	$r = -.198$ $p < .01$	113 Undergraduate students Knowledge – FAQ - (Palmore, 1988) Attitudes – FSA (Fabroni, 1990)
	Gordon, 2007	$r = .13$ $p < .05$	409 psychology doc students Knowledge – FAMHQ - (Palmore, 1988) Attitudes - KAOP - (Kogan, 1961)
	Olson, 2007	$F(1, 250) = 12.53, p < .001$	252 MSW students Attitudes – KAOP - (Kogan, 1961) Knowledge – Gerontology course
	Cummings, Adler, & DeCoster, 2005	$r = .25$ $p < .01$	Attitudes – ATAI – (Sheppard, 1981) Knowledge – FAQ – (Palmore, 1988)

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Stuart- Hamilton & Mahoney, 2003	$r = .325, p < .01$	200 employed participants Knowledge – FAQ - (Palmore, 1988) Attitudes – ASD - (Rosencranz & McNevin, 1969)
Gellis, Sherman, & Lawrence, 2003	$p < .01$	96 MSW students Attitudes – ASD - (Rosencranz & McNevin, 1969) Knowledge – FAQ - (Palmore, 1988)
Reed, Beall, & Baumhover, 1992	$r = .44, p < .001$	67 graduate MSW and Nursing students Knowledge – FAQ (Palmore, 1988) KAOP – (Kogan, 1961)

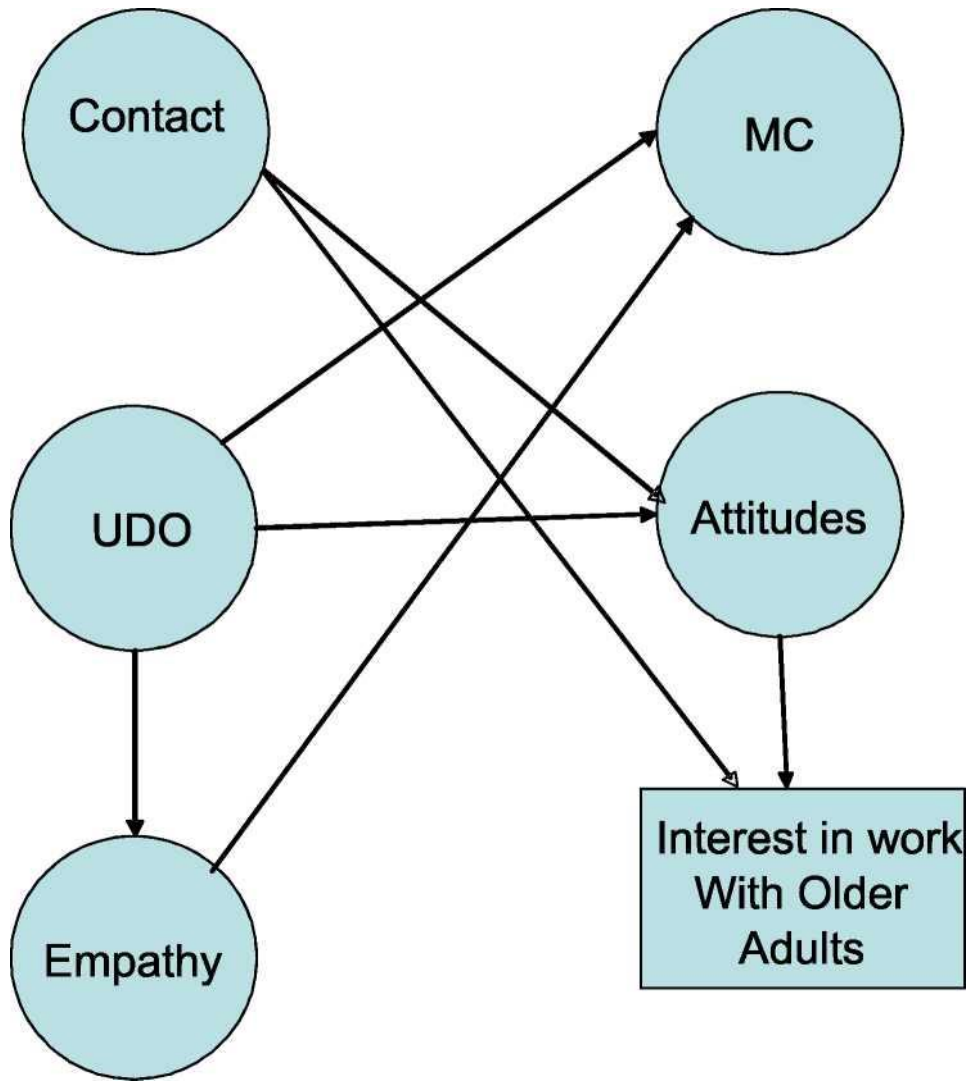
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Note  $p < .05$  is used for level of significance in each of the correlational studies. Author indicates that the author developed the questions or instrument used. If another authors name is used the items were initially developed by that other author. Developed scales are identified by their most commonly used acronyms.



