OLDER ADULTS’ INTENTIONS TO UTILIZE MENTAL HEALTH SERVICES: THE EFFECTS OF COHORT MEMBERSHIP

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CHAPTER I

Introduction

There is a vast amount of research that shows older adults are underutilizing mental health services (Biegel, Farkas & Song, 1997; Davies, Sieber & Hunt, 1994; Husaini, Moore, & Cain, 1994; Karlin, Duffy, & Gleaves, 2008; Quinn, Laidlaw, & Murray, 2009; Robertson & Mosher-Ashley, 2002; Segal, Coolidge, Mincic, & O’Riley, 2005). This gap becomes more pronounced when looking at older cohorts. The current cohort of older adults has the lowest rate of mental health service utilization when compared to all other age groups (Davies et al., 1994). Older adults are three times less likely to report receiving mental health treatment compared to younger adults (Karlin et al., 2008). This gap in service use is extremely important given the effectiveness of psychological treatments with older adults. A growing number of studies and meta-analyses report the high effectiveness of individual psychotherapies with elderly patients (Hillman & Stricker, 2002). Older adults who received mental health services reported gaining significant benefits which were at least as much as all other age groups (Karlin et al., 2008).
The fact that older adults are not utilizing mental health services is likely to become a larger problem as the population in the United States continues to age and the overall need for services increases. By 2025 it is estimated that 18.5% of the population will be over age 65 (Pickard, 2006). This is largely due to the “baby boomer” generation nearing the age of 65. “Baby boomers” are the term given to the 76 million persons born between the years of 1946 and 1964 in the United States after World War II (Haber, 2010). Members of the baby boomer generation currently make up over 40% of the adult population (Maples & Abney, 2006).

The baby boomer generation makes up a specific age cohort in United States history. A cohort can be defined as “the aggregate of individuals (within some population definition) who experienced the same event within the same time interval” (Ryder, 1965, p. 845). In nearly all research that looks at cohorts the defining event has been birth (Ryder, 1965). Birth cohorts provide important opportunities for societal transformations and should be studied as a concept for understanding social change (Ryder, 1965). Cohorts are an effective means of comparison because each cohort has distinctive characteristics that reflect the time in history in which it was formed (Ryder, 1965). Not only is this method effective, but it should be used in order to “capitalize on the congruence of social change and cohort identification” (Ryder, 1965, p. 843). Cohort effects have been shown in many areas of research including attitudes toward depression, body dissatisfaction, changes in attitudes toward gender roles, changes in religious behavior, empathy, and employment outcomes (Forbes et al., 2005; Grühn, Diehl, Rebucal, Lumley, & Lebouvie-Vief, 2008; Lippmann, 2008; Roger & Johnson-Greene,
Older Adults’ Intentions

2008; Twenge, 2001; Wilhelm, Rooney, & Tempel, 2007). Because of these findings it is important to look at potential cohort effects in the realm of mental health as well.

There is some evidence to suggest the presence of a cohort phenomenon in mental health service utilization (Koenig, George, & Schneider 1994; Veroff, Kulka, & Douvan, 1981). This is consistent with the concept of the “cohort clock,” which suggests that the time in history when a person grew up profoundly affects all components of his or her life, including attitudes and health (Garland & Garland, 2000; Knight, 2004). There is a belief that the baby boomer cohort will be more open to mental health services based on their current levels of receptivity (Haber, 2010; Koenig et al., 1994; Smith, 2007). There may be increases in the willingness of older adults to seek mental health services as the population becomes more “psychologically minded,” coupled with a decrease in the stigma toward psychological services (Smith, 2007).

The baby boomer generation is unique in their expectations for themselves and others. They have provided pressure for change across a number of social milieus. They are in better health than previous cohorts, have expectations of a higher quality of life, have different world views, and demand a higher standard of physical and mental health treatment (Maples & Abney, 2006). Because of these changes, baby boomers are likely to have greater control over health related decisions and a greater interest in health care in general. Despite these advances, the baby boomer generation is likely to have great need for mental health services. Compared to previous age cohorts, they suffer from increased family discord and higher divorce rates, have more chronic aches and pains, report lower amounts of physical exercise, may have delayed Social Security benefits, and are likely
to have to work later into life than previous cohorts (Maples & Abney, 2006). There are projections that the number of older adults with mental and behavioral health problems will nearly quadruple from four million in 1970 to 15 million in 2030 (American Psychological Association, 2008). This is mainly based on the baby boomer population getting older and the likelihood of unpleasant events inherent to older age. These may include anxiety and depression invoking experiences such as caregiver distress, coping with declining physical health, grief, family conflict, and dementia (American Psychological Association, 2008).

Based on their sheer numbers alone, the baby boomer generation is almost guaranteed to have a profound influence on what it means to age and grow old in the United States (Morgan, 1998). Baby boomers are now approaching old age and the current health care system poorly serves the mental health needs of the elderly (Pickard, 2006). Smith (2007) stated that as the baby boomers enter into their retirement years their psychological needs will become increasingly important. The mental health care system, as it stands now, is not prepared to meet the coming crisis in geriatric mental health (Pickard, 2006). The lack of mental health services provided to older adults is compounded by the lack of qualified mental health professionals serving older adults (Pickard, 2006). The present cohort of middle-aged adults is likely to put a lot of pressure on the mental health system to meet their demands as they enter older age (Currin, Schneider, Hayslip, & Kookan, 1998).

Many studies have looked at possible reasons why older adults are underrepresented in mental health service utilization. Some of these reasons include
older adults’ attitudes toward mental health, the stigma attached to mental health, the tendency to seek help from primary care physicians for mental health problems instead of mental health professionals, accurate identification of mental health symptoms, accurate perceptions of normal aging processes, self-efficacy, environmental barriers, and other societal barriers (Biegel et al, 1997; Currin et al., 1998; Davies et al., 1994; Husaini et al., 1994; Phillips & Murrell, 1994; Sarkisian, Hays, & Mangione, 2002; Smith, 2007; Woodward & Wallston, 1987). Though there is a lot of research on the subject, there is no definitive answer to explain the utilization gap.

To understand the reasons why older adults are underutilizing services it is important to look at their willingness and ability to seek services in the first place. One of the best ways of measuring this is through their intentions to seek mental health services. The theory of planned behavior (Ajzen, 1991) provides a succinct and comprehensive model for measuring intentions to engage in a specific behavior. The theory of planned behavior has strong empirical support for predicting, with a high level of accuracy, a person’s intention to perform a specific behavior by knowing his or her attitude toward the behavior, the subjective norm for engaging in the behavior, and the person’s perception of his or her level of control over engaging in the behavior (Ajzen, 1991). The theory of planned behavior has been used extensively in the health behavior literature as well as other literature that looks at socially related behaviors, including job searching, playing video games, problem drinking, leisure activity, cognitive task performance, election participation, voting choice, losing weight, attending class,
cheating, giving gifts (Ajzen, 1991) as well as physical activity among people with various chronic health conditions (Eng & Ginis, 2007; Latimer & Ginis, 2005).

Intention encapsulates motivational factors influencing behavior and represents how hard a person is willing to try and how much effort they are planning to put forth. A person’s intention to engage in a behavior, coupled with the perception of behavior control, largely explains actual behavior (Ajzen, 1991). Typically, when a person has a positive attitude toward the behavior, perceives that those close to him or her would approve of the behavior, and perceives fewer obstacles to the behavior, then a person’s intention to engage in the behavior will be stronger.

This study will use the theory of planned behavior as a model for predicting older adults’ intentions to seek mental health services. However, it is not prudent to conceptualize older adults as being a static and homogenous group. There is support to believe attitudes toward mental health are not necessarily a function of age, but rather a function of age cohort. Therefore, it may be more important to determine whether the baby boomer generation has similar intentions to seek services when compared to current cohorts of older adults. Furthermore, it is necessary to understand the unique contributions of specific variables toward their mental health service use.

However, when measuring mental health service utilization there are other important variables that need to be accounted for. Both gender and previous mental health utilization have been found to impact mental health seeking behavior. Numerous studies have determined that help seeking behavior seems to vary according to gender, with women more likely to seek mental health services than men (Addis & Mahalik,
This may be influenced by the fact that women tend to have more positive attitudes toward receiving professional psychological help (Ægisdóttir & Gerstein, 2009; Fischer & Turner, 1970; Good, Dell, & Mintz, 1989; Mackenzie et al., 2006; Mansfield, Addis, & Courtenay, 2005). There is a large body of empirical evidence that supports the belief that men are less likely to seek help from health professionals and are more unwilling to seek help for problems of daily living (Addis & Mahalik, 2003). Men appear to be socialized to avoid discussing problems with other people. Men who experience more negative consequences of socialized gender roles report less willingness to seek counseling and have less positive attitudes toward counseling services (Pederson & Vogel, 2007).

People with prior counseling experience are more likely to report having positive attitudes toward seeking mental health services (Ægisdóttir & Gerstein, 2009; Lopez, Melendez, Sauer, Berger, & Wyssman, 1998; Mackenzie et al., 2006; Vogel & Wester, 2003). Robertson and Mosher-Ashley (2002) found that familiarity with services was the variable most likely to lead to mental health consultation. This was defined as having previous exposure to outpatient psychological treatment or having friends or family members who had received psychological treatment.
Purpose of Study

The main purpose of this study was to expand upon the body of literature describing the relationship between older adults and mental health service utilization. While attention has been given to this topic in the literature, very few studies have empirically studied age cohort effects when looking at mental health service utilization. Further, even fewer studies have used sound methodology when measuring attitudes and intentions of older adults to utilize mental health services.

In particular, the study’s aim was to look at age cohort effects to determine whether or not baby boomers (born between 1946 and 1964) possessed similar or different intentions to seek mental health services when compared to a current cohort of older adults. This is important because there is a growing corpus of research suggesting that newer cohorts will be more open to psychological services. This proposition, coupled with less overall stigma surrounding the field in general, increases the importance of understanding whether or not baby boomers will suffer from the same amount of underutilization that current older adults experience. This study used Ajzen’s (1991) theory of planned behavior as a model for measuring intentions to seek mental health services because of its strong links to actual behavior. When there were differences between baby boomers and current older adult cohorts, then analyses were conducted to determine the nature of these differences and the relative influences of the different variables in the theory of planned behavior (attitudes, subjective norm and perceive behavioral control). Their relative contribution to the total variance in intentions
to use mental health services was controlled by including gender and prior service utilization in the analyses.
Definition of Terms

*Baby Boomer:* The term given to the 76 million persons born between the years of 1946 and 1964 in the United States (Haber, 2010). The baby boom is apparent when looking at fertility rates based on both the large increase in number of births as well as the rate women aged 15-44 were giving birth. These birth rates are magnified when comparing them to the previous period (1930-1945) when birth rates were low (Morgan, 1998). In this study it was measured by participants’ self-reported year of birth on the demographic form.

*Current Older Adult:* Persons aged 65 and older who were born in 1944 and earlier in the United States. In this study it was measured by participants’ self-reported year of birth on the demographic form.

*Attitude:* An attitude is defined as how positively or negatively a person evaluates a specific object or behavior. This is a reflection of behavioral beliefs. Attitudes are thought to develop from the beliefs that a person has about a particular object or behavior. Each belief is linked to a specific outcome which can therefore be evaluated as positive or negative (Doll & Ajzen, 1992). In this study it was measured by the participant’s score on the “expertness” factor of the Beliefs About Psychological Services scale (BAPS; Ægisdóttir & Gerstein, 2009).

*Subjective Norm:* The subjective norm is defined by how a person perceives the amount of social pressure to engage or to not engage in a specific behavior. This concept is a reflection of normative beliefs. As social pressure increases a person is either more or
less willing to engage in a behavior depending on the direction of the perceived social demands (Doll & Ajzen, 2002). In the present study it was measured by the four items on the Inventory of Attitudes toward Seeking Mental Health Services (IASMHS; Mackenzie, Knox, Gekoski, & Macaulay, 2004) which were designed to measure the concept of the subjective norm.

**Perceived Behavioral Control:** Perceived behavioral control is how easy or hard a person believes it would be to engage in a specific behavior. Perceived behavioral control is intended to reflect previous experiences and anticipated barriers to the behavior. These beliefs reflect the presence or absence of resources and opportunities to engage in a behavior. Sometimes these beliefs are based on direct previous engagement with the behavior, but they are more likely formed and influenced by second-hand information about the behavior (Doll & Ajzen, 2002). In the present study, it was measured by the three items on the IASMHS which were designed to measure the concept of perceived behavioral control.

**Intention:** An intention is a reflection of a person’s willingness and ability to engage in a specific behavior (Ægisdóttir & Gerstein, 2009). Under the theory of planned behavior a person’s performance on a particular behavior is primarily influenced by the intention to perform or not perform the behavior. The intention a person has encapsulates motivational factors influencing behavior and represents how hard a person is willing to try and how much effort they are planning to put forth (Ajzen, 1991). In the present study, it was measured by the participant’s score on the “intention” factor of the BAPS.
CHAPTER II

Review of Literature

U.S. Population Trends

The United States is an aging society with more people living longer. In 2004, the life expectancy in the United States was the highest it has ever been at an average age at death of 77.9 years old (Haber, 2010). In 1900, only 4% of the U.S. population was over age 65. Currently, 12.6% of the population is over age 65. By 2025 it is estimated that 18.5% of the population will be over age 65 (Pickard, 2006). Much of the reason for this coming older adult population explosion is due to the “baby boomer” generation nearing the age of 65.

“Baby boomers” are the term given to the 76 million persons born between the years of 1946 and 1964 in the United States after World War II (Haber, 2010). Members of the baby boomer generation currently make up over 40% of the adult population (Maples & Abney, 2006). They also occupy the largest 5-year age group born in the 20th century (Morgan, 1998). As seen in Figure 1, the baby boom is apparent when looking at
fertility rates based on both the large increase in number of births as well as the rate women aged 15-44 were giving birth (Morgan, 1998). These birth rates are magnified when comparing them to the previous period (1930-1945) when birth rates were low because of the Depression and World War II. It is posited that surviving the physical and emotional turmoil of World War II accelerated the maturation process (Morgan, 1998). Parents of the baby boomer generation got married and gave birth to approximately 76 million children during these 18 years. It was not until 1965 that fertility and birth rates in the United States returned to levels consistent with pre-war numbers (Maples & Abney, 2006).
Figure 1. Number of births (in millions) and fertility rates (the ratio of live births in an area to the population of that area; expressed per 1000 population per year) in the United States from 1905 through 1995 depicting the rise in birth rates between 1946 and 1964. Adapted from “Facts and figures about the baby boom,” by D. L. Morgan, 1998, Generations, 22, p.10.
The aging baby boomer population has many differences from current cohorts of older adults and will also possess differences that will distinguish them from future older adult cohorts. These differences fall under a variety of domains, including social, emotional, and spiritual, among others. The baby boomers are in much better health than previous cohorts of older adults and are likely to put more pressure on the health care system. The baby boomers have much higher quality of life expectations and will demand a higher standard of treatment both physically and mentally (Maples & Abney, 2006). The baby boomers also have vastly different world views from previous cohorts of older adults. This may largely be explained by the fact that they have lived in relative peace and have never had to experience global war (Maples & Abney, 2006). Their world view has also been greatly affected by a number of different technological and social trends. They have been exposed to other people and cultures through more advanced technology, improved communication means, and world travel. Also, since they did not grow up during the Depression, they did not have to experience the number of restrictions and deprivations that older cohorts have endured (Maples & Abney, 2006). Based on this information, older adults are likely to have greater expectations of mental health treatment as well. Not only are they likely to have high expectations, but there is also going to be a great need for mental health treatment.

Baby boomers suffer from many of the same concerns that the rest of the United States faces, but the way in which they deal with them may be more unique. One of the largest concerns facing the baby boomer population is changing family roles and increased family discord (Maples & Abney, 2006). There is an increasing divorce rate in
the baby boomer population which will create a number of problems that may not have existed in the past.

A second specific concern facing the baby boomer population is in the area of employment. Maples and Abney (2006) suggest that baby boomers could completely change the scope and attitude toward work and career. They state that the baby boomer population may be the first generation to have delayed Social Security benefits until the age of 67. They likely will not be able to count on social security as anything more than supplemental to their retirement income rather than its primary source. For this reason and others, older adults may have to work into their 80s instead of retiring in their 60s. Swan, Friis, and Turner (2008) suggest that baby boomers are more likely than previous cohorts to work at second careers later in life. Other reasons baby boomers may be required to work later into life include monetary concerns, enjoyment, fulfillment, security, and health insurance (Maples & Abney, 2006). However, there is a possibility that baby boomers may be more prepared financially for old age given their length of time in the workforce (Swan et al., 2008). Furthermore, because older adults are working into later life it increases the probability of being subjected to ageism and discrimination. Official age discrimination complaints rose 41% between 1999 and 2002 and most of them were reported by people ages 40-59 (Maples & Abney, 2006). Mental Health clinicians would be well suited to help older adults cope with career decisions and discrimination in older age if members of this population would be willing and able to seek services.
A third specific concern for the baby boomer generation is health and wellness. While the baby boomers are living longer and are in better general health than other cohorts, they still face some unique problems. They may be better at staving off acute harmful diseases, but 37% of baby boomers reported having chronic aches and muscle pains. A serious concern in this population is exercise, as 50% of males and 65% of females reported getting zero or minimal amounts of exercise. This is compounded by a large body of research linking physical health to mental health (Maples & Abney, 2006). Helping older adults to cope with chronic pain and health and wellness related concerns will be an important role for psychologists as the baby boomers continue to age.

Older Adults and Mental Health

Based on their sheer numbers alone, the baby boomer generation is almost guaranteed to have a profound influence on what it means to age and grow old in the United States (Morgan, 1998). Currin and colleagues (1998) assert that the present cohort of middle-aged adults is likely to put a lot of pressure on the mental health system to meet their demands as they enter older age (Currin, et al., 1998). Smith (2007) stated that as the baby boomers enter into their retirement years their psychological needs will become increasingly important. Koenig and colleagues (1994) referred to the year 2020 (when the middle of the baby boom cohort reaches age 65) as an impending crisis for mental health. This crisis is likely to occur because baby boomers have higher rates of emotional disorders when compared to current older adult cohorts and there is concern that these numbers may further increase as the baby boomers age and experience chronic
illness, disability, and shrinking social networks (American Psychological Association, 2008; Koenig et al., 1994).

The American Psychological Association (2008) projects that the number of older adults with mental and behavioral health problems will nearly quadruple from four million in 1970 to 15 million in 2030. Members of the baby boom cohort have higher rates of depression, suicide, anxiety, alcohol, and drug abuse when compared to present cohorts of older adults (Klerman & Weissman, 1989). Minardi and Hayes (2003) stated that depression (13.1%) and dementia (5.5%) are the two most commonly occurring mental health problems for those people over age 65, although dementia jumps to 20% over age 80. Kwong and Kwan (2003) described that older adults [in Hong Kong] are particularly prone to experiences of stress, and as a result, tend to exhibit mental symptoms, depression, and suicide. This situation becomes more dire when looking at older adults’ patterns of using mental health services.

There is an established body of research reporting that older adults underutilize mental health services (Biegel et al., 1997; Davies et al., 1994; Husaini et al., 1994; Karlin et al., 2008; Quinn et al., 2009; Robertson & Mosher-Ashley, 2002; Segal et al., 2005). This gap becomes more pronounced when looking at older cohorts. The current cohort of older adults (age 65 and older) has the lowest rate of mental health service utilization when compared to all other age groups (Davies et al., 1994). Karlin and colleagues (2008) found that older adults are three times less likely to report receiving mental health treatment when compared to younger adults. This gap in service use is extremely important given the effectiveness of psychological treatments with older
Older adults. A growing number of studies and meta-analyses report the effectiveness of individual psychotherapies with elderly patients (Hillman & Stricker, 2002). Older adults who received mental health services reported gaining significant benefits which were at least as much as all other age groups (Karlin et al., 2008).

This lack of mental health services provided to older adults is compounded by the lack of qualified mental health professionals serving older adults (Pickard, 2006). Baby boomers are now approaching old age and the current health care system poorly serves the mental health needs of the elderly. The mental health care system, as it stands now, is not prepared to meet the coming crisis in geriatric mental health (Pickard, 2006). This problem has not gone unnoticed by professionals who work with older adults. Dye (1978) described a growing frustration of gerontologists toward determining the reasons why elderly adults do not use mental health facilities in light of their mental health problems. Dye (1978) hypothesized that one of the reasons why older adults may underutilize mental health services is that there are negative attitudes within the mental health community toward working with older adults. However, she found that while psychologists may hold stereotypes toward older adults, they were interested in learning more about seeking out older clients in order to provide adequate care (Dye, 1978). Just because practitioners are interested in older adults and believe that older adults have the capacity to change does not mean that they are going to go out of their way to procure older adult clients. Further, having a positive attitude toward older adults will not mean as much if they are not willing to seek services.
Barriers to Mental Health Service Utilization

There is some evidence to suggest the presence of a cohort phenomenon in mental health service utilization (Currin et al., 1998; Koenig et al., 1994; Veroff et al., 1981). There is a belief that the baby boomer cohort will be more receptive and open to mental health services based on their current levels of receptivity (Haber, 2010; Koenig et al., 1994; Smith, 2007). There may be increases in the willingness of older adults to seek mental health services as the population becomes more “psychologically minded” coupled with a decrease in the stigma toward psychological services (Smith, 2007). It appears that as the social norm related to the utilization of mental health services becomes more positive there will be an increase in the willingness of older adults to seek services.

Attitudes toward mental health services may be an important barrier to older adults utilizing services. Using the theory of planned behavior as a model, Westerhof, Haessen, Bruijn, and Smets (2008) found that older adults’ attitudes (psychological openness) were related to the intention to seek preventative and therapeutic help in the Netherlands. Currin and colleagues (1998) hypothesized that newer cohorts of older adults would possess more positive attitudes toward counseling than older cohorts. They used two independent samples of older adults with one data collection point in 1977 when the mean age was 69.91 and one in 1991 when the mean age was 71.94. They posited that older adults, themselves, may be the most significant barrier to meeting their mental health needs. This is because older adults’ negative attitudes toward mental health services may lead to underutilization (Currin et al., 1998). Their results indicate a
positive cohort shift in attitudes toward mental health when controlling for age, level of
education, self-reported health, and income; supporting their hypothesis. These findings
showed that later born cohorts were less likely to view mental health problems in a rigid
and stereotyped manner, had a larger range of understanding what constituted “mental
health” problems, and were willing to seek help for a greater variety of issues (Currin et
al., 1998). This is the only study that examines cohort differences in older adults relating
to mental health attitudes. However, the questionnaires used in this analysis were
developed specifically for this one study and there is no conclusive evidence of their
reliability and validity. The scales used were constructed to measure various dimensions
of mental health attitudes including breadth of conceptions, bias, openness to help, and
range of problems. However, these questionnaires do not appear to have been generated
from any specific theory. Their usage is also not widely represented in the literature.

In regards to health care in general, (not distinctly mental health), younger adults,
in their 20s, have been found to have more positive attitudes (Thorson & Powell, 1991).
Younger adults had more positive attitudes toward seeking a physical examination,
stronger beliefs that diseases were more self-limiting, and stronger beliefs that they
would do the best that they could to take care of their own health (Thorson & Powell,
1991). These all suggest that compared to older adults, younger adults have more
positive attitudes toward taking an active role in seeking out health care. This finding is
not universally supported. Mackenzie and colleagues (2006) found that help-seeking
attitudes did not appear to be a barrier to seeking professional help among older adults.
Their study used age as a continuous variable and did not distinctly separate an older
adult group. However, there are considerable expectations that the attitudes held by older adults toward mental health services, will become more positive (Gatz & Smyer, 1992; Lebowitz & Niederehe, 1992). Also, there may be a reduction in the amount of stigma that is attached to mental health services. Stigma is another barrier to the underutilization of mental health services in the general population (Corrigan, 2004; Vogel, Wade, & Haake, 2006; Vogel, Wade, & Hackler, 2007). Stigma is defined as the perception of being flawed because one possesses a personal or physical characteristic that is seen as socially undesirable (Vogel et al., 2006). Attitudes regarding the stigma of having a mental health disorder are often seen as stronger in older populations. Currin and colleagues (1998) reported that current cohorts of older adults grew up during a time when mental illness carried a very negative stigma often accompanied by guilt. Older adults are also more likely to perceive people who are mentally ill as being embarrassing and having poor social skills (Segal et al., 2005). These types of negative stereotypes about people with mental illness may lead to older adults’ underutilization of mental health services. However, Knight (2004) suggested that as the baby boomer population gets older the demand for mental health services will become greater and the stigma regarding mental health services will fade. Veroff and colleagues (1981) looked at attitudes toward mental health and mental health utilization in 1957 and 1976. They found a positive increase in psychological orientation and attitudes toward mental health services. Possible explanations for these increases included scientific and technological advances, advances in communication and transportation, and the expanded role of the media (Veroff et al., 1981).
Accurate knowledge of where to go for problems related to mental health is another barrier preventing older adults from appropriately utilizing mental health services. Mackenzie and colleagues (2006) suggested that older adults’ intentions to visit primary care physicians may be an important barrier to helping them receive mental health services. When older adults do go to seek help, they tend to go to their general practitioner for mental health advice instead of a mental health professional (Phillips & Murrell, 1994). One study found that 111 out of a possible 120 mental health seekers went to their medical doctor for help, while only 17 went to a qualified mental health professional (six went to both) (Phillips & Murrell, 1994). Sixty percent of adults over the age of 55 had seen a doctor within the past six months, but only six percent had seen a mental health provider (Davies et al., 1994). Most of these contacts with mental health professionals were made by people who were in the 55-65 age range (Davies et al., 1994). This shows that newer cohorts of older adults may be more likely to use mental health services.

The ability to accurately identify symptoms that could be helped by mental health services is another barrier to service utilization. Older adults are less likely than younger adults to accurately perceive symptoms as being indicative of a mental health problem (Davies et al., 1994; Gurin, Veroff, & Feld, 1960; Karlin et al., 2008). Older adults appeared to observe the symptoms in a different way and were less likely to seek help if they had those same symptoms (Davies et al., 1994). One possible reason, why there is such a gap in utilization of mental health services between younger and older adults, is because of the way that symptoms are interpreted (Davies et al., 1994; Gurin et al., 1960).
Older adults seemed to have a more restricted range of what types of mental health symptoms would necessitate seeking help. For example, older adults were less likely than younger adults to identify affective mental health symptoms, such as depression, within themselves and their family that would require mental health services (Davies et al., 1994). Older adults are also found to be more likely to view symptoms of depression as personal failures that do not require treatment (Roger & Johnson-Greene, 2008). This may be reflective of the beliefs that older adults have regarding the natural aging process as it relates to mental health. Quinn and colleagues (2009) posited that poor understanding of late life mental illness may lead to the stereotyping of mental health problems in individuals who are primarily aging well. This stereotyping may lead to further underutilization.

Expectations of aging also seem to play a role in the determination to seek mental health services. Sarkisian and colleagues (2002) looked at older adults’ perception of their ability to maintain high cognitive and physical functioning (an optimal aging paradigm) and its relation to health care beliefs. They found that most older adults did not expect to attain this successful model of aging. Furthermore, having lower expectations related to aging was associated with a stronger belief that it is not important to seek health care (Sarkisian et al., 2002).

Similar to models of aging expectations, self-efficacy is also a barrier to mental health service utilization. Woodward and Wallston (1987) looked at the health care beliefs of older adults by examining the role of self-efficacy with respect to the desire for health-related information. Using the health care self-efficacy scale, they found that
people over the age of 60 had lower health-related self-efficacy, desired less health-related control than younger adults, and preferred other people to make health related decisions for them (Woodward & Wallston, 1987). Perceived self-efficacy was found to mediate the age differences in the desire for control in health related decisions. It is conceivable that perceived self-efficacy is related to the amount of behavioral control that older adults have over health care decisions and the ability to receive services. With increased perceptions of quality of care and increased health care expectations baby boomers are likely to have greater self-efficacy in regards to receiving services.

Not all of the barriers to utilizing psychological services are internal. Some are related to environmental or external sources. Phillips and Murrell (1994) found that people who were seeking help for mental health problems had a higher reporting of unpleasant stressful events, had poorer psychological well-being, reported more physical health problems, and had greater perceived deficits in the amount of social support they receive. Specific stressful events typically faced by these older adults included bereavement, social/economic loss, and the acquisition of new physical illnesses (Phillips & Murrell, 1994). Meeks and colleagues (1990) found that there was a failure of the chronically ill elderly to use mental health services, not for lack of need, but because the mental health services did not seem to be meeting the unique needs of the population. These unique needs included taking into consideration the chronically ill elderly’s a) perception of financial needs, b) living situation, c) problems with transportation and medical expenses, d) ratings of current health, and e) need for mental health and other services. Other environmental or systemic barriers to mental health services for older
Older Adults’ Intentions

adults include lack of accessibility, fragmentation of services, lack of supports provided to informal helpers, lack of specialized mental health services, and age differences between providers and older adults (Biegel et al., 1997). Lack of education of older adults and their family also played a role in the utilization of mental health services (Meeks et al., 1990). Karlin and colleagues found that the two most frequent reasons older adults did not seek mental health services when they needed them were not knowing where to go for services and not being able to afford treatment. Because of these external and environmental barriers it is important to consider the older adult’s perceived ability to obtain help, when looking at intentions to utilize mental health services. Westerhof and colleagues (2008) found that help-seeking propensity, which was conceptualized as a measure of perceived behavioral control, was related to older adults’ intentions to seek preventative and therapeutic help. However, there are also other important variables that explain individual differences in mental health seeking behavior.

Age Cohorts

A cohort can be defined as “the aggregate of individuals who experienced the same event within the same time interval” (Ryder, 1965, p. 845). In nearly all research that looks at cohorts the defining event has been birth (Ryder, 1965). Birth cohorts provide important opportunities for societal transformations and should be studied as a concept for understanding social change (Rentz & Reynolds, 1991; Ryder, 1965). When change occurs over time it allows for the differentiation among cohorts and studying cohorts is an effective way of understanding these changes. Cohorts are an effective
means of comparison because each cohort has distinctive characteristics that reflect the time in history it was formed (Ryder, 1965). Not only is this method effective, but it should be used in order to “capitalize on the congruence of social change and cohort identification” (Ryder, 1965, p. 843).

Following the notion of cohort effects, Knight (2004) constructed the idea of the “cohort clock” to describe the differences that occur among people who grew up during different generations. The cohort clock suggests that when a person grew up in history has a profound effect on all components of the person’s life. This is a good way to understand the differences that exist between individuals (Garland & Garland, 2000; Knight, 2004). Different cohorts experience different types of socialization that serve to distinguish them from people born earlier and later than them. Successive cohorts are differentiated from one another based on the content of formal education, peer group socialization, and idiosyncratic historical experiences (Ryder, 1965). These characteristics tend to stay relatively stable over time. Such factors may include beliefs regarding health and health care, music, the perception of current trends, abilities, attitudes, values, expectations, experiences, and personality dimensions (Knight, 2004).

Cohort effects may even be more important than an individual’s particular age in helping to understand attitudes and beliefs (Knight, 2004). This is important because it helps to normalize feelings during the aging process. Attitudes and thoughts may not be a mere side effect of getting older, but rather are a result of not growing up under the same situations and place in time as more current generations (Garland & Garland, 2000; Knight, 2004). It is important to decipher differences between groups as functions of
cohort membership versus mere maturation effects. Recognizing differences among cohorts may facilitate appropriate expectations for mental health and mental health treatment. It may also serve to explain certain trends in mental health care utilization. This is important because very little research has been conducted that looks at the effects of sociocultural influences or effects related to maturation (Currin et al., 1998).

More recent research has supported the idea of cohort differences in various contexts. Cohort differences have been demonstrated related to attitudes toward depression (Roger & Johnson-Greene, 2008), body dissatisfaction (Forbes et al., 2005), empathy (Grühn et al., 2008), changes in women’s attitudes in response to status and roles (Twenge, 2001), religious giving, secular giving, and religious attendance (Wilhelm et al., 2007), and post-displacement employment outcomes (Lippmann, 2008). Because of these findings it is also important to look at potential cohort effects in the realm of mental health.

Investigators have indicated that one of the largest methodological barriers to conducting life-span development research is the near impossibility of differentiating between age, period, and cohort effects (Costa & McCrae, 1982; Rentz & Reynolds, 1991). Age effects are those related to the maturation of a person. Period effects are those related to the time in which the research takes place. Previous research typically defined cohort membership as the generation a person was born in (Costa & McCrae, 1991). Typically, all three are used as analytical tools to understand behavior. Rosenberg and Letrero (2006) suggest that cohort effects are assumed to stay relatively stable and are therefore representative of the cohort no matter when in time they are
studied. Age effects, which happen to everyone as a function of getting older, are best understood through longitudinal research which is beyond the scope of the current study. Period effects, which reflect changes in the population due to historical events, cannot be directly controlled for and are difficult to identify. Given that previous research has established that baby boomers, as a cohort, have differing attitudes and preferences it is reasonable to analyze attitudes toward mental health as a cohort effect.

Based on the large size of the baby boomer cohort it is important to look at the unique characteristics it possesses and the impact it will have on society. Ryder (1965) suggested that the size of a cohort is an important variable in understanding its impact. The larger a cohort is, relative to the cohorts around it, the larger imprint it is likely to have on society. As the cohort reaches each major juncture in the life cycle, society faces the challenge of meeting the individual demands of the cohort (Ryder, 1965). Therefore, as the baby boomers reach older adulthood it is important to understand what will be required of the mental health community to meet their demands.

**Help Seeking and Gender**

Researching older adults as if they were a homogenous group ignores individual differences and is problematic. Numerous studies have determined that help seeking behavior seems to vary according to gender, with women more likely to seek mental health services than men (Addis & Mahalik, 2003; Mackenzie, et al., 2006; Pederson & Vogel, 2007). This may be influenced by the fact that women tend to have more positive attitudes toward receiving professional psychological help (Ægisdóttir & Gerstein, 2009; Fischer & Turner, 1970; Good et al., 1989; Mackenzie et al., 2006; Mansfield et al.,
Veroff and colleagues (1981) found that women, both in 1957 and 1976 were more likely to spontaneously bring up professional help when asked about personal problems, including mental health. Good and colleagues (1989) reported that two-thirds of all clients seeking psychological services are female. When looking at help-seeking in general, not just from a professional, women were more likely to talk to friends and relatives while men were more likely to drink alcohol more than usual and go for long walks (Husaini et al., 1994).

There is a large body of empirical evidence that supports the belief that men are less likely to seek help from health professionals and are more unwilling to seek help for problems of daily living (Addis & Mahalik, 2003). Men appear to be socialized to avoid discussing problems with other people. Men who experience more negative consequences of socialized gender roles report less willingness to seek counseling and have less positive attitudes toward counseling services. Attitudes were found to have a mediating effect between traditional masculine ideology and psychological help-seeking intentions (Smith, Tran, & Thompson, 2008). Therefore, male gender role conflict and adherence to traditional masculine ideologies seems to play an extremely large role in their underutilization of services (Berger, Levant, McMillan, Kelleher, & Sellers, 2005; Blazina & Marks, 2001; Blazina & Watkins, 1996; Good et al., 1989; Lane & Addis, 2005; Pederson & Vogel, 2007). Giving further credence to the methodology used in this study, Smith and colleagues (2008) suggest that the theory of planned behavior is an effective model in understanding men’s psychological help-seeking.
Previous Help-Seeking Experience

Familiarity with mental health services is a significant factor that influences a person’s likelihood of seeking professional psychological help. People with prior counseling experience are more likely to report having positive attitudes toward seeking mental health services (Ágisdóttir & Gerstein, 2009; Lopez et al., 1998; Mackenzie et al., 2006; Quinn et al., 2009; Vogel & Wester, 2003; Woodward & Pachana, 2009).

Robertson and Mosher-Ashley (2002) found that familiarity with services was the variable most likely to lead to mental health consultation. This was defined as having previous exposure to outpatient psychological treatment or having friends or family members who had received psychological treatment. Solberg, Ritsma, Davis, Tata, and Jolly (1994) found that college students who indicated having previous counseling experience reported greater willingness to seek help from a university counseling center.

While few studies have directly looked at previous service use, it is often used as an important covariate that needs to be accounted for.

Theory of Planned Behavior

In looking at older adults’ willingness to seek psychological services, one of the most easily measurable and widely accepted determinants is their intention to use services. Ajzen and Fishbein (1980) described the theory of reasoned action as a model for determining behavior change and asserted that a person’s performance on a particular behavior is primarily influenced by the intention to perform or not perform the behavior. In 1991, the theory of reasoned action was updated to address limitations in predicting behaviors that are not under a person’s own control (Ajzen, 1991). This updated theory
was renamed the theory of planned behavior. The theory of planned behavior has strong empirical support for predicting, with a high level of accuracy, a person’s intention to perform a specific behavior by knowing his or her attitude toward the behavior, the subjective norm for engaging in the behavior, and the person’s perception of his or her level of control over engaging in the behavior (Ajzen, 1991) (see Figure 2). The intention a person has encapsulates motivational factors influencing behavior and represents how hard a person is willing to try and how much effort they are planning to put forth. A person’s intention to engage in a behavior, coupled with the perception of behavior control, largely explains actual behavior (Ajzen, 1991). Therefore, in testing a person’s participation in a behavior, one would only need to measure the intention to engage in the behavior, and not obtain a measurement of the behavior, itself.