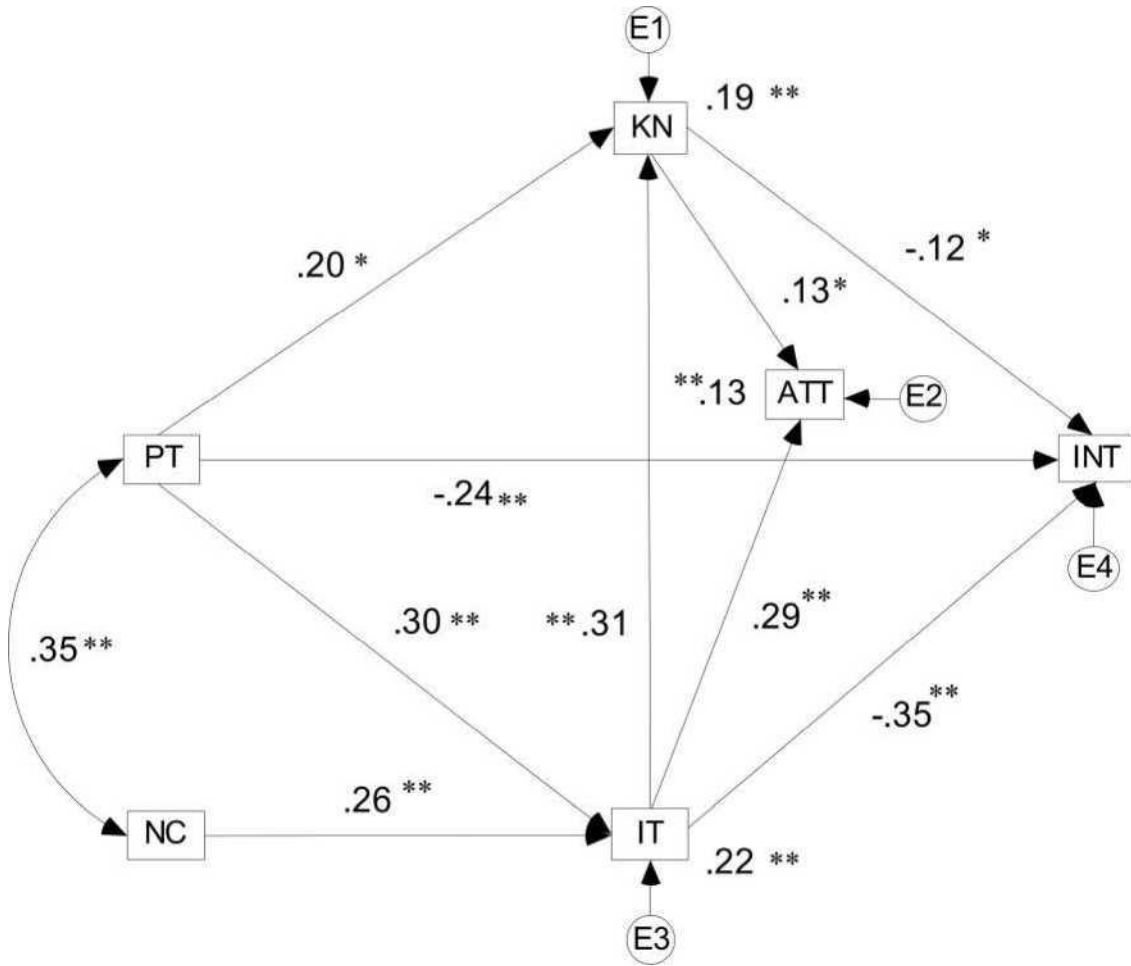
Appendix B: Conceptual Reduced Model - (Sutton, 2013)

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**Appendix C: Adjusted Path Model, (Gordon, 2007 p.63)**

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Note: Adjusted path model: Influence of previous training (PT), number of aging courses (NC), knowledge of aging and mental health (KN), attitudes toward older adults (ATT), and interest in geropsychology training (IT) on geropsychology training at the internship level (INT). E1-E4 represents the error variance associated with each measure. Numbers reported along the paths are standardized regression (beta) weights, and a correlation is reported along the arc. Numbers reported on the endogenous variables are squared multiple correlations. Coefficients on direct paths to INT are interpreted inversely due to the inverse transformation performed on this variable prior to analysis. \*  $p < .05$ ; \*\*  $p < .001$ .

Appendix D: Student Interest in Gerocounseling Scale – (Foster et al., 2009)

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1. The following is a list of topics that are more specific to working with older adults in a counseling setting. Please circle below which answer best describes your interest in counseling older individuals in the following topic areas. Circle one answer for each topic area.

Extent of interest in topic areas for older adults

	<b>Very Interested</b>	<b>Somewhat Interested</b>	<b>Not Sure</b>	<b>Somewhat Disinterested</b>	<b>Very Disinterested</b>
Grief Counseling					
Retirement Counseling					
Family Counseling with Aging Parents and Older Children					
Counseling Caregivers of Older Adults					

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2. The following is a list of work environments in which counselors may work with older adults. Please circle below which answer best describes your interest in working with individuals in the following work environments. Circle one answer for each area.

Extent of interest in work settings for older adults

	<b>Very Interested</b>	<b>Somewhat Interested</b>	<b>Not Sure</b>	<b>Somewhat Disinterested</b>	<b>Very Disinterested</b>
Hospice Care					
Geriatric Unit of a Hospital					
Nursing Home					
Private practice working primarily with older adults					
Community agency working primarily with older adults					

Appendix E: Initial Gerontological Counseling Competencies Scale – (O’Connor-  
Thomas, 2012)



## WORKING WITH OLDER ADULTS

Directions: Using the 5-point Likert scale below, please read the following statements and select the answer that best describes you.

	Describes me well		Describes me somewhat		Does not describe me at all
<b>1</b> I know the theoretical approaches which are most effective when counseling older adults	5	4	3	2	1
<b>2</b> I am able to aid older adults in the use of memory enhancing techniques to overcome cognitive deficits that may impact the counseling process.	5	4	3	2	1
<b>3</b> I know the assessment instruments that are psychometrically appropriate for use with older adults.	5	4	3	2	1
<b>4</b> I know about evidenced-based interventions with older adults.	5	4	3	2	1
<b>5</b> I am able to tailor assessment instruments created for younger individuals to the special needs of older adults.	5	4	3	2	1
<b>6</b> I am able to facilitate the retirement process with older adults.	5	4	3	2	1
<b>7</b> I am able to identify factors which facilitate the counseling process with older adults.	5	4	3	2	1
<b>8</b> I am able to adapt psychotherapeutic interventions for use with older adults.	5	4	3	2	1
<b>9</b> I am able to enhance health literacy skills of older adults.	5	4	3	2	1
<b>10</b> I am able to facilitate the process of choosing alternative careers for older adults in retirement.	5	4	3	2	1
<b>11</b> I know how to work in groups with older adults.	5	4	3	2	1
<b>12</b> I know about the formal and informal aging services network.	5	4	3	2	1
<b>13</b> I am able to modify the therapeutic environment to overcome the physical limitations of older adults.	5	4	3	2	1