The three variables of behavioral attitude, subjective norm, and perceived behavioral control are sufficient in predicting the engagement in a behavior (Ajzen, 1991). Under some situations only one or two of the variables will have a significant effect on intentions, while in others all three variables make individual contributions and play an important role in accounting for intentions.

The theory of planned behavior is based on the important role that beliefs play in relation to relevant behaviors. While people are able to maintain a multitude of beliefs about many different topics only a small number of salient beliefs are important in determining intentions and actions (Ajzen, 1991). There are three separate types of salient beliefs that should be distinguished from one another because of their individual importance to behavior. These include behavioral beliefs, normative beliefs, and control
beliefs. These types of salient beliefs are reflected in the three variables in the theory of planned behavior.
The attitude toward the behavior refers to how positively or negatively a person evaluates a specific behavior (Doll & Ajzen, 1992). This is a reflection of behavioral beliefs. Attitudes are thought to develop from the beliefs that a person has about a particular object or behavior. Each belief is linked to a specific outcome which can therefore be evaluated as positive or negative.

The subjective norm refers to how a person perceives the amount of social pressure to engage or to not engage in a behavior (Doll & Ajzen, 1992). This concept is a reflection of normative beliefs. As social pressure increases a person is either more or less willing to engage in a behavior depending on the direction of the perceived social demands. As the United States population becomes more psychologically minded the norms related to mental health services are likely to affect different cohorts of older adults in different ways.

Perceived behavioral control, which is intended to reflect previous experiences and anticipated barriers to the behavior, refers to how easy or hard a person believes it would be to engage in the behavior (Doll & Ajzen, 1992). As its name suggests, this is a reflection of control beliefs. Ajzen (1991) based the concept of perceived behavioral control on the idea of self-efficacy. However, later research showed that this is a similar but distinct concept from self-efficacy (Ajzen, 2001). Perceived behavioral control reflects whether people believe they have volitional control over the performance of a behavior. Self-efficacy on the other hand refers to the degree of perceived difficulty in performing a behavior (Ajzen, 2001). Beliefs reflecting behavioral control reflect the presence or absence of resources and opportunities to engage in a behavior. Sometimes
these beliefs are based on direct previous engagement with the behavior, but they are more likely formed and influenced by second-hand information about the behavior (Ajzen, 1991). When intention is held constant, a person’s effort that he or she is willing to expend will increase as the behavioral control he or she has over the event increases. While not always the case, perceived behavioral control can usually be used as a substitute measure of actual control (Ajzen, 1991). Naturally, this probability increases when a person has accurate interpretations of control. Accurate perceptions decrease when a person has little information about the behavior, when requirements or resources have changed, or when new or unique elements have entered into the situation (Ajzen, 1991). The inclusion of perceived behavioral control into the model is most important when volitional control over the behavior declines. This may be important for older adults who are under the care of other people or have limited transportation and access to services. Typically, when a person has a positive attitude toward the behavior, perceives that those close to him or her would approve of the behavior, and perceives fewer obstacles to the behavior, then a person’s intention to engage in the behavior will be stronger.

The theory of planned behavior has been used extensively in the health behavior literature as well as other literature that looks at socially related behaviors, including job searching, playing video games, problem drinking, leisure activity, cognitive task performance, election participation, voting choice, losing weight, attending class, cheating, giving gifts, (Ajzen, 1991) as well as physical activity among people with various chronic health conditions (Eng & Ginis, 2007; Latimer & Ginis, 2005). A meta-
analysis of studies using the theory of reasoned action and theory of planned behavior to predict intentions to attend screening programs and actual attendance showed that, as a whole, attitudes had a large-sized relationship with intention, while subjective norms and perceived behavioral control had medium-sized relationships (Cooke & French, 2008). However, few studies have used the theory of planned behavior as a model for predicting mental health seeking behavior, and none have used it when looking at the mental health seeking behavior of older adults.

**Measurement of Attitudes**

Mackenzie and colleagues (2004) reported that while the relationship between attitudes and mental health services has been studied for over three decades, still little is definitively understood about the connections between the two. They state that one of the reasons for this is the way that attitude measures have been constructed in the past. In particular, the authors were referring to the exclusion of social psychology principles, such as the theory of planned behavior, which have proven to help explain people’s attitudes (Mackenzie et al., 2004). They stated that of all the measures that exist, the best attitude measure is likely Fischer and Turner’s (1970) Attitudes toward Seeking Professional Psychological Help scale (ATSPPH) because of the way it was constructed and empirically validated. However, Mackenzie and colleagues (2004) note a number of theoretical and methodological concerns with the ATSPPH. These critiques follow below.

Mackenzie and colleagues (2004) chose to expand the ATSPPH by updating it and adding items to create the IASMHS. They chose to update and adapt the ATSPPH
instead of creating a new attitude instrument because it was fundamentally constructed well and a large body of literature is based on its use. In the creation of this inventory, the authors addressed limitations present in the ATSPPH. Mackenzie and colleagues (2004) changed the language of the scale to make it more gender neutral and expanded the definition of mental health professional from psychologists and psychiatrists to include more broad definitions. They changed the Likert scale items from having four points to five points. They used a community sample instead of using only students in constructing the scale and used more up to date factor analytic techniques in analyzing the scale. Furthermore, they constructed twelve more questions to represent Ajzen’s (1991) constructs of the subjective norm and perceived behavioral control. Of the twelve items that were created, seven were kept for the final scale. Four items were added to assess the subjective norm and three items were added to assess perceived behavioral control. This was done because Fischer and Turner (1970) did not use psychological constructs that were shown in the literature to accurately measure attitudes (Mackenzie et al., 2004). Therefore, the additional items included in the scale were designed to clearly measure constructs present in Ajzen’s (1991) theory of planned behavior.

Similar to the IASMHS, the Beliefs About Psychological Services scale (BAPS; Ægisdóttir & Gerstein, 2009) was also constructed to address the shortcomings of the widely used ATSPPH and its short form. Ægisdóttir and Gerstein (2009) stated that these shortcomings included the wording of items, generation of items, interchangeability of the terms “psychiatrist,” “counselor,” and “psychologist,” the construct validity of the scale, and its factor structure.
Summary

The current study used the theory of planned behavior as a model for determining the intention of older adults to utilize mental health services. By obtaining intentions to utilize mental health services, older adults’ actual utilization was predicted. This is important because even though researchers have investigated the topic of older adults and mental health service use, very few studies have empirically studied age cohort effects when looking at mental health service utilization. Further, even fewer studies have done so using sound methodology in measuring all important constructs.

Each older adult age cohort has distinctive characteristics which reflect the time in history in which it was formed (Ryder, 1965). Studying cohorts is an important trend in current research and is an efficient way to understand if and how attitudes are changing. As the baby boomers reach older adulthood it will be important for the mental health community to meet their needs.

However, because of previously found differences in the help-seeking behavior of men and women and people with previous mental health service utilization, it is important to separate these variables during analysis. Using the theory of planned behavior as a theoretical model, this study investigated the relative impact of attitudes toward mental health, subjective norm, perceived behavioral control, and intentions to utilize mental health services while controlling for gender and prior mental health experience.
Research Questions

1. Do men and women differ in their attitudes toward mental health services?

2. Do men and women differ in how much they are affected by the subjective norm toward seeking mental health services?

3. Do men and women differ in their perceived behavior control over seeking mental health services?

4. Do men and women differ in their intentions to seek mental health services?

5. Do people with previous mental health service utilization differ in their attitudes toward mental health services?

6. Do people with previous mental health service utilization differ in how much they are affected by the subjective norm toward seeking mental health services?

7. Do people with previous mental health service utilization differ in their perceived behavioral control over seeking mental health services?

8. Do people with previous mental health service utilization differ in their intentions to seek mental health services?

9. Do baby boomers differ from current cohorts of older adults in their attitudes toward mental health services?

10. Do baby boomers differ from current cohorts of older adults in how much they are affected by the subjective norm toward seeking mental health services?
11. Do baby boomers differ from current cohorts of older adults in their perceived behavioral control over seeking mental health services?

12. Do baby boomers differ from current cohorts of older adults in their intentions to seek mental health services?

13. Can gender, previous mental health service use, attitude toward mental health services, the subjective norm toward seeking mental health services, and perceived behavioral control over seeking mental health services predict baby boomers’ intentions to seek mental health services?

14. Can gender, previous mental health service use, attitude toward mental health services, the subjective norm toward seeking mental health services, and perceived behavioral control over seeking mental health services predict older adults’ intentions to seek mental health services?
Research Hypotheses

1. Women will have more positive attitudes toward mental health services when compared to men.

2. Women will be less affected by the subjective norm toward seeking mental health services when compared to men.

3. Women will have greater perceived behavioral control over seeking mental health services when compared to men.

4. Women will have greater intentions to seek mental health services when compared to men.

5. People with previous mental health service utilization will have more positive attitudes toward mental health services when compared to people with no previous mental health service utilization.

6. People with previous mental health service utilization will be less affected by the subjective norm toward seeking mental health services when compared to people with no previous mental health service utilization.

7. People with previous mental health service utilization will have greater perceived behavioral control over seeking mental health services when compared to people with no previous mental health service utilization.
8. People with previous mental health service utilization will have greater intentions to seek mental health services when compared to people with no previous mental health service utilization.

9. Baby boomers will have more positive attitudes toward mental health services when compared to current cohorts of older adults.

10. Baby boomers will be less affected by the subjective norm toward seeking mental health services when compared to current cohorts of older adults.

11. Baby boomers will have greater perceived behavioral control over seeking mental health services when compared to current cohorts of older adults.

12. Baby boomers will have greater intentions to seek mental health services when compared to current cohorts of older adults.

13. Gender, previous mental health service use, attitude toward mental health services, the subjective norm toward seeking mental health services, and perceived behavioral control over seeking mental health services will predict baby boomers’ intentions to seek mental health services.

14. Gender, previous mental health service use, attitude toward mental health services, the subjective norm toward seeking mental health services, and perceived behavioral control over seeking mental health services will predict older adults’ intentions to seek mental health services.
CHAPTER III

Method

Participants

The participants consisted of 401 older adults and baby boomers. Of these 401 participants, 153 (38.2%) were in the older adult group and 248 (61.8%) were in the baby boomer group. The age range for the older adult sample was 65 to 97 years. The age range for the baby boomer sample was 44 to 63 years. See Table 1 for means and standard deviations of demographic variables.

The study consisted of 160 male participants (39.9%) and 241 female participants (60.1%). The older adult sample consisted of 87 male participants (56.9%) and 66 female participants (43.1%). The baby boomer sample consisted of 73 male participants (29.4%) and 175 female participants (70.6%). See Table 1.

Education. In the overall sample, 0.2% of the participants \( (n = 1) \) had some High School, 4.7% \( (n = 19) \) were High School graduates, 9.5% \( (n = 38) \) had some College, 5.2% \( (n = 21) \) had an Associate’s degree, 13.7% \( (n = 55) \) had a Bachelor’s degree, 25.4%
(n = 102) had a Master’s degree, and 41.1% (n = 165) had a professional degree. In the older adult sample, 7.8% (n = 12) were High School graduates, 7.2% (n = 11) had some College, 2% (n = 3) had an Associate’s degree, 3.9% (n = 6) had a Bachelor’s degree, 23.5% (n = 36) had a Master’s degree, and 55.6% (n = 85) had a professional degree. In the baby boomer sample, 0.4% (n = 1) had some High School, 2.8% (n = 7) were High School graduates, 10.9% (n = 27) had some College, 7.3% (n = 18) had an Associate degree, 19.8% (n = 49) had a Bachelor’s degree, 26.6% (n = 66) had a Master’s degree, and 32.3% (n = 80) had a professional degree. See Table 1.

Race. In the overall sample, 395 participants (98.5%) identified as White, 2 (0.5%) identified as Black/African American, and 3 (0.7%) identified as other, which included “European American,” “American,” and a mixture between White, Black/African American, and American Indian or Alaska Native. One participant (0.2%) declined to indicate a race. In the older adult sample, 153 (100%) of the participants identified as White. In the baby boomer sample, 242 (97.6%) identified as White, 2 (.8%) identified as Black/African American, 3 (1.2%) identified as other, and 1 (.4%) declined to respond. See Table 1.

Marital Status. In the overall sample, 278 participants (69.3%) were married, 55 (13.7%) were divorced, 31 (7.7%) were widowed, and 37 (9.2%) had never been married. In the older adult sample, 100 participants (65.4%) were married, 17 (11.1%) were divorced, 25 (16.3%) were widowed, and 11 (7.2%) had never been married. In the baby boomer sample, 178 participants (71.8%) were married, 38 (15.3%) were divorced, 6 (2.4%) were widowed, and 26 (10.5%) had never been married. See Table 1.
Previous Mental Health Experience. Participants were asked whether or not they had any previous experience receiving mental health services from a traditional mental health service provider, such as a psychologist, psychiatrist, counselor, or social worker. If they responded yes to the question then they were asked to identify whom they had received services from by choosing from a list including psychologist, psychiatrist, counselor, and social worker. They were also asked if they had ever gone to their primary care doctor for mental health services. In the overall sample (n = 401), 213 (53.1%) participants indicated that they had previous mental health experience. Of the total sample (n=401), 138 (34.4%) had seen a psychologist, 56 (14%) had seen a psychiatrist, 114 (28.4%) had seen a counselor, and 29 (7.2%) had seen a social worker. In addition, 79 participants (19.7%) had gone to their primary care doctor for mental health services. In the older adult sample (n = 153), 68 participants (44.4%) had previous mental health experience. Of these 153, 46 participants (30.1%) had seen a psychologist, 18 (11.8%) had seen a psychiatrist, 27 (17.6%) had seen a counselor, and 6 (3.9%) had seen a social worker. In addition, 17 older adults (11.1%) had gone to their primary care doctor for mental health services. In the baby boomer sample (n = 248), 145 participants (58.5%) had previous mental health experience. Of these 248, 92 participants (37.1%) had seen a psychologist, 38 (15.3%) had seen a psychiatrist, 87 (35.1%) had seen a counselor, and 23 (9.3%) had seen a social worker. In addition, 62 baby boomers (25%) had gone to their primary care doctor for mental health services. See Table 1.

Health Insurance. Participants were asked if their health insurance provider covered mental health services. This question included four categories: “Yes,” “No,” “I
don’t know,” and “I don’t have health insurance.” In the overall sample, 232 participants (57.9%) answered yes, 8 (2%) answered no, 157 (39.2%) answered I don’t know, and 3 (.7%) didn’t have health insurance. In the older adult sample, 81 participants (52.9%) answered yes, 4 (2.6%) answered no, 67 (43.8%) answered I don’t know, and all of the older adults had health insurance. In the baby boomer sample, 151 participants (60.9%) indicated yes, 4 (1.6%) indicated no, 90 (36.3%) indicated I don’t know, and 3 (1.2%) didn’t have health insurance. See Table 1.
Table 1

Demographic Information

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Age (range = 44-97)

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Gender

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<th>Older Adults</th>
<th>Baby Boomers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>87 (56.9%)</td>
<td>73 (29.4%)</td>
<td>160 (39.9%)</td>
</tr>
<tr>
<td>Female</td>
<td>66 (43.1%)</td>
<td>175 (70.6%)</td>
<td>241 (60.1%)</td>
</tr>
</tbody>
</table>

Education

<table>
<thead>
<tr>
<th></th>
<th>Older Adults</th>
<th>Baby Boomers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some High School</td>
<td>0 (0.0%)</td>
<td>1 (0.4%)</td>
<td>1 (0.2%)</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>12 (7.8%)</td>
<td>7 (2.8%)</td>
<td>19 (4.7%)</td>
</tr>
<tr>
<td>Some College</td>
<td>11 (7.2%)</td>
<td>27 (10.9%)</td>
<td>38 (9.5%)</td>
</tr>
<tr>
<td>Associate’s Degree</td>
<td>3 (2.0%)</td>
<td>18 (7.3%)</td>
<td>21 (5.2%)</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>6 (3.9%)</td>
<td>49 (19.8%)</td>
<td>55 (13.7%)</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>36 (23.5%)</td>
<td>66 (26.6%)</td>
<td>102 (25.4%)</td>
</tr>
<tr>
<td>Professional/Doctoral Degree</td>
<td>85 (55.6%)</td>
<td>80 (32.3%)</td>
<td>165 (41.1%)</td>
</tr>
</tbody>
</table>

Race

<table>
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<th></th>
<th>Older Adults</th>
<th>Baby Boomers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>153 (100%)</td>
<td>242 (97.6%)</td>
<td>395 (98.5%)</td>
</tr>
<tr>
<td>Black/African American</td>
<td>0 (0.0%)</td>
<td>2 (0.8%)</td>
<td>2 (0.5%)</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0.0%)</td>
<td>3 (1.2%)</td>
<td>3 (0.7%)</td>
</tr>
</tbody>
</table>
## Marital Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Count (Row %)</th>
<th>Count (Column %)</th>
<th>Total (Row %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>100 (65.4%)</td>
<td>178 (71.8%)</td>
<td>278 (69.3%)</td>
</tr>
<tr>
<td>Divorced</td>
<td>17 (11.1%)</td>
<td>38 (15.3%)</td>
<td>55 (13.7%)</td>
</tr>
<tr>
<td>Widowed</td>
<td>25 (16.3%)</td>
<td>6 (2.4%)</td>
<td>31 (7.7%)</td>
</tr>
<tr>
<td>Never Married</td>
<td>11 (7.2%)</td>
<td>26 (10.5%)</td>
<td>37 (9.2%)</td>
</tr>
</tbody>
</table>

## Previous Mental Health Experience

<table>
<thead>
<tr>
<th>Experience</th>
<th>Count (Row %)</th>
<th>Count (Column %)</th>
<th>Total (Row %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>68 (44.4%)</td>
<td>145 (58.5%)</td>
<td>213 (53.1%)</td>
</tr>
<tr>
<td>No</td>
<td>85 (55.6%)</td>
<td>103 (41.5%)</td>
<td>188 (46.9%)</td>
</tr>
<tr>
<td>Psychologist</td>
<td>46 (30.1%)</td>
<td>92 (37.1%)</td>
<td>138 (34.4%)</td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>18 (11.8%)</td>
<td>38 (15.3%)</td>
<td>56 (14.0%)</td>
</tr>
<tr>
<td>Counselor</td>
<td>27 (17.6%)</td>
<td>87 (35.1%)</td>
<td>114 (28.4%)</td>
</tr>
<tr>
<td>Social Worker</td>
<td>6 (3.9%)</td>
<td>23 (9.3%)</td>
<td>29 (7.2%)</td>
</tr>
<tr>
<td>Primary Care Doctor</td>
<td>17 (11.1%)</td>
<td>62 (25.0%)</td>
<td>79 (19.7%)</td>
</tr>
</tbody>
</table>

## Health Insurance Covers Mental Health

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Count (Row %)</th>
<th>Count (Column %)</th>
<th>Total (Row %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>81 (52.9%)</td>
<td>151 (60.9%)</td>
<td>232 (57.9%)</td>
</tr>
<tr>
<td>No</td>
<td>4 (2.6%)</td>
<td>4 (1.6%)</td>
<td>8 (2.0%)</td>
</tr>
<tr>
<td>I Don’t Know</td>
<td>67 (43.8%)</td>
<td>90 (36.3%)</td>
<td>157 (39.2%)</td>
</tr>
</tbody>
</table>
| Don’t Have Insurance | 0 (0.0%) | 3 (1.2%) | 3 (0.7%)
Instruments

The instruments used in this study included a demographics questionnaire (See Appendix E), the Inventory of Attitudes toward Seeking Mental Health Services (IASMHS) (See Appendix F), Beliefs About Psychological Services (BAPS) (See Appendix G), and an open-ended question regarding other opinions not shared in the questionnaire (See Appendix H). The open-ended question was included with the intent of gathering general qualitative information.