## WORKING WITH OLDER ADULTS

<b>14</b> I demonstrate positive, wellness enhancing attitudes toward older adults	5	4	3	2	1
<b>15</b> I know the contributions of older adults to society.	5	4	3	2	1
<b>16</b> I know the common stereotypes of older adults.	5	4	3	2	1
<b>17</b> I understand how sociocultural factors can influence the mental health of older adults.	5	4	3	2	1
<b>18</b> I am able to apply effective communication skills with older adults.	5	4	3	2	1
<b>19</b> I know about the normal cognitive changes in older adults (e.g., short-term memory deficits, slower processing speed).	5	4	3	2	1
<b>20</b> I know about the biological aspects of aging (e.g., hearing changes, vision changes).	5	4	3	2	1
<b>21</b> I know about the abnormal cognitive changes in older adults (e.g., dementia).	5	4	3	2	1

Appendix F: Ambivalent Ageism Scale – (Cary et al., 2016)

## WORKING WITH OLDER ADULTS

	<b>1 = Strongly Disagree</b>	<b>2 = Disagree</b>	<b>3 = Slightly Disagree</b>	<b>4 = Neutral</b>	<b>5 = Slightly Agree</b>	<b>6 = Agree</b>	<b>7 = Strongly Agree</b>
<b>1.</b> It is good to tell old people that they are too old to do certain things; otherwise they might get their feelings hurt when they eventually fail.	1	2	3	4	5	6	7
<b>2.</b> Even if they want to, old people shouldn't be allowed to work because they have already paid their debt to society.	1	2	3	4	5	6	7
<b>3.</b> Even if they want to, old people shouldn't be allowed to work because they are fragile and may get sick.	1	2	3	4	5	6	7
<b>4.</b> It is good to speak slowly to old people because it may take them a while to understand things that are said to them.	1	2	3	4	5	6	7
<b>5.</b> People should shield older adults from sad news because they are easily moved to tears.	1	2	3	4	5	6	7
<b>6.</b> Older people need to be protected from the harsh realities of society.	1	2	3	4	5	6	7
<b>7.</b> It is helpful to repeat things to old people because they rarely understand the first time.	1	2	3	4	5	6	7
<b>8.</b> Even though they do not ask for help, older people should always be offered help.	1	2	3	4	5	6	7
<b>9.</b> Even if they do not ask for help, old people should be helped with their groceries.	1	2	3	4	5	6	7
<b>10.</b> Most old people interpret innocent remarks or acts as being ageist.	1	2	3	4	5	6	7
<b>11.</b> Old people are too easily offended.	1	2	3	4	5	6	7
<b>12.</b> Old people exaggerate the problems they have at work.	1	2	3	4	5	6	7
<b>13.</b> Old people are a drain on the health care system and the economy.	1	2	3	4	5	6	7

Appendix G: Palmore's Facts on Aging Quiz (FAQ1) Multiple-Choice Version (Harris et al., 1996)

## WORKING WITH OLDER ADULTS

\* correct answer

+ positive bias  
— negative bias  
0 neutral

1. The proportion of people over 65 who are senile (have impaired memory, disorientation, or dementia) is:

- a. about 1 in 100 +
- b. about 1 in 10 \*
- c. about 1 in 2 —
- d. the majority —

2. The senses that tend to weaken in old age are:

- a. sight and hearing +
- b. taste and smell +
- c. sight, hearing, and touch+
- d. all five senses \*

3. The majority of old couples:

- a. have little or no interest in sex —
- b. are not able to have sexual relations —
- c. continue to enjoy sexual relations \*
- d. think sex is only for the young —

4. Lung vital capacity in old age:

- a. tends to decline \*
- b. stays about the same among non-smokers +
- c. tends to increase among healthy old people +
- d. is unrelated to age +

5. Happiness among old people is:

- a. rare —
- b. less common than among younger people —
- c. about as common as among younger people \*
- d. more common than among younger people +

6. Physical strength:

- a. tends to decline with age \*
- b. tends to remain the same among healthy old people +
- c. tends to increase among healthy old people +
- d. is unrelated to age +

7. The percentage of people over 65 in long-stay institutions (such as nursing homes, mental hospitals, and homes for the aged) is about:

- a. 5% \*

## WORKING WITH OLDER ADULTS

- b. 10%
- c. 25%
- d. 50%

8. The accident rate per driver over age 65 is:

- a. higher than for those under 65 –
- b. about the same as for those under 65 —
- c. lower than for those under 65 \*
- d. unknown 0

9. Most workers over 65:

- a. work less effectively than younger workers –
- b. work as effectively as younger workers \*
- c. work more effectively than younger workers +
- d. are preferred by most employers +

10. The proportion of people over 65 who are able to do their normal activities is about:

- a. one-tenth —
- b. one-quarter –
- c. one-half –
- d. three-fourths \*

11. Adaptability to change among people over 65 is:

- a. rare –
- b. present among about half –
- c. present among most \*
- d. more common than among younger people +

12. As for old people learning new things:

- a. most are unable to learn at any speed –
- b. most are able to learn, but at a slower speed \*
- c. most are able to learn as fast as younger people +
- d. learning speed is unrelated to age +

13. Depression is more frequent among:

- a. people over 65 –
- b. adults under 65 \*
- c. young people 0
- d. children 0

14. Old people tend to react:

- a. slower than younger people \*
- b. at about the same speed as younger people +
- c. faster than younger people +
- d. slower or faster than younger people, depending on the type of test +

## WORKING WITH OLDER ADULTS

15. Old people tend to be:

- a. more alike than younger people –
- b. the same as younger people in terms of likeness 0
- c. less alike than younger people 0
- d. more alike in some respects and less alike in others \*

16. Most old people say:

- a. they are seldom bored \*
- b. they are sometimes bored –
- c. they are often bored –
- d. life is monotonous —

17. The proportion of old people who are socially isolated is:

- a. almost all –
- b. about half —
- c. less than a fourth \*
- d. almost none –

18. The accident rate among workers over 65 tends to be:

- a. higher than among younger workers —
- b. about the same as among younger workers –
- c. lower than among younger workers \*
- d. unknown because there are so few workers over 65 –

19. The proportion of the U.S. population now age 65 or over is:

- a. 3% 0
- b. 13% \*
- c. 23% 0
- d. 33% 0

20. Medical practitioners tend to give older patients:

- a. lower priority than younger patients \*
- b. the same priority as younger patients +
- c. higher priority than younger patients +
- d. higher priority if they have Medicaid +

21. The poverty rate (as defined by the federal government) among old people is:

- a. higher than among children under age 18 –
- b. higher than among all persons under 65 –
- c. about the same as among persons under 65 –
- d. lower than among persons under 65 \*



## WORKING WITH OLDER ADULTS

22. Most old people are:

- a. employed +
- b. employed or would like to be employed +
- c. employed, do housework or volunteer work, or would like to do some kind of work \*
- d. not interested in any work –

23. Religiosity tends to:

- a. increase in old age 0
- b. decrease in old age 0
- c. be greater in the older generation than in the younger generations \*
- d. be unrelated to age 0

24. Most old people:

- a. are seldom angry \*
- b. are often angry –
- c. are often grouchy —
- d. often lose their tempers –