Demographics Questionnaire. Participants responded to a 10-item demographic questionnaire including questions about gender, age, education level, country of birth, race, marital status, previous utilization of mental health services, who they went to for those services, whether or not they ever went to a primary care doctor for mental health services, and whether or not their health insurance covers mental health services. Demographic categories followed the classifications used in the United States Census.

Inventory of Attitudes toward Seeking Mental Health Services. The Inventory of Attitudes toward Seeking Mental Health Services (IASMHS; Mackenzie et al., 2004) is a 24-item instrument designed to measure a person’s attitudes toward seeking professional psychological help. The IASMHS is an adaptation and extension of Fischer and Turner’s (1970) Attitudes toward Seeking Professional Psychological Help scale (ATSPPH). It was created to incorporate items measuring the constructs present in Ajzen’s (1991) theory of planned behavior, including perceived behavioral control and subjective norm. The IASMHS contains three internally consistent factors including “psychological openness,” “help-seeking propensity,” and “indifference to stigma.” “Psychological
“Psychological openness” is defined as “the extent to which individuals are open to acknowledging psychological problems and to the possibility of seeking professional help for them” (Mackenzie et al., 2004, p. 2420). Psychological openness is an eight-item subscale.

“Help-seeking propensity” is a reflection of “the extent to which individuals believe they are willing and able to seek professional psychological help” (Mackenzie et al., 2004, p. 2420). Help-seeking propensity is an eight-item subscale. “Indifference to stigma” is defined as “the extent to which individuals are concerned about what various important others might think should they find out that the individual was seeking professional help for psychological problems” (Mackenzie et al., 2004, p. 2420). Indifference to stigma is an eight-item subscale.

Respondents in the current study were asked to rate their level of agreement on specific statements using a 5-point Likert-type scale from 0 (Disagree) to 4 (Agree) with high scores indicating greater levels of agreement. An example of an item used to measure psychological openness reads, “There are certain problems which should not be discussed outside of one’s immediate family” (Mackenzie et al., p. 2421). An example of an item used to measure help-seeking propensity reads, “I would want to get professional help if I were worried or upset for a long period of time” (Mackenzie et al., p. 2421). An example of an item used to measure indifference to stigma reads, “I would be embarrassed if my neighbor saw me going into the office of a professional who deals with psychological problems” (Mackenzie et al., 2004, p. 2422).

Instead of using the subscales in their entirety, the current study only used the individual items that were created to measure the concepts of perceived behavioral...
control and subjective norm. There were four items used to measure the subjective norm which assessed how important others, including immediate family members, people within social or business circles, close friends, significant others (e.g. spouse, partner), neighbors, and general important others would respond if the person completing the scale were to seek professional psychological help. An example of an item that measured the subjective norm reads, “I would not want my significant other (spouse, partner, etc.) to know if I were suffering from psychological problems” (Mackenzie et al., 2004, p. 2422). All of these four items loaded on the indifference to stigma factor.

Three items were used to measure perceived behavioral control which assessed perceived control over barriers including personal reservations, knowledge of what to do and who to talk to, finances and time. An example of an item that measured perceived behavioral control reads, “I would have a very good idea of what to do and who to talk to if I decided to seek professional help for psychological problems” (Mackenzie et al., 2004, p. 2422). All three of these items loaded on the help-seeking propensity factor.

Internal consistency reliability was reported as $\alpha = .87$ for the full inventory, $\alpha = .82$ for the psychological openness subscale, $\alpha = .76$ for the help-seeking propensity subscale, and $\alpha = .79$ for the indifference to stigma subscale (Mackenzie et al., 2004). Test-retest reliability, measured over a three week time period, was reported as $r = .85$ for the total IASMHS score, $r = .86$ for the psychological openness score, $r = .64$ for the help-seeking propensity score, and $r = .91$ for the indifference to stigma score (Mackenzie et al., 2004).
Discriminant validity was established for the total score on the instrument as well as all of the subscales except the indifference to stigma subscale by displaying the ability to differentiate between people who would and would not use mental health services in the future (Mackenzie, et al., 2004).

Beliefs About Psychological Services. The Beliefs About Psychological Services scale (BAPS; Ægisdóttir & Gerstein, 2009) is an 18-item self-report instrument reflecting an individual’s attitudes and beliefs about seeking mental health counseling. The BAPS contains three internally consistent factors including “intent,” “stigma tolerance,” and “expertness.” “Intent” is a six-item subscale reflecting a person’s willingness and intention to seek psychological services. “Stigma tolerance” is an eight-item subscale referring to labeling, stigma, and negative beliefs about psychological services. “Expertness” is a four-item subscale referring to the perceived merits of seeking professional counseling services.

Respondents in the current study were asked to rate their level of agreement on specific statements using a 6-point Likert-type scale from 1 (Strongly Disagree) to 6 (Strongly Agree) with higher scores indicating greater levels of agreement. An example of an item that measured “intent” reads, “If a good friend asked my advice about a serious problem, I would recommend that he/she see a psychologist” (Ægisdóttir & Gerstein, 2009). An example of an item that measured “stigma tolerance” reads, “Having received help from a psychologist stigmatizes a person’s life” (Ægisdóttir & Gerstein, 2009). An example of an item that measured “expertness” reads, “Because of their
training, psychologists can help you find solutions to your problems” (Ágisdóttir & Gerstein, 2009).

Internal consistency reliability for the total score on the BAPS was reported as $\alpha = .88$ with each item contributing significantly. Internal consistency reliability for “intent” was $\alpha = .82$. Internal consistency reliability for “stigma tolerance” was $\alpha = .78$. Internal consistency reliability for “expertness” was $\alpha = .72$ (Ágisdóttir & Gerstein, 2009). Alpha coefficients were stable across multiple studies and all items correlated moderately with the factor they were intended to represent. Test-retest reliability for the total BAPS score at two weeks was .87. Test-retest reliability after two weeks for subscale scores were .88 (intent), .79 (stigma tolerance), and .75 (expertness) (Ágisdóttir & Gerstein, 2009).

The factor stability of the BAPS was established through confirmatory factor analysis on an independent sample. Discriminant validity was established by the ability of the total score on the BAPS to differentiate between men and women as well as people who have and have not had previous counseling experience. All three subscales were able to differentiate between men and women. However, only two out of three subscales (intent and stigma tolerance) discriminated between those who did and did not receive previous counseling experience. The “expertness” subscale was unable to make this differentiation. Convergent validity for the BAPS was established by correlating the total BAPS score and subscale scores with the ATSPPH (original and short forms) and its subscales (Ágisdóttir & Gerstein, 2009). The BAPS total score correlated highly with the total score on the original ATSPPH ($r = .83$), but less well with the short form ($r = .71$). The BAPS’ subscales scores correlated moderately to highly with the ATSPPH
total score and subscale scores. The correlations for “intent” were: $r = .71$ for the ATSPPH total score, $r = .68$ for ATSPPH “recognition of need for psychotherapeutic help” subscale, $r = .43$ for the ATSPPH “stigma tolerance” subscale, $r = .52$ for the “interpersonal openness” subscale, and $r = .59$ for the “confidence in mental health practitioners” subscale. The correlations for stigma tolerance were: $r = .74$ for the ATSPPH total score, $r = .55$ for ATSPPH recognition of need for psychotherapeutic help subscale, $r = .68$ for the ATSPPH “stigma tolerance” subscale, $r = .67$ for the “interpersonal openness” subscale, and $r = .47$ for the “confidence in mental health practitioners” subscale. The correlations for “expertness” were: $r = .50$ for the ATSPPH total score, $r = .39$ for ATSPPH “recognition of need for psychotherapeutic help” subscale, $r = .34$ for the ATSPPH “stigma tolerance” subscale, $r = .42$ for the “interpersonal openness” subscale, and $r = .41$ for the “confidence in mental health practitioners” subscale. Divergent validity for the BAPS was established by correlating total and subscale scores on the BAPS with the Marlowe-Crowne Social Desirability Scale (M-C SDS). The correlation between the BAPS total score and the M-C SDS was not significant ($r = .08$). The correlations between the “intent” subscale score ($r = -.08$) and the “expertness” subscale score ($r = .04$) with the M-C SDS were not significant. However, there was a very low correlation between the “stigma tolerance” subscale score ($r = .21$) and the social desirability, with social desirability only accounting for 4% of the total variance. For the current study, the “expertness” subscale was used to measure attitudes and the “intention” subscale was used to measure intentions to seek mental health services.
Data Collection Procedure

Participants were recruited through two separate sources in order to obtain the appropriate representation of the current older adult cohort (1944 and earlier) and the baby boomer cohort (1946-1964). The participants came from an available sample pool consisting of current and retired Ball State University faculty and staff. Ball State University is a mid-sized Midwestern University. In order to obtain participants for the current older adult cohort, Ball State University retired faculty and staff were used. At the time of the study there were 1,193 Ball State University retired faculty and staff listed in the Ball State University Directory (B-Book). A total of 1,191 retired faculty and staff were contacted and invited to participate in the survey. Two were not contacted because of incomplete addresses. Participants in the baby boomer cohort were recruited from the current faculty and staff at Ball State University. At the time of the study there were 1,611 listed faculty and staff at Ball State University.

Inclusion criteria include a) being a member of the current older adult cohort (those people born in 1944 or earlier) and listed as Retired Ball State University faculty or staff (as listed in the Ball State University Directory B-Book) or b) being a member of the “baby boomer” cohort (those people born between 1946 and 1964) and listed as a current Ball State University faculty or staff member.

Exclusion criteria included a) people who were born after 1964 because they did not fall under either age category, b) people born in 1945 because they did not fall under either age category, and c) people who were not born in the United States because they do not belong to United States age cohorts.
There was a 16.85% response rate for the survey with 472 out of a possible 2,802 responding. There were 43 participants who were excluded because they were born after 1964. One participant was excluded for being born in 1945. One participant was excluded for not being born in the United States. A total of 401 participants who completed the survey met all of the inclusion criteria and were included in the data analysis. It is impossible to know exactly how many respondents there were from each data collection procedure because both groups completed the same online survey which did not differentiate between collection procedures. This was done in order to protect the complete anonymity of the respondents. It was expected that the vast majority of the older adult sample came from the retirees sample and nearly all the baby boomers came from the current faculty and staff sample. However, this cannot be stated with absolute certainty.

A power analysis was completed, following guidelines proposed by Stevens (2002). Sample size was calculated in order to conduct a study with adequate power of .70 as recommended by Stevens (2002). In order to conduct a study with power equal to .70, \( \alpha = .05 \), with eight groups, and four dependent variables, 24 participants per group are needed to obtain a large effect size. Therefore, 196 total participants were needed. The 401 participants in this study more than meet this requirement.

The method of subject recruitment differed for the two different age cohort groups. For the current older adult cohort group all participants were recruited via the United States Postal System. All listed retired faculty and staff in the Ball State University Directory were mailed a letter (See Appendix A) on September 24, 2009.
inviting them to participate in the research study. In the letter, there was a web address which the participant could type into his or her web browser in order to take the survey online. If the participant preferred a paper copy of the survey then he or she was invited to contact the researcher via telephone or letter. A total of 45 participants requested a paper copy of the survey. Twenty-four paper surveys (See Appendix B) were mailed on September 29, 2009. Twelve paper surveys were mailed on October 2, 2009. Three paper surveys were mailed on October 9, 2009. Four paper surveys were mailed on October 10, 2009. Two paper surveys were mailed on October 17, 2009. A total of 42 (93.3%) out of the 45 surveys that were requested via mail were returned to the researcher. The last paper survey was received on November 9, 2009. Thus, the data collection period for this study was between September 24, 2009 and November 9, 2009.

Recruitment for the “baby boomer” cohort was conducted via the Ball State University Communications Center. The Communications Center provides the delivery of internal communications to the Ball State University community via e-mail and other electronic media (Communications Center, 2010). An initial e-mail message (See Appendix C) was sent out by the Departmental Publisher on September 29, 2009 inviting current faculty and staff to participate in the study. The following Communications Center categories received the e-mail: Academics: Academic Opportunities, Academics: Academic News & Events, Academics: Research & Programs, Employee News & Events: Other. In order to increase response rate a second e-mail message (See Appendix D) was sent one week later on October 6, 2009. The online survey was closed
approximately one month after the second Communications Center contact on November 9, 2009. See Figure 3 for a graphical depiction of data collection procedures.
Figure 3. Data collection procedure used in obtaining the final number of participants for analysis.
A total of 430 people completed the online survey. As previously stated, 45 respondents were excluded because they did not meet the inclusion criteria for the study. Also, 22 online survey respondents were excluded via listwise deletion because they stopped the survey early and skipped entire survey measures. Chi-square tests were conducted to determine whether or not these participants stopped the survey at random. Results of the chi-square tests indicated that completion of the survey significantly varied based on a participant’s marital status. This was the only variable that was significant. More detailed analysis can be found in chapter four. Four paper survey respondents were excluded because they skipped a page in the middle of the survey packet. There was no consistency to which page was skipped and therefore can be attributed to chance rather than something inherent in the survey.

Variables

Independent Variables and Operational Definitions

1. Gender – Dichotomous variable (Male and Female). Gender was determined by self-report on the demographic questionnaire.

2. Previous Mental Health Service Utilization – Dichotomous variable (Yes or No). This was determined by self-report on the demographic questionnaire.

3. Age Cohort – Dichotomous variable (Baby Boomer and Current Older Adult). This was determined based on the participant’s self report of data of birth on the demographic questionnaire. Participants born between 1946 and 1964 were grouped as baby boomers. Participants who are born in or before 1944 (65 years old and older at the time of the completion of the survey) were grouped as the
current older adult cohort. People born in 1945 were excluded because they were not members of either age cohort. People born after 1964 were also excluded because they were not members of either age cohort.

Dependent Variables

1. Attitude Toward Mental Health Services – Measured by the participant’s score on the “expertness” factor of the BAPS.
2. Subjective Norm – Measured by the four items on the IASMHS which were designed to measure the concept of the subjective norm.
3. Perceived Behavioral Control – Measured by the three items on the IASMHS which were designed to measure the concept of perceived behavioral control.
4. Intention to Seek Mental Health Services – Measured by the participant’s score on the “intention” factor of the BAPS.

Data Analysis

**MANOVA.** Multivariate Analysis of Variance (MANOVA) was used in order to test the hypotheses that attitudes, subjective norm, perceived behavioral control, and intentions would vary by age cohort, gender, and previous mental health service use. Data was analyzed using a 2x2x2 MANOVA. Age cohort had two levels (baby boomer and older adult), gender had two levels (male and female), and previous mental health service utilization had two levels (yes and no). All data analysis was completed using the Statistical Package for the Social Sciences (SPSS). Multivariate analysis, which is an extension of univariate analysis, is used to simultaneously test differences among groups with multiple dependent variables (Pedhazur, 1982). This was appropriate considering
that there were four separate dependent variables of interest (attitude, subjective norm, perceived behavioral control, and intention) in the study. Leary and Altmaier (1980) warn that when conducting analyses with multiple dependent variables there is the possibility of inflated error rates. By using MANOVA to look at the dependent variables at the same time, researchers are able to reduce the probability of making a Type I error to the chosen alpha level (Leary & Altmaier, 1980).

First, the MANOVA was run to determine if there were any overall differences between the groups. Assumptions needed in order to run a MANOVA include that a) the observations be independent, b) the observations of the dependent variables follow a multivariate normal distribution in each group, and c) equal population covariance matrices for the dependent variables (Stevens, 2002). Overall significance was determined by using the Wilks’s likelihood-ratio criterion test of the lambda matrix ($\Lambda$). Wilks’s $\Lambda$ is the most widely used multivariate statistic (Larrabee, 1982). The smaller the value of $\Lambda$, the greater the difference is between groups (Larrabee, 1982). If there is an overall significance, then the null hypothesis is rejected, indicating at least one between groups difference on one of the dependent variables (Leary & Altmaier, 1980).

**ANOVA.** Analysis of Variance (ANOVA) was used in order to test the hypotheses that women, those with previous mental health experience, and baby boomers had more positive attitudes toward mental health services, were less affected by the subjective norm toward seeking mental health services, had greater perceived behavioral control over receiving mental health services, and had greater intentions to seek mental health services when compared to men, those without previous mental health experience,
and older adults. A series of univariate F-tests are the most commonly utilized post hoc analyses following a multivariate analysis (Larrabee, 1982). When the overall MANOVA was found to be significant then a series of univariate tests (ANOVAs) were conducted for each dependent variable on each independent variable. This was done to determine which variable or variables were responsible for the significant multivariate effect (Leary & Altmaier, 1980). Assumptions needed in order to run an ANOVA analysis include a) the observations are independent, b) the observations are normally distributed on the dependent variable in each group, and c) homogeneity of variance (Stevens, 2002).

Regression Analyses. Regression analyses were run in order to test the hypotheses that gender, previous mental health service use, attitude toward mental health services, the subjective norm toward seeking mental health services, and perceived behavioral control over seeking mental health services could predict baby boomers’ and older adults’ intentions to seek mental health services. When post hoc ANOVA showed that there were differences between the age cohorts, then separate regression analyses were run for each cohort. This allowed for determinations to be made regarding different patterns of intentions to use mental health services. Multiple regression analysis looks at the individual and collective contributions of independent variables (predictors) on the variation of a dependent variable (criterion) (Wampold & Freund, 1987). Assumptions needed into order to run a regression analysis include a) normal distribution, b) linearity, c) homoscedasticity, and d) variables are measured without error (Pedhazur, 1982). Hierarchical regression was used so that the order in which the variables were entered
into the regression equation was controlled. The order that the variables are entered into the regression equation should be ordered based on their research relevance (Wampold & Freund, 1987).

Regression analyses followed Ajzen’s (1991) theory of planned behavior. Intentions to use mental health services was the criterion variable, while attitudes toward mental health services, the subjective norm, and perceived behavioral control were predictor variables. Ajzen (1991) stated that there is no specific formula or predetermined way to decide the relative importance of each variable in the theory of planned behavior. The relative importance of attitude, perceived behavioral control, and subjective norm are likely to vary across behaviors and situations (Ajzen, 1991). Therefore, the order in which they were entered into the regression equation was based on their research support. Prior literature suggested that the most likely order of importance was: attitude, subjective norm and perceived behavioral control. Thus, in the regression analysis, these three variables were entered in this order.

However, because of the strongly established links between gender and mental health utilization (Fischer & Turner, 1970; Good et al., 1989; Mackenzie et al., 2006; Mansfield et al., 2005) and previous service utilization and future mental health utilization (Lopez et al., 1998; Mackenzie et al., 2006; Vogel & Wester, 2003) these two variables were entered into the regression equation as predictors before the theory of planned behavior variables (attitude, subjective norm, and perceived behavioral control). Gender was entered first into the regression equation because there is more research
support linking it with mental health service utilization. Previous mental health service utilization was entered second into the equation.

As indicated above, the variables in the theory of planned behavior were then entered. Attitude was entered third, subjective norm fourth and perceived behavioral control fifth. While not unequivocally supported, attitudes among older adults appeared to play an important role in service utilization. Currin and colleagues (1998) suggested that older adults’ attitudes might be the most significant barrier to their ability to have their mental health needs met. Stigma, which is a closely related concept to the subjective norm has consistently been found to play a role in mental health service utilization (Corrigan, 2004; Vogel et al., 2006; Vogel et al., 2007) Therefore, subjective norm was entered fourth. Perceived behavioral control, as an independent or predictor variable, has not received much research attention and was therefore entered fifth in the equation.

When conducting a hierarchical regression, the most important coefficient of interest ($R^2$) is the proportion of variance that is accounted for at a particular step that is over and above what was accounted for by the independent variables entered at previous steps. $R^2$ is equal to the proportion of variance of the dependent variable that is explained by the independent variables (Wampold & Freund, 1987). This analysis determined whether the different cohorts’ intentions to use mental health services were differently affected by the three variables in the theory of planned behavior.
CHAPTER IV

Results

Data Preparation

Chi Square Analysis. There were a total of 430 participants who started the online survey. However, 22 of these stopped the survey early without completing it. In order to remove these participants from the final analysis through listwise deletion, it was important to first know if there were any systematic differences between those who completed the survey and those who started, but stopped prior to completion. During listwise deletion, entire cases are excluded if any of the variables contain missing values. Allison (2003) stated that this type of deletion will not cause statistical error as long as the data are missing completely at random. To ensure that the data are missing completely at random, Allison (2003) suggested dividing the observations into separate groups and test whether the group with missing data differed from the other observation group. Listwise deletion’s greatest advantage is its ease of use. Its major disadvantage is that it may reduce statistical power by removing too many cases. However, if only a small proportion of the data are removed in this way then it should not cause significant bias (Croy & Novins, 2005). In order to determine whether the differences between those
who completed the online survey and those who stopped early were due to anything more than chance, chi-square tests were conducted. Chi-square tests are appropriate for determining independence among groups (Abrami, Cholmsky, & Gordon, 2001). In a chi-square test the null hypothesis is that there is independence among groups. Chi-square tests were run for each of the demographic variables, including age group, gender, education, race, marital status, previous mental health experience, previously seen a primary care physician for mental health, and if health insurance covers mental health services. These analyses and all other data analytic procedures were conducted using the Statistical Package for the Social Sciences (SPSS). Assumptions of a chi-square analysis include the random selection of samples, independence of observations, and that group sample sizes are sufficiently large (Abrami et al., 2001).

Results of the chi-square analyses (See Table 2), with $\alpha = .05$, showed that two of the variables were not independent. This means that there were differences between those participants who did and did not complete the survey across two of the demographic variables (race and marital status). When testing for race, the observations were of insufficient size to compare all of the categories. Thus, all non-White participants were collapsed into a single race category. When this was done, the chi-square test was no longer significant. The chi-square test for marital status was also significant, $\chi^2_{(3)} = 13.36, p = .004$. This seems to be accounted for by a difference in the number of people who had never been married who did and did not complete the survey. Of those who completed the survey, 37 participants (9.23%) had never been married. In comparison, seven people who did not complete the survey (31.82%) had never been married. Even though these numbers are very low it means that the survey may not
adequately represent the opinions of people who have never been married. These 22 respondents who were removed only represent approximately 5% of the total participants who took the online survey so it is unlikely that their removal had any significant effect on the results of the study. Therefore, it was appropriate to remove the participants who did not complete the survey from the final data analyses.
Table 2

*Chi-square Tests Comparing Missing and Non Missing Data*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\chi^2$</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Group</td>
<td>.03</td>
<td>1</td>
<td>.866</td>
</tr>
<tr>
<td>Gender</td>
<td>.01</td>
<td>1</td>
<td>.925</td>
</tr>
<tr>
<td>Education</td>
<td>1.71</td>
<td>6</td>
<td>.944</td>
</tr>
<tr>
<td>Race</td>
<td>1.62</td>
<td>1</td>
<td>.204</td>
</tr>
<tr>
<td>Marital Status</td>
<td>13.36</td>
<td>3</td>
<td>.004</td>
</tr>
<tr>
<td>Previous Mental Health Experience</td>
<td>2.35</td>
<td>1</td>
<td>.126</td>
</tr>
<tr>
<td>Went to Primary Care Doctor for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Health</td>
<td>.03</td>
<td>1</td>
<td>.861</td>
</tr>
<tr>
<td>Insurance Covers Mental Health</td>
<td>.62</td>
<td>3</td>
<td>.891</td>
</tr>
</tbody>
</table>
Psychometric Analyses of Scales

Inventory of Attitudes toward Seeking Mental Health Services (IASMHS). In order to determine the reliability of the IASMHS and its subscales, internal consistency analysis using Cronbach’s $\alpha$ was conducted. Internal consistency reliability for the overall scale was $\alpha = .80$. The reliabilities for the subscales were: a) psychological openness ($\alpha = .73$), b) help-seeking propensity ($\alpha = .68$), and c) indifference to stigma ($\alpha = .80$). However, the full subscales were not used in the final analyses. Therefore, it was appropriate to separately analyze the four items used to measure the subjective norm and the three items used to measure perceived behavioral control. The reliability for subjective norm was $\alpha = .69$. The reliability for perceived behavioral control was $\alpha = .39$. The mean total score on the IASMHS was 73.7 (SD = 12.59). This total score is similar to results obtained in the original instrument development study by Mackenzie and colleagues (2004) ($M = 69.19$, $SD = 14.36$). The reliability of perceived behavioral control was very low. This means that the three items used may not be an accurate measure of the construct of perceived behavioral control and represents a limitation of the study. The means and standard deviations of the subscales, subjective norm, and perceived behavioral control are presented in Table 3.

Baby Boomers. Internal consistency for the overall IASMHS for baby boomers was $\alpha = .80$. The reliabilities for the subscales were: a) psychological openness ($\alpha = .71$), b) help-seeking propensity ($\alpha = .68$), and c) indifference to stigma ($\alpha = .81$). The reliability for subjective norm was $\alpha = .69$. The reliability for perceived behavioral control was $\alpha = .40$. Once again the reliability of perceived behavioral control was very
low which represents a limitation of the study. The mean total score on the IASMHS for baby boomers was 71.32 ($SD = 12.81$). The means and standard deviations of the subscales, subjective norm, and perceived behavioral control are presented in Table 3.

**Older Adults.** Internal consistency for the overall IASMHS for older adults was $\alpha = .79$. The reliabilities for the subscales were: a) psychological openness ($\alpha = .76$), b) help-seeking propensity ($\alpha = .65$), and c) indifference to stigma ($\alpha = .78$). The reliability for subjective norm was $\alpha = .70$. The reliability for perceived behavioral control was $\alpha = .44$. Once again the reliability of perceived behavioral control was very low which represents a limitation of the study. The mean total score on the IASMHS for older adults was 75.55 ($SD = 12.12$). The means and standard deviations of the subscales, subjective norm, and perceived behavioral control are presented in Table 3.

In regards to the present sample, the results of these analyses suggest that the IASMHS was not a reliable measure of perceived behavioral control but it was an acceptable measure of the subjective norm.
### Table 3

*Means and Standard Deviations for IASMHS Subscales*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baby Boomers</th>
<th>Older Adults</th>
<th>Overall</th>
<th>Initial Development Study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M (SD)$</td>
<td>$M (SD)$</td>
<td>$M (SD)$</td>
<td>$M (SD)$</td>
</tr>
<tr>
<td>PO</td>
<td>23.33 (5.40)</td>
<td>22.94 (6.05)</td>
<td>23.18 (5.65)</td>
<td>21.79 (6.76)</td>
</tr>
<tr>
<td>HP</td>
<td>24.60 (4.50)</td>
<td>26.90 (3.85)</td>
<td>25.47 (4.40)</td>
<td>23.98 (5.35)</td>
</tr>
<tr>
<td>IS</td>
<td>23.31 (6.31)</td>
<td>25.49 (5.80)</td>
<td>24.56 (6.15)</td>
<td>23.42 (6.22)</td>
</tr>
<tr>
<td>SN</td>
<td>3.09 (.82)</td>
<td>3.29 (.78)</td>
<td>3.22 (.80)</td>
<td>N/A</td>
</tr>
<tr>
<td>PBC</td>
<td>3.10 (.72)</td>
<td>3.55 (.57)</td>
<td>3.27 (.70)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Beliefs About Psychological Services (BAPS). In order to determine the reliability of the BAPS and its subscales, internal consistency analysis using Cronbach’s $\alpha$ was conducted. Internal consistency reliability for the overall scale was $\alpha = .90$. The reliability for the subscales was: a) intent ($\alpha = .85$), b) stigma tolerance ($\alpha = .78$), and c) expertness ($\alpha = .81$). The mean total score on the BAPS was 4.84 ($SD = .71$). The means and standard deviations of the subscales are presented in Table 4. These scores are similar to those obtained by Ægisdóttir & Gerstein (2009) in the initial development study (See Table 4). As a reminder, only the expertness scale (to measure attitudes) and intent scale (to measure intentions) were used in the final analysis.

Baby Boomers. Internal consistency reliability for the overall scale for baby boomers was $\alpha = .91$. The reliability for the subscales was: a) intent ($\alpha = .86$), b) stigma tolerance ($\alpha = .81$), and c) expertness ($\alpha = .80$). The mean total score on the BAPS was 4.75 ($SD = .73$). The means and standard deviations of the subscales are presented in Table 4.

Older Adults. Internal consistency reliability for the overall scale for older adults was $\alpha = .88$. The reliability for the subscales was: a) intent ($\alpha = .84$), b) stigma tolerance ($\alpha = .71$), and c) expertness ($\alpha = .82$). The mean total score on the BAPS was 4.99 ($SD = .64$). The means and standard deviations of the subscales are presented in Table 4.
In regards to the present sample, the results of these analyses suggest that the BAPS was a reliable measure of a person’s attitudes and intentions to use mental health services.
Table 4

Means and Standard Deviations for BAPS Subscales

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baby</th>
<th>Older</th>
<th>Overall</th>
<th>Initial Development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boomers</td>
<td>Adults</td>
<td></td>
<td>Study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Women</td>
</tr>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Intent</td>
<td>4.39 (.96)</td>
<td>4.60 (.94)</td>
<td>4.47 (.96)</td>
<td>4.30 (.85)</td>
</tr>
<tr>
<td>Stigma Tolerance</td>
<td>5.18 (.70)</td>
<td>5.33 (.61)</td>
<td>5.23 (.67)</td>
<td>4.98 (.66)</td>
</tr>
<tr>
<td>Expertness</td>
<td>4.44 (.96)</td>
<td>4.85 (.91)</td>
<td>4.59 (.96)</td>
<td>4.62 (.84)</td>
</tr>
</tbody>
</table>

MANOVA Analysis

Multivariate Analysis of Variance (MANOVA) was used in order to test whether or not the three independent variables: gender, previous mental health service utilization, and age cohort showed differences across any of the four dependent variables: attitude, subjective norm, perceived behavioral control, and intention.

Results of the MANOVA showed that the assumption of equal population covariance matrices for the dependent variables was violated ($Box’s M = 116.63, F_{(70, 105814.50)} = 1.60, p = .001$). Besides unequal covariances, this may also mean that there may not be a multivariate normal distribution for two or more of the dependent variables. In order to minimize the influence of the covariance violation, a stratified random sample was created from the initial data set that resulted in equal $Ns$ among groups. Stevens (2002) stated that if group sizes are equal or approximately equal then the analysis is considered conditionally robust when the covariances are heterogeneous.

Overall significance was determined using Wilks’s $\Lambda$. The MANOVA demonstrated two main effects (See Table 5). There was a main effect for age cohort, $Wilks’s A = .83, F_{(4, 245)} = 12.49, p < .001, \eta^2 = .17$. There was also a main effect for previous mental health experience, $Wilks’s A = .88, F_{(4, 245)} = 8.68, p < .001, \eta^2 = .12$. The rest of the main effects and interaction effects were not statistically significant (See Table 5).
Table 5

**MANOVA Results for Main Effects and Interactions for Gender, Age Cohort, and Previous Mental Health Experience across the Dependent Variables of Attitude, Subjective Norm, Perceived Behavioral Control, and Intention**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Wilks’s Λ</th>
<th>F (^a)</th>
<th>p</th>
<th>Partial η²</th>
<th>Noncentrality Parameter</th>
<th>Observed Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.98</td>
<td>1.33</td>
<td>.264</td>
<td>.02</td>
<td>5.31</td>
<td>.41</td>
</tr>
<tr>
<td>Age Cohort</td>
<td>.83</td>
<td>12.49</td>
<td>&lt;.001</td>
<td>.17</td>
<td>49.95</td>
<td>&gt;.99</td>
</tr>
<tr>
<td>PMH</td>
<td>.88</td>
<td>8.68</td>
<td>&lt;.001</td>
<td>.12</td>
<td>34.73</td>
<td>&gt;.99</td>
</tr>
<tr>
<td>Gender* Age Cohort</td>
<td>&gt;.99</td>
<td>.30</td>
<td>.875</td>
<td>.01</td>
<td>1.22</td>
<td>.12</td>
</tr>
<tr>
<td>Gender* PMH</td>
<td>.99</td>
<td>.72</td>
<td>.579</td>
<td>.01</td>
<td>2.88</td>
<td>.23</td>
</tr>
<tr>
<td>Age Group* PMH</td>
<td>.99</td>
<td>.59</td>
<td>.668</td>
<td>.01</td>
<td>2.37</td>
<td>.20</td>
</tr>
<tr>
<td>Gender*Age Cohort</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*PMH</td>
<td>.99</td>
<td>.88</td>
<td>.479</td>
<td>.01</td>
<td>3.50</td>
<td>.28</td>
</tr>
</tbody>
</table>

*Note.* PMH = Previous Mental Health Experience.

\(^a\) All Hypothesized df = 4. All Error df = 245.
ANOVA Analyses

After the MANOVA was conducted, ANOVAs were run separately for each of the dependent variables to determine which one(s) were contributing to the main effects. All four dependent variables for age cohort were significant (See Table 6). Older adults ($M = 4.92, SD = .88$) expressed more positive attitudes toward mental health than baby boomers did ($M = 4.36, SD = .97, F_{(1,248)} = 23.99, p < .001, \eta^2 = .09$). Older adults ($M = 4.74, SD = .88$) expressed greater intentions to seek mental health services when compared to baby boomers ($M = 4.31, SD = .93, F_{(1,248)} = 16.13, p < .001, \eta^2 = .06$). Older adults ($M = 3.43, SD = .69$) were less affected by the subjective norm toward seeking mental health services when compared to baby boomers ($M = 3.04, SD = .86, F_{(1,248)} = 16.42, p < .001, \eta^2 = .06$). Older adults ($M = 3.54, SD = .58$) expressed greater perceived behavioral control over obtaining mental health services when compared to baby boomers ($M = 3.04, SD = .75, F_{(1,248)} = 35.73, p < .001, \eta^2 = .13$). As shown in Table 7, older adults had higher means on all four dependent variables. The effect size was greatest for perceived behavioral control followed by attitude, subjective norm, and intention. These findings did not provide support for the proposed hypotheses that compared to older adults, baby boomers would have more positive attitudes toward mental health services, have greater intentions to seek mental health services, be less affected by the subjective norm toward seeking mental health services, and have greater perceived behavioral control over obtaining mental health services.