25. The health and economic status of old people (compared to younger people) in the year 2010 will:

- a. be higher than now \*
- b. be about the same as now –
- c. be lower than now –
- d. show no consistent trend –

Appendix H: Contact Scale – Adapted from Islam & Hewstone, 1993

# WORKING WITH OLDER ADULTS

## Quantitative Aspects of Contact

Amount of contact with older adults (those age 65 or older)

1. How much contact have you had with older adults while in school or work experiences?  
Not at all -----A Great Deal

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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2. How much contact have you had with older adults as neighbors or people you live near.  
Not at all -----A Great Deal

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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3. How would you describe the frequency of your interactions with older adults who are close friends  
Not at all -----A Great Deal

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
----------	----------	----------	----------	----------	----------	----------

4. What is the frequency of your informal conversations with older adults  
Never-----Very Often

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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5. How would you describe the frequency of your visits to the home of an older adult  
Never-----Very Often

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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### Qualitative

1. Did you perceive your interactions with older adults as between equals?  
Definitely Not-----Definitely Yes

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
----------	----------	----------	----------	----------	----------	----------

2. Were your interactions with older adults involuntary or voluntary?  
Definitely Involuntary -----Definitely Voluntary

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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## WORKING WITH OLDER ADULTS

3. Were your interactions with older adults superficial or intimate?

Very Superficial-----Very Intimate

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
----------	----------	----------	----------	----------	----------	----------

4. Were your interactions with older adults experienced as pleasant?

Not at all-----Very

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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5. Were your interactions with older adults viewed as competitive or cooperative?

Very Competitive-----Very Cooperative

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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### Interpersonal

1. When you came into contact with older adults did you feel like you met as individuals or like a younger person and an older adult?

As Individuals-----As Group Members

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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2. You usually saw older adults with whom you had contact with as typical older adults

Not at all Typical-----Very Typical

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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Appendix I: Demographics Form

## WORKING WITH OLDER ADULTS

### General Demographics Questionnaire

**Directions:** Please review each item and select the most appropriate response. *All responses are anonymous.*

1. **What is your age?** \_\_\_\_\_
  
2. **What is your gender?**
  - Female
  - Male
  - Other (Please specify): \_\_\_\_\_
  
3. **What is your race/ethnicity?**
  - American Indian or Alaska Native
  - Asian
  - Black or African American
  - Hispanic or Latino
  - Multiracial
  - Native Hawaiian or Other Pacific Islander
  - White
  - Other: (please specify) \_\_\_\_\_
  
4. **What percentage of your program have you completed?** \_\_\_\_\_
  
5. **Which counseling specialization are you working toward?**
  - Clinical Mental Health Counseling
  - Marriage and Family Therapist
  - School Counseling
  - Other (Please specify): \_\_\_\_\_
  
6. **What is the PRIMARY age population that you would like to work with?**
  - Preschooler (e.g., 3-5)
  - Middle school (e.g., 5-12)
  - Adolescence (e.g., 12-18)
  - Young adulthood (e.g., 18-40)
  - Adulthood (e.g., 40-65)
  - Older adulthood (e.g., 65+)

## WORKING WITH OLDER ADULTS

- 7. Please select the age groups that you would MOST like to work with**
- Preschooler (e.g., 3-5)
  - Middle school (e.g., 5-12)
  - Adolescence (e.g., 12-18)
  - Young adulthood (e.g., 18-40)
  - Adulthood (e.g., 40-65)
  - Older adulthood (e.g., 65+)
- 8. How prepared do you feel to work with older adult clients (e.g., over the age of 65) based on your counseling training?**
- Very Prepared
  - Somewhat Prepared
  - Neither Prepared nor Unprepared
  - Somewhat Unprepared
  - Very Unprepared
- 9. How likely is it that you will pursue a counseling job in the near future specifically working with older adults (e.g., over the age of 65)?**
- Very likely
  - Likely
  - Somewhat likely
  - Somewhat unlikely
  - Unlikely
  - Very unlikely
- 10. Have any of your program courses addressed counseling older adults? (e.g., over the age of 65)?**
- Yes (if yes, please specify which courses \_\_\_\_\_)
  - No
- 11. What is/are the motivating factors for you to work with the population that you want to work with (Select all that apply)?**
- Personal interest, preference, or comfort with this population
  - Recognized need for counselors in that area
  - Job opportunity
  - Financial benefit
  - Sense of calling
  - Recent career development or career change
  - Potential impact on the clients
  - Skills or ability to work with those clients
  - Other (Please specify): \_\_\_\_\_