For previous mental health experience, those participants with previous mental health experience ($M = 4.80, SD = .94$) expressed more positive attitudes toward mental
health when compared to those participants without previous mental health experience ($M = 4.48, SD = .97$), $F_{(1,248)} = 7.70, p = .006, \eta^2 = .03$. Participants with previous mental health experience ($M = 4.82, SD = .87$) expressed greater intentions to seek mental health services when compared to participants without previous mental health experience ($M = 4.22, SD = .88$), $F_{(1,248)} = 31.67, p < .001, \eta^2 = .11$. Participants with previous mental health experience ($M = 3.38, SD = .61$) expressed greater perceived behavioral control over obtaining mental health services when compared to participants without previous mental health experience ($M = 3.20, SD = .80$), $F_{(1,248)} = 4.40, p = .037, \eta^2 = .02$. However, the subjective norm was not statistically significant when comparing participants who had previous mental health experience ($M = 3.26, SD = .84$) and participants who did not have previous mental health experience ($M = 3.21, SD = .77$), $F_{(1,248)} = .21, p = .649, \eta^2 < .01$ (See Table 6). As shown in Table 8, those participants who had previous mental health experience had higher means on all four dependent variables. The effect size was greatest for intention followed by attitude, perceived behavioral control, and then subjective norm. These results provided support for the proposed hypotheses that when compared to participants without previous mental health experience, participants with previous mental health experience have more positive attitudes toward mental health services, have greater intentions to seek mental health services, and have greater perceived behavioral control over obtaining mental health services. However, there was not support for the hypothesis that participants with previous mental health experience would be less affected by the subjective norm when compared to participants without previous mental health experience.
There was not a main effect for gender during the multivariate analysis so none of the univariate analyses were interpretable. This means that there was not support for the hypotheses that when compared to men, women would have more positive attitudes toward mental health services, have greater intentions to seek mental health services, be less affected by the subjective norm toward seeking mental health services, and have greater perceived behavioral control over obtaining mental health services.
Table 6

*ANOVA Results for Age Cohort and Previous Mental Health Experience*

<table>
<thead>
<tr>
<th>Effect</th>
<th>Dependent Variable</th>
<th>Type III df</th>
<th>Mean</th>
<th>F</th>
<th>p</th>
<th>Partial $\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sum of Sq.</td>
<td>Square</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Age Cohort</td>
<td>Attitude</td>
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<td>19.97</td>
<td>23.99</td>
<td>&lt;.001</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>Intention</td>
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<td>11.75</td>
<td>16.13</td>
<td>&lt;.001</td>
<td>.06</td>
</tr>
<tr>
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<td>16.42</td>
<td>&lt;.001</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>PBC</td>
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<td>15.83</td>
<td>35.73</td>
<td>&lt;.001</td>
<td>.13</td>
</tr>
<tr>
<td>PMH</td>
<td>Attitude</td>
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<td>6.41</td>
<td>7.70</td>
<td>.006</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>Intention</td>
<td>23.06</td>
<td>23.06</td>
<td>31.67</td>
<td>&lt;.001</td>
<td>.11</td>
</tr>
<tr>
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<td>.13</td>
<td>.21</td>
<td>.649</td>
<td>&lt;.01</td>
</tr>
<tr>
<td></td>
<td>PBC</td>
<td>1.95</td>
<td>1.95</td>
<td>4.40</td>
<td>.037</td>
<td>.02</td>
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</tbody>
</table>

*Note.* SN = Subjective Norm. PBC = Perceived Behavioral Control. PMH = Previous Mental Health Experience.
Table 7

*Age Cohort Estimated Marginal Means for Dependent Variables*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Older Adults</th>
<th>Baby Boomers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>95% Confidence Interval</td>
<td>95% Confidence Interval</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Error</td>
</tr>
<tr>
<td>Attitude</td>
<td>4.92</td>
<td>0.08</td>
</tr>
<tr>
<td>Intention</td>
<td>4.74</td>
<td>0.08</td>
</tr>
<tr>
<td>SN</td>
<td>3.43</td>
<td>0.07</td>
</tr>
<tr>
<td>PBC</td>
<td>3.54</td>
<td>0.06</td>
</tr>
</tbody>
</table>

*Note.* SN = Subjective Norm. PBC = Perceived Behavioral Control.
Table 8

*Previous Mental Health Experience Estimated Marginal Means for Dependent Variables*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Previous Mental Health Experience Mean</th>
<th>Standard Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
<th>No Previous Mental Health Experience Mean</th>
<th>Standard Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>4.80</td>
<td>.08</td>
<td>4.64</td>
<td>4.95</td>
<td>4.48</td>
<td>.08</td>
<td>4.32</td>
<td>4.64</td>
</tr>
<tr>
<td>Intention</td>
<td>4.82</td>
<td>.08</td>
<td>4.67</td>
<td>4.97</td>
<td>4.22</td>
<td>.08</td>
<td>4.07</td>
<td>4.37</td>
</tr>
<tr>
<td>PBC</td>
<td>3.38</td>
<td>.06</td>
<td>3.26</td>
<td>3.49</td>
<td>3.20</td>
<td>.06</td>
<td>3.09</td>
<td>3.32</td>
</tr>
</tbody>
</table>

*Note.* SN = Subjective Norm. PBC = Perceived Behavioral Control.
Regression Analyses

Hierarchical regression was conducted in order to determine whether or not older adults’ and baby boomers’ intentions to seek mental health services were differently impacted by gender, previous mental health service use, attitude, subjective norm, and perceived behavioral control. Separate regression analyses were conducted for older adults and baby boomers. Based on previous research, the order in which the variables were entered into both regression models were as follows: gender, previous mental health service use, attitude, subjective norm, and perceived behavioral control. See Table 9 for Pearson correlations for older adults and Table 12 for Pearson correlations for baby boomers.

**Older Adults.** Overall, this model accounted for 55.7% of the total variance in older adults’ intentions to seek mental health services (See Table 10). Gender was added first to the model and it accounted for 6.1% of the total variance. Previous mental health experience was added second and it accounted for an additional 10.9% of explained variance. Attitude was added third and it accounted for an additional 36.6% of explained variance. The subjective norm was added fourth and it accounted for an additional 0.8% of explained variance. Perceived behavioral control was added fifth and it accounted for an additional 1.4% of explained variance. Overall, attitude had the greatest effect ($\beta = .576$, $p < .001$) (See Table 11). Previous mental health experience had the second highest effect ($\beta = .430$, $p < .001$). Perceived behavioral control had the third highest effect ($\beta = .196$, $p = .037$). Neither subjective norm nor gender had a significant effect (See Table 11).
Table 9

*Older Adult Pearson Correlation Analysis for Intention, Gender, Previous Mental Health Experience, Attitude, Subjective Norm, and Perceived Behavioral Control*

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>Variable</th>
<th>Intention</th>
<th>Gender</th>
<th>PMH</th>
<th>Attitude</th>
<th>SN</th>
<th>PBC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>- .247**</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>PMH</td>
<td>.347**</td>
<td>-.073</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.683**</td>
<td>-.206**</td>
<td>.156*</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>SN</td>
<td>.296**</td>
<td>-.214**</td>
<td>.104</td>
<td>.266**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC</td>
<td>.333**</td>
<td>-.047</td>
<td>.071</td>
<td>.300**</td>
<td>.239**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* PMH = Previous Mental Health Experience. SN = Subjective Norm. PBC = Perceived Behavioral Control.

* p<.05

**p<.01
Table 10

*Older Adult Regression Model Summary*

<table>
<thead>
<tr>
<th>Variables Added</th>
<th>R</th>
<th>R²</th>
<th>Adj. R²</th>
<th>Std. Error of the Est.</th>
<th>R² Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.247</td>
<td>.061</td>
<td>.055</td>
<td>.88664</td>
<td>.061</td>
<td>9.667</td>
<td>1</td>
<td>149</td>
<td>.002</td>
</tr>
<tr>
<td>PMH</td>
<td>.412</td>
<td>.170</td>
<td>.159</td>
<td>.83640</td>
<td>.109</td>
<td>19.435</td>
<td>1</td>
<td>148</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Attitude</td>
<td>.732</td>
<td>.536</td>
<td>.526</td>
<td>.62758</td>
<td>.366</td>
<td>115.879</td>
<td>1</td>
<td>147</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>SN</td>
<td>.737</td>
<td>.543</td>
<td>.531</td>
<td>.62452</td>
<td>.008</td>
<td>2.443</td>
<td>1</td>
<td>146</td>
<td>.120</td>
</tr>
<tr>
<td>PBC</td>
<td>.746</td>
<td>.557</td>
<td>.542</td>
<td>.61730</td>
<td>.014</td>
<td>4.435</td>
<td>1</td>
<td>145</td>
<td>.037</td>
</tr>
</tbody>
</table>

*Note.* PMH = Previous Mental Health Experience. SN = Subjective Norm. PBC = Perceived Behavioral Control.
Table 11

*Older Adult Regression Coefficients*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>Std. Error</td>
<td>β</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.763</td>
<td>.405</td>
<td>1.884</td>
</tr>
<tr>
<td>Gender</td>
<td>-.167</td>
<td>.105</td>
<td>-.091</td>
</tr>
<tr>
<td>PMH</td>
<td>.430</td>
<td>.103</td>
<td>.235</td>
</tr>
<tr>
<td>Attitude</td>
<td>.576</td>
<td>.061</td>
<td>.572</td>
</tr>
<tr>
<td>SN</td>
<td>.085</td>
<td>.072</td>
<td>.070</td>
</tr>
<tr>
<td>PBC</td>
<td>.196</td>
<td>.093</td>
<td>.124</td>
</tr>
</tbody>
</table>

*Note.* PMH = Previous Mental Health Experience. SN = Subjective Norm. PBC = Perceived Behavioral Control.
Baby Boomers. Overall, this model accounted for 58.2% of the total variance in baby boomers’ intentions to seek mental health services (See Table 13). Gender was first added to the model and it accounted for 1.4% of the total variance. Previous mental health experience was added second and it accounted for an additional 6.1% of explained variance. Attitude was added third and it accounted for an additional 47.5% of explained variance. The subjective norm was added fourth and it accounted for an additional 2.1% of explained variance. Perceived behavioral control was added fifth and it accounted for an additional 1.0% of explained variance (See Table 13).

Overall, attitude accounted for the most variability in intentions ($\beta = .630, p < .001$) (See Table 14). Previous mental health experience accounted for the second highest amount of variability in intentions ($\beta = .309, p < .001$). Perceived behavioral control accounted for the third highest amount of variability in intentions ($\beta = .154, p = .015$). Subjective norm accounted for the fourth highest amount of variability in intentions ($\beta = .140, p = .008$). Gender did not have a significant effect (See Table 14). This pattern was almost exactly the same as the pattern for the older adults and accounted for nearly the same amount of variance. The only difference is that for baby boomers, the subjective norm had a significant effect. These results do not provide support for the hypotheses that gender, previous mental health service use, attitude toward mental health services, the subjective norm toward seeking mental health services, and perceived behavioral control over seeking mental health services would be able to predict baby boomers’ and older adults’ intentions to seek mental health services. Both models accounted for a high amount of variance in intentions (55.7% for older adults and 58.2%
for baby boomers) but gender was not statistically significant in both models and subjective norm was not statistically significant in the older adult model.
Table 12

Baby Boomer Pearson Correlation Analysis for Intention, Gender, Previous Mental Health Experience, Attitude, Subjective Norm, and Perceived Behavioral Control

<table>
<thead>
<tr>
<th>Pearson Correlation</th>
<th>Intention</th>
<th>Gender</th>
<th>PMH</th>
<th>Attitude</th>
<th>SN</th>
<th>PBC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.117*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PMH</td>
<td>.259**</td>
<td>-.120*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.721**</td>
<td>-.101</td>
<td>.123*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN</td>
<td>.321**</td>
<td>-.012</td>
<td>.031</td>
<td>.248**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC</td>
<td>.401**</td>
<td>-.104*</td>
<td>.151**</td>
<td>.348**</td>
<td>.349**</td>
<td></td>
</tr>
</tbody>
</table>

Note. PMH = Previous Mental Health Experience. SN = Subjective Norm. PBC = Perceived Behavioral Control.

* p<.05

**p<.01
Table 13

*Baby Boomer Regression Model Summary*

<table>
<thead>
<tr>
<th>Variables</th>
<th>R</th>
<th>R²</th>
<th>Adj. R²</th>
<th>Std. Error</th>
<th>R² Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.117</td>
<td>.014</td>
<td>.010</td>
<td>.95972</td>
<td>.014</td>
<td>3.404</td>
<td>1</td>
<td>246</td>
<td>.066</td>
</tr>
<tr>
<td>PMH</td>
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<td>.075</td>
<td>.067</td>
<td>.93151</td>
<td>.061</td>
<td>16.127</td>
<td>1</td>
<td>245</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Attitude</td>
<td>.742</td>
<td>.550</td>
<td>.544</td>
<td>.65100</td>
<td>.475</td>
<td>257.617</td>
<td>1</td>
<td>244</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>SN</td>
<td>.756</td>
<td>.571</td>
<td>.564</td>
<td>.63659</td>
<td>.021</td>
<td>12.175</td>
<td>1</td>
<td>243</td>
<td>.001</td>
</tr>
<tr>
<td>PBC</td>
<td>.763</td>
<td>.582</td>
<td>.573</td>
<td>.63015</td>
<td>.010</td>
<td>5.992</td>
<td>1</td>
<td>242</td>
<td>.015</td>
</tr>
</tbody>
</table>

*Note.* PMH = Previous Mental Health Experience. SN = Subjective Norm. PBC = Perceived Behavioral Control.
Table 14

*Baby Boomer Regression Coefficients*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>Std. Error</td>
<td>β</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.510</td>
<td>.242</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.044</td>
<td>.089</td>
<td>-.021</td>
</tr>
<tr>
<td>PMH</td>
<td>.309</td>
<td>.083</td>
<td>.158</td>
</tr>
<tr>
<td>Attitude</td>
<td>.630</td>
<td>.045</td>
<td>.630</td>
</tr>
<tr>
<td>SN</td>
<td>.140</td>
<td>.053</td>
<td>.119</td>
</tr>
<tr>
<td>PBC</td>
<td>.154</td>
<td>.063</td>
<td>.115</td>
</tr>
</tbody>
</table>

*Note.* PMH = Previous Mental Health Experience. SN = Subjective Norm. PBC = Perceived Behavioral Control.
Post Hoc Correlation Analyses

Post hoc correlation analyses were conducted using Pearson’s $r$ in order to determine whether or not there were positive relationships between the variables in the theory of planned behavior (attitude, intention, subjective norm, and perceived behavioral control) and two demographic variables (age and education). Participant age and education were chosen because of speculation that they might be positively correlated with attitude, intention, subjective norm and perceived behavioral control. A strong positive relationship between age and/or education and the other variables might offer a potential explanation for current findings. One post hoc hypothesis was that as age increased then attitude, intention, subjective norm, and perceived behavioral control would significantly increase. The second post hoc hypothesis was that as educational attainment increased then attitude, intention, subjective norm, and perceived behavioral control would significantly increase. If strong positive relationships were found, it might offer an explanation for why there was no effect for gender.

Correlation analyses showed small but significant positive relationships between age and attitude ($r = .21, p < .001$), age and intention ($r = .10, p = .045$), and a moderate positive relationship between age and perceived behavioral control ($r = .325, p < .001$). The relationship between age and subjective norm was not statistically significant. All relationships were in the positive direction which meant that as age increased so did attitude, intention, and perceived behavioral control. None of the correlations between education and the variables in the theory of planned behavior were significant. This meant that as education increased, attitude, intention, subjective norm, and perceived
behavioral control did not significantly increase. The results of these analyses suggest that there may have been more of an age effect than a cohort effect when measuring attitudes, intentions, and perceived behavioral control. Further, there was not support for the hypothesis that as education increased so did attitudes, intentions, perceived behavioral control, and subjective norm. See Table 15 for results of the correlation analysis.
Table 15

*Pearson Correlation Analyses Comparing Age and Education with Attitude, Intention, Subjective Norm, and Perceived Behavior Control*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Age</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$r$</td>
<td>$p$</td>
</tr>
<tr>
<td>Attitude</td>
<td>.211</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Intention</td>
<td>.100</td>
<td>.045</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.087</td>
<td>.094</td>
</tr>
<tr>
<td>Perceived Behavior Control</td>
<td>.325</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Qualitative Analyses

A cursory qualitative analysis was conducted to try and determine if there was any additional information regarding mental health service utilization not captured by the measures used in the study. An open-ended question was added at the end of the survey which invited participants to share their opinions. The exact wording of the question was, “We are interested in reasons why a person would or would not seek mental health services. If you have any other opinions that you have not already shared in the questions you just answered please share them below.” Responses to the open-ended questions were organized and coded into different response categories. An answer could be coded into multiple categories if it was comprised of more than one type of response category. This was done in order to glean if there were particular themes represented in the responses. Out of the 401 participants in the final analysis, 198 provided responses to the open-ended question.

This analysis resulted in 10 different response categories including: a participant’s personal experience with the mental health field, stigma, cost and insurance barriers, reasons for seeking mental health services, other coping strategies, critiques of the survey, knowledge and availability of services, medication or medically focused responses, individual variables relating to mental health professionals, and an “other” category which captured responses that did not fit in one of the other nine categories. See Table 16 for response categories and examples.

**Personal Experience.** The greatest amount of responses (N = 51) fell under the category of personal experience. Responses that clustered into this category reflected personal experiences with the counseling field as well as how those experiences may
have colored the participant’s responses on the survey. Personal experiences were either of the participant or they reflected knowledge of experiences from friends or relatives. The experiences were either positive or negative and differentially impacted a person’s attitude toward the mental health field. See Table 16 for positive and negative responses typifying this category.

**Stigma.** The second highest number of responses \( (N = 40) \) fell under the category of stigma. Responses either reflected an idea that stigma was not a problem or the conception that stigma was a barrier to seeking mental health services. Most responses suggested that stigma was a significant barrier. Responses reflecting the latter opinion included stigma from external sources such as the media, family, friends, loved ones, employers, coworkers, and society at large. Another set of responses reflected a self-stigma or how the individual felt about seeking services. These responses included feelings of shame, embarrassment, weakness, and self-blame. See Table 16 for examples typifying this category.

**Cost and Insurance.** Responses that fell into this category \( (N = 34) \) reflected the notion that there was a significant financial or insurance barrier related to receiving services. For many, the perceived cost of services would prevent people from seeking services. Insurance barriers included either not having insurance or the ramifications of what receiving mental health services would do to insurance rates or future coverage. See Table 16 for an example of a response that typified this category.

**Reasons for Seeking Services.** Responses in this category \( (N = 33) \) related to reasons why it would be appropriate for a person to seek mental health services. Some
responses related to specific symptoms, conditions, or diagnoses that would necessitate seeking help. These included: depression, anxiety disorders, eating disorders, schizophrenia, behavioral concerns, marital or family problems, grief, trauma/abuse, helplessness, frequent crying, poor self-image, difficulty in coping with daily life, fear of personal safety or imminent danger, or if a person is a danger to self or others. Other responses pointed to the severity of the problem and whether or not a person had exhausted other coping strategies. Participants also described individual benefits from counseling including learning better ways to cope with problems, preventing the worsening of problems, and obtaining diagnoses or labels that would result in benefits or services. Other responses reflected anecdotal accounts of success, receiving an objective opinion, and simply because the need was there. See Table 16 for an example of a response that typified this category.

Other Coping Strategies. Responses that clustered in this category (N = 20) indicated other coping strategies that could be employed instead of seeking help from a mental health service professional. The majority of these responses indicated religious options for coping, including consulting a religious leader, prayer, and faith. Many responses suggested that a person could seek guidance and support from other people close to them such as friends, family, workplace advisors, and confidantes. Other responses reflected specific strategies such as journaling, self-help books, self-help groups, removing oneself from the environment causing stress, and taking time to determine if the problem ceases on its own. Finally, there were also some responses suggesting that people can and should cope with problems on their own without outside
help. See Table 16 for an example of a response that typified this category.