WORKING WITH OLDER ADULTS

12. What barriers keep you from wanting to work with older adults (e.g., clients over the age of 65), if any?

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**Please provide any additional comments you have regarding this study:**

**Thank you for participating in this study!**



**Appendix J: Informed Consent**



William & Mary  
School of Education

**Informed Consent**

<b>Title of the Project:</b>	Predictive Factors of Interest in Counseling Older Adults Among Masters Level Counseling Students
<b>Principal Investigator:</b>	Nathaniel J. Wagner, MA, LMHC
<b>Faculty Chair:</b>	Dr. Charles “Rip” McAdams III
<b>IRB Coordinator</b>	Dr. Tom Ward

Dear Student,

You are being invited to participate in a research study. To participate you must be 18 years of age or older and be enrolled in a masters level counseling program course. **You do not need to be interested in working with older adults to participate in this study.**

The purpose of this study is to examine how factors that may be related to students interest or lack thereof in counseling older adults (i.e. those 65 years of age and older) may correspond with, relate to, and contribute to students level of interest in working with older adults.

If you choose to participate in this study you will complete five sets of self-report questions. Each set of questions involves questions about you in regards to older adults. Also, you will be providing some general demographic information; however, your participation in the study and information shared will be **anonymous**, the demographic information collected will not be identifiable.

To complete the packet in its entirety should take between 10-15 minutes.

Participation in this research project is **Voluntary**. You do *not* have to answer any questions that you do not want to answer. You may withdraw from the study at any time without consequence.

**Questions or Concerns:**

If you have any questions, concerns, or complaints please contact Nathaniel J. Wagner, Doctoral Candidate, School of Education, School Psychology and Counselor Education program at [njwagner01@email.wm.edu](mailto:njwagner01@email.wm.edu) or Charles “Rip” McAdams, Dissertation Chair, Professor at William & Mary, School of Education School Psychology and Counselor Education program at [crmcad@wm.edu](mailto:crmcad@wm.edu)

**If you have concerns about your rights in the study, or to report a complaint:** Research at the William & Mary involving human participants is conducted with the oversight of the institutional review board (W&M IRB). If you have concerns about your rights or to report a complaint please contact Dr. Tom Ward at the number provided below.

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE

WORKING WITH OLDER ADULTS

COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS  
COMMITTEE (Phone 757-221-3966) ON 2017-08-15 AND EXPIRES ON 2018-08-15.

Appendix K: Instructions for Distribution

## WORKING WITH OLDER ADULTS

10/20/17

Dear Dr. [Name]

Thank you for your willingness to assist me with the collection of data for my dissertation study. This package should contain everything necessary for your class. Enclosed you should find, (a) instructions for distribution of packets (this document) (b) a pre-paid return label, and (c) [NUMBER] data completion packets for your class(es). Once, again, thank you for your participation in this project.