**Critiques of the Survey.** There were some responses \(N = 15\) that did not focus on mental health seeking or utilization, but rather focused on the survey and its construction. These included: complaints relating to the wording and grammar of specific items, a dearth of questions relating to religion and spirituality, frustration that the questions referred to “all” mental health professionals and did not reflect a participant’s various experiences, the forced choice nature of one of the measures, and not enough options in the marital status demographic question (e.g. no options for committed homosexual relationships or domestic partnerships). See Table 16 for an example of a response that typified this category.

**Knowledge and Availability of Services.** Responses that clustered in this category \(N = 14\) reflected the idea that both knowledge of mental health services and the availability of these services were barriers toward seeking mental health assistance. One potential barrier was a lack of knowledge of where to start or who to contact if a person wanted to see a mental health professional. Other service barriers included not knowing where to go, lack of familiarity with available counselors, not knowing the competency of available counselors, having no available services for a particular problem, limited options, interpreting a need for services, and not having an accurate understanding of what a mental health professional does. See Table 16 for an example of a response that typified this category.

**Medically Focused Responses.** Responses that grouped into this category \(N = 12\) included answers that referenced medication or medically relevant reasons why a
person would or would not seek mental health services. Some responses indicated a fear of over-medication suggesting that medication may compound the problem as well as a perceived difficulty in prescribing the correct dosage to achieve a desired result. By contrast, one response stated that a reason to seek services would be in order to receive appropriate medication. Other responses indicated the possibility that an emotional problem may have a physical/biological basis and vice versa. One response suggested that the brain is too complex to be understood and thus there was no point in seeing a mental health professional. See Table 16 for an example of a response that typified this category.

**Individual Characteristics of Mental Health Professionals.** Responses in this category (N = 10) suggest that there are specific individual characteristics that some mental health professionals possess that would be deterrents to seeking services from them. These characteristics include reputation, age, gender, religion, personality, and treatment approach. Another potential barrier to services was competency concerns of the professional, including fear of misdiagnosis, not wanting to see a specific type of professional, and worry that the professional had only gone into the field to solve his or her own problems. Other professional characteristics included confidentiality concerns, a fear that the person would not be believed, and apprehension that the professional used non-scientific approaches. See Table 16 for an example of a response that typified this category.

**Other.** There were a few responses (N = 10) that were not captured by the previous nine categories and therefore were clustered into their own catchall category.
These responses included other barriers to receiving services such a lack of resources (e.g. vehicle or phone) and time, both having enough time to commit to services and the length of time it can take for change to occur. Other responses included legal implications, an overall lack of faith in the mental health field, problems with terminology within the field, generational differences in views toward mental health, and a belief in the direct correlation between educational level and degree of seeking mental health services. See Table 16 for an example of a response that typified this category.
Table 16

Qualitative Analysis Response Categories and Examples

<table>
<thead>
<tr>
<th>Response Category</th>
<th>n</th>
<th>Example(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Experience</td>
<td>51</td>
<td>I sought help from a professional to help figure out where my marriage was going. It turned into a divorce, but with the help of the professional I discovered a lot about myself which helped me to cope with the divorce and I learned a great deal about my inner self. I learned how to listen to my inner voice. I have had help in the past with mixed results. Experience like that does not foster confidence in the system. In theory, I believe in the potential for help. My personal experience is less than satisfactory.</td>
</tr>
<tr>
<td>Stigma</td>
<td>40</td>
<td>People do have a stigma about people going to get help, especially if it is for depression. It puts you in a group and they never really believe that you get over it. It just hangs over your head. I do not agree with people who feel there is a stigma attached to seeking help from a mental health professional. It makes me annoyed and impatient with people who act as if it is shameful in some way to have to ask for help. If I needed help, I would certainly see a professional. I have known people whose lives have been changed, not too strong a statement to say saved, because of their mental health professionals. I certainly do not think they were weak in any way to have sought such assistance. I am glad and thankful that they did.</td>
</tr>
<tr>
<td>Cost and Insurance</td>
<td>34</td>
<td>Cost is always a factor. Money, time out of your workday, and if you use insurance, it’s on your medical record forever (like HTN or CAD) and might drive up health insurance rates or make you less insurable if you change jobs.</td>
</tr>
<tr>
<td>Category</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>Reasons for Seeking Services</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Other Coping Strategies</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Critiques of the Survey</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Knowledge and Availability of Services</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Medically Focused Responses</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Individual Characteristics of Mental</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Health Professionals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

**Reasons for Seeking Services**

A person should seek mental health services if they are experiencing: 1. Clinical depression 2. Fear of personal safety 3. Intense or persistent loneliness.

**Other Coping Strategies**

…Almost all the time, I can receive good advice from a Christian brother/sister/Pastor or in talking and listening to God in my prayer time. No need to take the extra step.

**Critiques of the Survey**

Your wording on questions: 16, 27, 40, & 43 was not easily translated into a Likert scale answer. Did your beta test group work through these okay?

**Knowledge and Availability of Services**

I wouldn’t even know how to start seeking mental health services; which might mean I’m already past the point of seeking such service.

**Medically Focused Responses**

I think it is important to get a complete physical examination when experiencing mental issues. Sometimes there can be a physical component to mental illness that needs to be addressed.

**Individual Characteristics of Mental Health Professionals**

1. I would not be particularly comfortable going to a counselor who was a huge amount younger than I am. While training is the most important, life experience has some value. 2. I think there might be a problem talking to someone whose religious experience differed vastly from mine. 3. I would be concerned about the style of counseling used for specific problems.

**Other**

I believe mental health professionals are first and foremost listeners. I don’t believe they SOLVE problems. For that reason my belief is that mental health professionals are most useful to people who lack friends or family members they can confide in.
The purpose of this study was to empirically analyze the relationship between age cohort membership and mental health service utilization. Specifically, this study sought to determine whether or not baby boomers (born between 1946 and 1964) possessed similar or different intentions to seek mental health services when compared to a current cohort of older adults. Ajzen’s (1991) theory of planned behavior was used as a theoretical model in measuring intentions based on the strong link between intention and actual behavior. MANOVA was used to determine whether or not there were overall differences in the independent variables (age cohort, gender, and previous mental health utilization) across the dependent variables (attitude, subjective norm, perceived behavioral control, and intention). When the MANOVA showed that there were overall group differences, follow-up ANOVAs were conducted in order to determine which variables were responsible for the multivariate effect. Finally, regression analyses were run in order to determine whether or not gender, previous mental health service utilization, attitudes, subjective norm, and perceived behavioral control could predict older adults’ and baby boomers’ intentions to seek mental health services.
Discussion

The following discussion summarizes the results of the current study, while simultaneously integrating them with previous literature. It is organized by gender, previous mental health service utilization, age cohort, and intention patterns by cohort.

Gender. Results of the MANOVA analysis showed that there was not a statistically significant main effect for gender (See Table 5). Therefore, gender could not be analyzed univariately. This means that all hypotheses regarding gender differences were not supported. This was surprising given previous research findings that women have more positive attitudes toward receiving professional psychological help (Ágisdóttir & Gerstein, 2009; Fischer & Turner, 1970; Good et al., 1989; Mackenzie et al., 2006; Mansfield et al., 2005; Veroff et al., 1981) and are more likely to seek help mental health services than men (Addis & Mahalik, 2003; Mackenzie et al., 2006; Pederson & Vogel, 2007). Potential explanations for these findings may be obtained by a closer analysis of the demographic attributes of the sample. It is possible that another variable, such as education level, may have mitigated the effect of gender. The relative strength of the relationship between gender and attitudes may be weaker than the relationship between educational attainment and attitudes. Another hypothesis is that as people age, gender differences related to mental health attitudes and intentions may decrease. More in depth analysis will be detailed in the limitations section.

Previous Mental Health Service Utilization. Results of the MANOVA showed a statistically significant main effect for previous mental health service utilization (See Table 5). Univariate analyses showed statistically significant effects for previous mental
health service utilization and attitude, intention, and perceived behavioral control (See Table 6). This means that people who have received mental health services in the past have more positive attitudes toward mental health, feel as if they have more control over obtaining mental health services, and have greater intentions toward utilizing mental health services. Positive previous experiences would result in more positive attitudes and intentions to seek further services. Also, people who have previous mental health experience are more likely to have confidence in their ability to obtain it in the future. However, on the variable of the subjective norm there were no significant differences between those who had and those who had not received previous mental health services. One potential reason for this could be that people are influenced by the stigma associated with receiving mental health services, a concept closely related to the subjective norm, whether or not they have had previous mental health experience. In other words, previous experience with receiving services for mental health problems may not be enough to counter the social pressure inherent in stigma toward mental health (i.e. the subjective norm).

**Age Cohort.** Results of the MANOVA showed a statistically significant main effect for age cohort (See Table 5). Univariate analyses showed statistically significant main effects for attitude, intention, subjective norm, and perceived behavioral control (See Table 6). However, as Table 7 shows, the effect is in the opposite direction of the proposed hypotheses. When compared to baby boomers, older adults had more positive attitudes toward mental health, were less affected by the subjective norm, had greater perceived behavioral control over seeking mental health services, and had greater
intentions to seek mental health services. This result is particularly puzzling given previous research and current low mental health service utilization of older adults in the general population. What is enigmatic is the finding that there was a main effect in the opposite direction and not merely no effect. Potential reasons for these findings may be found in the data collection techniques and the demographics of the sample. Also, the possibility exists that intentions are more of an age effect rather than a cohort effect. Perhaps as people age and experience illness, loss, and decreasing social support, their attitudes toward mental health become more positive. Intentions to utilize services may increase as there are less people in their lives to turn to in times of crisis. Some recent research findings have supported this hypothesis. Mackenzie, Scott, Mather, and Sareen (2008) found that “older adults” (aged 55-74) had more positive attitudes toward help-seeking than younger adults. They concluded that attitudes and treatment beliefs were not barriers to mental health for older adults. Post hoc correlation analysis provided further support for this hypothesis as age was significantly positively related to attitude, intentions, and perceived behavioral control. Furthermore, both baby boomers and older adults in the current sample had greater attitudes (except when compared to only women) and intentions when compared to a sample of college students (Ægisdóttir & Gerstein 2009) (See Table 4). This suggests that positive attitudes toward seeking mental health services may increase as people age. More in depth analysis will be detailed in the limitations section.

_Intention Patterns by Age Cohort._ Results of hierarchical regression analyses showed that the regression models for both the older adults and baby boomers accounted
for a high proportion of the variance in intentions to seek mental health services (See Tables 10 and 13). The regression models for both age cohorts were very similar in the way they explained the variance. The regression model for older adults accounted for 55.7% of the variance in intentions to seek mental health services, whereas the regression model for baby boomers accounted for 58.2% of the variance. In both models, the order in which the variables were added was as follows: gender, previous mental health experience, attitude, subjective norm, and perceived behavioral control. In both models, attitude had the greatest effect, previous mental health experience had the second highest effect, and perceived behavioral control had the third highest effect. Only in the baby boomer model did the subjective norm have a significant effect. In both models gender did not have a significant effect on predicting intentions to utilize mental health services. The fact that gender and subjective norm were not consistently significant is surprising given their respective support in the literature linking them to mental health service use. Furthermore, it is somewhat surprising that one of the variables (subjective norm) from the theory of planned behavior did not have a significant effect for older adults, given Ajzen’s (1991) supposition that all three are important in predicting intentions. However, Ajzen (1991) does state that in some situations, only one or two of the variables will have a significant effect on intentions. Therefore, the current study would suggest that in order to predict someone’s intent to engage in mental health services, knowing the effect of the subjective norm is only important in the baby boomer population.

One possible reason for this is that the subjective norm becomes less important as people age. Older adults may be less concerned about social pressure compared to
younger adults because other people’s opinions of them are less important. Because of retirement and established family roles they are in fewer situations where they are evaluated by others. Contrary to Ajzen’s (1991) assertion that these three variables are sufficient in predicting intention, it appears that previous mental health service utilization plays a key role. Also, not all of the variability was accounted for in the regression models. There were 44.3% (older adults) and 41.8% (baby boomers) of the variance that was unexplained by the models, so there continue to be other, unidentified variables that are important in predicting intentions. The respective effects of the different variables differed slightly for older adults and baby boomers, but the overwhelming effect that attitude had in both populations is what is most salient. The more positive a person’s attitude is toward mental health services, the more likely he or she is to seek and subsequently obtain those services.

Limitations of the Study

Demographics. One limitation of the study is the demographic representativeness of the sample. There are four demographic variables that stand out, including education level, race, marital status, and previous mental health experience.

Education. As shown in Table 17, both the older adult sample and the baby boomer sample are very highly, and disproportionately, educated when compared to the overall United States population. For example, 41.1% of the sample held a professional or doctoral degree compared to 2.6% of the overall U.S. population (See Table 17). Compared to each other, the older adult sample is even more highly educated than the baby boomer sample. This may be an important limitation given the link
between education level and mental health utilization and attitudes toward mental health. Some studies have found that the more highly educated a person is, the more likely he or she is to have more positive attitudes toward mental health (Fischer & Cohen, 1972) and be more likely to use mental health services (Steele, Dewa, & Lin, 2007; Ten Have, Oldehinkel, Vollebergh, & Ormel, 2003). However, this is not always the case, as other studies; such as Woodward and Pachana (2009) found that education level did not play a role in attitudes toward mental health. Based on the findings and demographics of the current study it is likely that education level played a significant role in the results.

One potential reason that the older adults had more positive attitudes, were less affected by the subjective norm, had greater perceived behavioral control over seeking mental health services, and had greater intentions to seek mental health services was because they were more highly educated. Post hoc correlation analysis did not provide support that as educational attainment increased so did attitudes and intentions. However, this may be because education’s effects may have a ceiling effect. For example, the difference between completing a Bachelor’s degree versus having a high school degree may be more important than the difference between Master’s degree and a Doctoral degree. It is also conceivable that because the overall sample was so highly educated the effects of gender were mitigated. The impact of gender on help seeking may have been minimized by education level. Perhaps gender roles become less salient as people obtain higher levels of education. Higher educational attainment may open employment opportunities and lifestyles in which traditional male and female gender roles are not as relevant.
Race. As shown in Table 17, the majority of the sample was White (98.5%). There were only five participants (1.2%) who identified as something other than White (1.2%). This is an important limitation considering the disparities in mental health utilization between people who are White and those who are racial and ethnic minorities. Minorities have less access to mental health services, are less likely to receive needed services, and often have less available services (Department of Health and Human Services [DHHS], 2001). Despite having less access to services and lower utilization, most minority groups have similar rates of mental disorders to Whites. The exception to this is vulnerable and high need subgroups which are rarely included in community survey research. People who fall in the lowest echelon of income, education, and occupation are two to three times more likely to have a mental disorder than those in the highest echelon (DHHS, 2001). This is significant considering that minorities are likely to have at least as unfavorable attitudes toward mental illness that Whites have (DHHS, 2001). Mackenzie and colleagues (2008) found that White older adults had more positive attitudes toward mental health services when compared to other races. The current sample may not accurately capture the attitudes and intentions of the entire population, and may over-represent the opinions of Whites.
Table 17

*Demographic Comparisons between Sample and Population*

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Older Adults</th>
<th>Baby Boomers</th>
<th>Total</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n = 153$</td>
<td>$n = 248$</td>
<td>$N = 401$</td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td>$N = 226,973$</td>
</tr>
<tr>
<td>Some High School</td>
<td>0 (0.0%)</td>
<td>1 (0.4%)</td>
<td>1 (0.2%)</td>
<td>20,589 (9.1%)</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>12 (7.8%)</td>
<td>7 (2.8%)</td>
<td>19 (4.7%)</td>
<td>70,004 (30.8%)</td>
</tr>
<tr>
<td>Some College</td>
<td>11 (7.2%)</td>
<td>27 (10.9%)</td>
<td>38 (9.5%)</td>
<td>44,241 (19.5%)</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>3 (2.0%)</td>
<td>18 (7.3%)</td>
<td>21 (5.2%)</td>
<td>19,303 (8.5%)</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>6 (3.9%)</td>
<td>49 (19.8%)</td>
<td>55 (13.7%)</td>
<td>40,276 (17.7%)</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>36 (23.5%)</td>
<td>66 (26.6%)</td>
<td>102 (25.4%)</td>
<td>15,260 (6.7%)</td>
</tr>
<tr>
<td>Professional/</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>85 (55.6%)</td>
<td>80 (32.3%)</td>
<td>165 (41.1%)</td>
<td>5,860 (2.6%)</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
<td>$N = 301,237,703$</td>
</tr>
<tr>
<td>White</td>
<td>153 (100%)</td>
<td>242 (97.6%)</td>
<td>395 (98.5%)</td>
<td>223,965,009 (74.3%)</td>
</tr>
<tr>
<td>Black/</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>0 (0.0%)</td>
<td>2 (0.8%)</td>
<td>2 (0.5%)</td>
<td>37,131,771 (12.3%)</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0.0%)</td>
<td>3 (1.2%)</td>
<td>3 (0.7%)</td>
<td>40,140,923 (13.3%)</td>
</tr>
</tbody>
</table>

*Note.* United States educational attainment data was obtained from the 2009 American Community Survey (ACS) and the Current Population Survey (CPS) (U.S. Census Bureau, 2010). United States race data was obtained from the 2006-2008 American Community Survey (ACS) (U.S. Census Bureau, 2010).
Marital Status. The results of the chi-square analysis showed that there were differences between those people who completed the online survey and those who started the online survey but did not complete it on the variable of marital status. This was accounted for by the number of people who had never been married who did and did not complete the survey. A disproportionate amount of people who had never been married did not complete the online survey after starting it. Therefore, one of the limitations of the study is that it may not accurately reflect the opinions of people who have never been married. This may or may not be a significant limitation. There is mixed evidence on whether or not marital status impacts help seeking behavior. Some studies have found no relationship (Cairney & Wade, 2002; Jackson et al., 2007). A few studies found a negative relationship between being married and mental health service use (Crabb & Hunsley, 2006; Lefebvre, Lesage, Cyr, Toupin, & Fournier, 1998). Other studies have shown a positive relationship between marital status and help seeking behaviors with those who are married being more likely to utilize treatment (Koenen, Goodwin, Struening, Hellman, & Guardino, 2003; Nour, Elhai, Ford, & Frueh, 2009). This is also true when looking at health seeking behavior such as end of life care (Watcherman & Sommers, 2006). One study found that single and married elderly individuals showed lower levels of psychiatric impairment than those who were widowed, divorced or separated (Smyer & Pruchno, 1984). This wide variation in findings makes it unclear how much an effect this limitation has on the generalizability of the study. However, because there were only 22 respondents (5% of the total respondents) removed from the study it is unlikely that their removal had any significant effect on the results of the study.
Previous Mental Health Experience. The current sample displayed rates of utilization of mental health services (53.1%) that were far greater than the average rate of utilization in the United States population. In comparison, in three separate studies Ægisdóttir and Gerstein (2009) found that 45%, 40%, and 41% of college students (who have access to free mental health services) had previous mental health experience. Furthermore, a Surgeon General’s report compiled by the U.S. Department of Health and Human Services (DHHS, 1999) found that only 15% of adults use mental health services in a given year. This means that the sample is not representative of the population, at large, in terms of previous mental health service utilization. This is important given that people who have previous mental health experience are more likely to report having positive attitudes toward seeking mental health services (Ægisdóttir & Gerstein, 2009; Lopez et al., 1998; Mackenzie et al., 2006; Quinn et al., 2009; Vogel & Wester, 2003; Woodward & Pachana, 2009). However, the impact of previous service use was partially controlled for by adding it second in the hierarchical regression equations before adding any of the theory of planned behavior variables. While this would not account for potentially inflated scores on the IASMHS and BAPS (compared to the U.S. population) it would control for its impact on a participant’s overall intention to utilize mental health services.