- ✓ **The Packets:** The first page of each packet contains the Informed Consent which will describe the research study, a demographic questionnaire and five assessment instruments. The Informed Consent includes an explanation that participation is optional, and participants may withdraw from the study at any time without consequence. Although the subject of the study is on interest in working with older adults, participants **Do NOT** need to have any experiences or interest in working with older adults to participate. The only participation requirements are that the student is currently enrolled in a masters level counseling program or class and **must be 18 years of age or older**. The Informed Consent page contains information to contact me, supervising faculty and the College of William & Mary School of Education Institutional Review Board.
- ✓ **Distribution Instructions:** For data collection please provide one packet to each student. The five assessments are a total of 80 questions and with the demographics section will be a total of 13 questions. As such, this assessment will likely take between 8-14 minutes for those who choose to complete it in its entirety. When students have completed their packet (or if they choose to not complete it), they can place the packet back in the blank envelope and return it to you to ensure anonymity of responses.
- ✓ **PLEASE NOTE:** Please inform students that the instruments contain printing on both sides of the paper. Also, please request that participants complete each section of survey, as each section should be applicable to all participants.
- ✓ **Extra Credit or Incentives:** This study is not controlling for incentives, and as such you are free to offer extra credit incentives for students participation in this study if you so choose. However, please note the importance of anonymity in this study. If you choose to offer extra credit I would encourage you do so on an honor system (such as through the signing of another sheet, or verbal agreement).
- ✓ **Return of Packets:** Once you have collected the data back into the original envelopes, please return them to me in the original box (or another box if the original was damaged) with the enclosed prepaid return label.

I greatly appreciate your willingness to assist with this project. if you have *any* questions or concerns, please feel free to contact me at: (727) 537-6693 or [njwagner01@email.wm.edu](mailto:njwagner01@email.wm.edu). Thank you for your time, your help is invaluable.

Kind Regards,



## WORKING WITH OLDER ADULTS

**Nathaniel J. Wagner, MA, LMHC**

Doctoral Candidate

Counselor Education and Supervision

The College of William & Mary

Phone: (727) 537-6693

Email: njwagner01@email.wm.edu

Appendix L: Contact Email

## WORKING WITH OLDER ADULTS

SUBJECT: Requesting Assistance with Dissertation Research on Interest with Older Adults

Dear [Name of Participant]:

My name is Nathaniel Wagner and I am a doctoral student (PhD in Counselor Education & Supervision) at the College of William and Mary. As you may know there is a significant growth in the older adult population (people aged 65 and older); yet, there is limited understanding about counselors' interest and confidence in working with this cliental population. Therefore, I am working under the supervision of Dr. Charles "Rip" McAdams III on a study to explore factors related to counselor trainees interest in clinical work with older adults.

To complete this study, we need to survey a large set of participants who are currently in a counselor training program. This survey consists of 5 instruments and a short demographics form that will take between 10-15 minutes to complete, and I need your help to make this research a success.

The survey will be conducted face-to-face and I need your help to distribute the survey packets to your students, preferably during or after a class. If you are amenable, I would be also willing to skype in to a class to discuss research in general, this research project, or the literature review with your class.

Your participation in this survey is *important* and will help contribute to the literature on counselor trainees knowledge, attitudes, preparedness, contact, and interest to work with older adults. We also hope to use information from this study to help inform training practices for counselor education programs. *Therefore, your responses to this survey are very important to us.*

To assist in this study, we are looking for you to distribute a packet to your students during, or after, a class period. This packet consists of an informed consent, 5 instruments and a short demographics form that will take between 10-15 minutes to complete. Should you agree to participate, I will mail you the packets along with a return envelope, you would simply need to provide the packets and then return them to me in the provided return envelope.

***All students participation in this survey is voluntary and responses will be anonymous.*** No personally identifiable information will be associated with their responses in any reposts of this data. Should you have any questions or comments, please feel free to contact me at njwagner01@email.wm.edu.

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone [757-221-3966](tel:757-221-3966)) ON 2017-08-15 AND EXPIRES ON 2018-08-15.

Thanks for taking the time to consider assisting me with this study. We hope you decide to participate and find it to be an enjoyable experience.

Kind Regards,

Nathaniel Wagner, MA, LMHC (FL)



## WORKING WITH OLDER ADULTS

Doctoral Candidate  
Counselor Education & Supervision  
The College of William & Mary  
School of Education  
P.O. Box 8795  
Williamsburg, VA 23187-8795

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