Study Design. Another potential limitation of the study is the type of research design that was used. The current design studied cohorts in isolation instead of taking into account other variables often used in lifespan development research such as period effects and age effects. As a reminder, age effects are those related to the maturation of a
person, period effects are those related to the time in which the research takes place, and cohort effects refer to generational differences (Costa & McCrae, 1982). Some investigators had indicated that it is nearly impossible to study lifespan development without studying the effects of all three (Costa & McCrae, 1982; Rentz & Reynolds, 1991). The current study only looked at cohort based on previously established research suggesting that baby boomers, as a cohort, possessed different attitudes and preferences when compared to other age cohorts. Furthermore, Rosenberg and Letrero (2006) suggested that cohort effects are assumed to stay relatively stable and are therefore representative of the cohort no matter when in time they are studied. However, there is a possibility that attitudes, the susceptibility to the subjective norm, perceived behavioral control, and intentions (related to mental health service utilization) change as a person ages rather than staying constant within a cohort. Even though the correlations were small to moderate, post hoc correlation analyses supported this hypothesis. The only feasible way to adequately test this limitation would be to conduct a longitudinal study measuring these four variables as people age.

Another potential limitation exists in the way in which the cohorts were operationalized. Because the “baby boomer” cohort is defined over such a long period of time (1946-1964) there is a possibility that they may differ more within the cohort than they do between other cohorts. One potential way to control for this would have been to split the “baby boomer” cohort into multiple groups. For example, in studying physical activity of “baby boomers,” Swan and colleagues (2008) split the larger cohort into “old
Older Adults’ Intentions

Threats to Internal Validity. According to Heppner, Wampold, and Kivlighan (2008) there are eight separate threats to internal validity that could compromise the results of a research study. The current study potentially contains one of these threats, which is known as “selection.” This happens when participants are selected and separated based on group membership. The threat occurs when there are potential differences in the groups before the study even begins (Heppner et al., 2008). This is a potential threat because the samples were recruited and separated based on membership in an age cohort. Besides differing by age group, the older adults and the baby boomers had subtle differences in the way they were recruited. The baby boomers were sent an e-mail in which all they had to do was click on a link that directed them to the survey. Because the older adult sample was recruited through a Postal Service mailing they had to either type the URL into their web browser or they had to request a paper copy of the survey and fill it out by hand. In either case the older adults had to go through more steps in order to take the survey. It is possible that because there were more steps involved in taking the survey, the people who chose to fill it out had more positive attitudes, more previous experience, and greater intentions than those who did not fill it out. This is a potential threat to both samples, but more so in the older adult sample because of the extra steps required to take the survey. The only way to control for the “selection” threat is through random assignment (Heppner et al., 2008). That would have been impossible.
in the current study because the main variable of interest was age and participants cannot be randomly assigned into an age group.

**Threats to Construct Validity.** According to Heppner and colleagues (2008) there are twelve separate threats to the construct validity of a research study. Construct validity refers to the ability of the independent and dependent variables to accurately measure the constructs they intended to measure (Heppner et al., 2008). The construct validity should have been good because the measures and scales used were specifically designed to measure the different components of the model (theory of planned behavior) which guided the research design. Specifically, the IASMHS (Mackenzie et al., 2004) included items designed to measure the subjective norm and perceived behavioral control. However, reliability analysis showed that the IASMHS did not reliably capture the construct of perceived behavioral control ($\alpha = .39$). This means that most of what contributed to this score was error and not an accurate reflection of the construct of perceived behavioral control.

There were two other potential threats to construct validity, including “mono-operation bias” and “mono-method bias.” A mono-operation bias exists when there is only a single measure of an independent or dependent variable (Heppner et al., 2008). Each variable in the current study, including attitude, subjective norm, perceived behavioral control, and intention, were obtained using single measures of each construct. This is a potential threat because it is rarely possible to capture all facets of a construct using a single measure (Heppner et al., 2008). This threat may account for perceived behavioral control not being accurately measured.
The other potential threat to construct validity in the current study was “mono method bias.” This occurs when the data obtained in a study is only gathered using one method, which in the case of the current study was self-report. Self-report measures may contain a bias of participants to respond in a socially-desirable manner (Heppner et al., 2008). This may mean that participants were more likely to respond with positive attitudes toward mental health because it would make them be seen in a more positive light. This threat was largely unavoidable given the difficulty in measuring actual behaviors (mental health service utilization). However, the threat may be minimized given the multiple findings that the likelihood of a person engaging in a behavior can be gleaned from intentions to engage in that behavior (Ajzen, 1991).

*Threats to external validity.* According to Heppner and colleagues (2008) there are five separate threats to the external validity, or generalizability, of a research study. The current study does not contain any of the specific threats detailed by Heppner and colleagues (2008), largely because these threats refer to causal relationships found in treatment comparisons. However, the overall generalizability of the study can be questioned. This is because of the previously detailed demographic differences between the participants in the study and United States population, at large. However, the results most likely accurately reflect the beliefs of well-educated, Caucasian, Midwestern older adults and baby boomers. Future replication of the results is to definitively prove this assertion.
Implications for Future Research

The limitations of this study provide important recommendations for future research in the area of mental health utilization and age. The results of the study were surprising, indicating that older adults may have even more positive attitudes and intentions toward seeking mental health utilization than baby boomers. It would be beneficial to replicate these results using similar methodology with other samples. The current sample was not demographically representative of the United States population and future research should be done with samples who are less educated, more racially and ethnically diverse, come from a lower socioeconomic status, have less previous mental health service experience, and more accurately represent the opinions of people who have never been married. Suggestions from the qualitative data collected indicate that further demographic categories could be incorporated, such as religious means of coping and more encompassing marital categories, including cohabitation, committed homosexual relationships, and domestic partnerships.

Future research could also be conducted using different methodology in order to more accurately reflect other areas of lifespan development such as aging effects. Though difficult and often costly, longitudinal research could be beneficial in more definitively determining the existence of cohort versus maturation effects on intentions to utilize mental health services. Also, the way in which the constructs of the model were measured could potentially be improved. To reduce the mono-operation bias there could be multiple measures of each variable to help ensure that the constructs are accurately captured. This is particularly important for the construct of perceived behavioral control.
In the current study, the three items in the IASMHS (Mackenzie et al., 2004) that were designed to measure perceived behavioral control were not an accurate measure of this construct. Future research should look at better ways to measure the construct of perceived behavioral control.

Another suggestion is to alter the way older adults and baby boomers are operationalized in order to be more sensitive to age differences. For example, the baby boomers could be broken down into smaller age groups such as “old boomers” and “young boomers.” The older adult category could also be broken down into smaller age categories. However, this may make obtaining adequate sample sizes for each group more difficult. Furthermore, future studies could use more similar recruitment techniques across age groups. In the current study, the older adults had to go through more steps to participate and equalizing the process would further strengthen the results of future studies.

Because of the strong association that was found between attitude and intentions to utilize mental health services, future research should be conducted assessing ways to improve attitudes toward mental health. It was interesting that the subjective norm was only found to be statistically significant in the baby boomer regression model even though many people indicated in the open response question that stigma, which is a related concept, still exists. Maybe instead of focusing research or efforts on reducing stigma, time should be spent looking at how to showcase the positive benefits of the mental health field. This may be particularly important for older adults whose intentions were not statistically significantly related to subjective norm. Even though it was not
supported in the current study, previous research shows that older adults are more likely to go to their primary care physicians for mental health services than mental health professionals (Davies et al., 1994; Mackenzie et al., 2006; Phillips & Murrell, 1994). Future research could look at improving attitudes through interventions in a naturalistic setting such as primary care physician offices. Collaboration with other health professionals could be critical in helping to improve attitudes and subsequently increase utilization of mental health professionals.

**Clinical Implications**

There are a number of clinical implications that are evident based on the results of this study. It is encouraging that in the current sample, which was highly educated, both age cohorts displayed overall positive attitudes and intentions to seek mental health services. However, it is concerning that the current cohort of older adults showed greater intentions to utilize mental health services when compared to baby boomers. A result in the opposite direction would have suggested a positive age cohort shift in attitudes toward mental health. The results of the current study suggest that the most effective way to increase mental health service utilization is through education and improving attitudes. However, because of the relationship between educational achievement and intentions it may be more beneficial to focus education and resources toward improving the attitudes of people who are less educated and come from lower socioeconomic statuses who traditionally have poorer attitudes toward mental health services (DHHS, 2001).

Although not supported in the quantitative analysis, qualitative responses indicate that stigma may still be an attitudinal barrier. Responses from the qualitative section also
Older Adults’ Intentions

indicate that there may be a number of other barriers to receiving mental health services. These include external barriers such as the perceived cost of mental health services, transportation, and the knowledge and availability of services. More education is needed to increase the awareness of what services exist in a given area as well as better explanations about what these services entail. Also helping people recognize the need for services and how to get them is important. This is consistent with recent findings suggesting that the attitudes and treatment beliefs of older adults may not be significant barriers to utilizing mental health service when compared to other factors such as the need for services or access to services (Mackenzie et al., 2008). Yang and Jackson (1998) detail a number of solutions to help older adults overcome barriers to mental health services including the administration of psychological services in the client’s home or over the phone, the implementation of age-related support groups, concerted efforts focused on community outreach, and healthcare liaisons to communicate with other professions.

An important avenue to explore could be the relationship that the mental health field has with other important health care professionals. Educating primary care doctors and other medical personnel about available services could be an extremely beneficial step in breaking down barriers and improving attitudes. This is also important to implement in integrated medical settings where mental health professionals and other health professionals have interactions with the same patients in the same locations. Not only could his could help foster more positive attitudes for patients and health personnel, it could also increase the quality and depth of care.
Results from the demographic section reveal interesting data which may represent another significant barrier. When asked if their health insurance covers mental health problems, 39.2% of the respondents indicated that they did not know. Mental health services can be very costly, but this cost is often minimized by health insurance coverage. If cost is a significant barrier and people do not know if their health insurance covers mental health problems, then people will be less likely to seek out services. There needs to be an effort to help educate the public about the coverage of mental health services.

**Conclusion**

The purpose of this study was to expand upon the body of literature describing the relationship between older adults and mental health service utilization. This is an extremely important topic given the large corpus of research showing that older adults underutilize mental health services (Biegel et al., 1997; Davies et al., 1994; Husaini et al., 1994; Karlin et al., 2008; Quinn et al., 2009; Robertson & Mosher-Ashley, 2002; Segal et al., 2005) combined with the aging of the United States population (Maples & Abney, 2006; Pickard, 2006) and the inevitable explosion in the need for geriatric mental health (Currin et al., 1998; Pickard, 2006; Smith, 2007). Because of research suggesting that attitudes and intentions may be a cohort phenomenon coupled with the aging of the “baby boomer” generation, the current study intended to determine whether or not baby boomers possessed similar or different intentions to seek mental health services when compared to a current cohort of older adults. The theory of planned behavior (Ajzen, 1991) was used a theoretical model to guide the measurement of intentions to utilize mental health services because of its strong link to actual behavior. Surprisingly, when
compared to baby boomers, older adults possessed more positive attitudes, were less affected by the subjective norm, had greater perceived behavioral control, and greater intentions to seek mental health services. In both the baby boomer cohort and the older adult cohort, the greatest predictor of intentions was attitude. In both cohorts, gender, previous mental health experience and the three variables of the theory of planned behavior (attitude, subjective norm, and perceived behavioral control) accounted for over 50% of the total variance in a person’s intention to utilize mental health services.

Overall, this suggests that baby boomers do not have greater intentions to seek mental health services when compared to current older adults, but their intentions are driven by similar mechanisms. If intentions are even lower than current cohorts of older adults who already underutilize mental health services, this portends a problem in the mental health field.

It appears that the best way to address this finding is by improving education that affects attitudes toward mental health. Also, increased efforts should be taken to educate the public about the availability of mental health services in their area, how to recognize the need for services, and how to obtain these services when they are needed. Further, improving communication and collaboration with other health professionals is crucial in helping to facilitate appropriate utilization of mental health services.

Future research should be conducted to determine whether or not these results are replicable in other population samples, especially those that more accurately reflect the demographics of the overall United States population. Also, future research should address some of the methodological concerns in the current study, such as using a more
accurate measure of perceived behavioral control and investigating aging effects separate from cohort effects. As the baby boomers continue to age this problem will continue to become more apparent, and it is important to proactively address it before the potential crisis becomes reality.
References


Appendix A

Initial Mailing Recruitment Letter

Date
Participant Name
Participant Address
Participant Address

Dear Participant,

We are writing to ask for your help in a confidential survey being conducted by the Department of Counseling Psychology at Ball State University, in collaboration with the Fisher Institute for Wellness and Gerontology. This study is part of an effort to understand the thoughts and beliefs that people have about mental health and mental health services. Only by asking people like yourself, for their honest opinions, can we learn what people think about mental health services. Completing the survey will take approximately 20 minutes.

You must meet the following criteria in order to participate:

- Born in the United States
- Born before the year 1965
- Must not be born in the year 1945

If you have access to the internet and would like the convenience of completing the survey online, you can access the survey by visiting:

http://www.surveymonkey.com/ballstate

If you would like to participate by completing a paper copy of the survey please call Dr. Donald Nicholas at 765-285-8058 to request a copy and one will be sent to you.

Your answers are completely confidential and no individual answers will be able to be identified. If you request a paper copy, when you return your completed questionnaire, any envelopes or information with your name on it will be destroyed and there will be no way to connect your name to your answers.
Your participation is voluntary, and you may withdraw from the study at any time and for any reason. There is no penalty for not participating or withdrawing. There are no costs to you or any other party. Your consent to participate will be assumed if you complete and submit the survey. If you have any questions or comments about this study, we would be happy to talk with you. You may call at 765-285-8058, or you may write to us at the address on the letterhead. Thank you very much for helping with this important study.

Sincerely,

Nazar Seyala, M.A.  Donald Nicholas, Ph.D.  David Haber, Ph.D.
Nazar Seyala, M.A.  Donald Nicholas, Ph.D.  David Haber, Ph.D.
Doctoral Candidate  Professor of Psychology  Distinguished Professor of
Ball State University  Ball State University  Wellness and Gerontology
Ball State University  Ball State University
Appendix B

Mailing for Hard Copy Survey Request

September 28, 2009
Participant Name
Participant Address

Dear Participant,

Thank you very much for agreeing to participate in a confidential survey being conducted by the Department of Counseling Psychology at Ball State University, in collaboration with the Fisher Institute for Wellness and Gerontology. This study is part of an effort to understand the thoughts and beliefs that people have about mental health and mental health services. Completing the survey will take approximately 20 minutes.

Please read the directions in each section carefully and answer all items on the survey. When you have completed the survey please enclose it in the pre-stamped envelope that has been provided for you and place it in the mail.

If you have any questions or comments about this study, we would be happy to talk with you. You may call at 765-285-8058, or you may write to us at the address on the letterhead. Once again, thank you very much for helping with this important study.

Sincerely,

Nazar Seyala, M.A.
Doctoral Candidate
Ball State University

Donald Nicholas, Ph.D.
Professor of Psychology
Ball State University

David Haber, Ph.D.
Distinguished Professor of Wellness and Gerontology
Ball State University
Demographic Questionnaire & Surveys

1. What is your gender?
   ___ Male
   ___ Female

2. What is your date of birth? (e.g. 1/5/1949)   ____/____/_______

3. What is the highest level of education that you have completed?
   ___ Some High School
   ___ High School Graduate – high school diploma or the equivalent (for example: GED)
   ___ Some College
   ___ Associate degree (for example: AA, AS)
   ___ Bachelor’s degree (for example: BA, AB, BS)
   ___ Master’s degree (for example: MA, MS, MEng, MEd, MSW, MBA)
   ___ Professional/Doctorate degree (for example: MD, DDS, JD, PhD, EdD)

4. Were you born in the United States?
   ___ Yes
   ___ No
   **If no, you may stop the questionnaire at this time.

5. What is your race? (Mark one or more races)
   ___ Spanish/Hispanic/Latino
   ___ White
   ___ Black/African American
   ___ American Indian or Alaska Native
   ___ Asian/Asian American/Pacific Islander
   ___ Other (please specify) ____________________________

6. What is your current marital status?
   ___ Married
   ___ Divorced
   ___ Widowed
   ___ Never Been Married
7. Do you have any previous experience receiving mental health services from a traditional mental health service provider (such as a psychologist, psychiatrist, counselor, or social worker?)
   ___ Yes
   ___ No

8. If yes, please check the people you have received mental health services from (check all that apply).
   ___ Psychologist
   ___ Psychiatrist
   ___ Counselor
   ___ Social Worker

9. Have you ever gone to your primary care doctor for mental health services?
   ___ Yes
   ___ No

10. Does your health insurance provider cover mental health services?
   ___ Yes
       ___ No
       ___ I Don’t Know
       ___ I Don’t Have Health Insurance

The following questions will measure your thoughts related to mental health services. The term professional refers to individuals who have been trained to deal with mental health problems (e.g. psychologists, psychiatrists, and social workers)

The term psychological problems refers to reasons one might visit a professional. Similar terms include mental health concerns, emotional problems, mental troubles, and personal difficulties.

For each item indicate whether you:

Disagree (0), Somewhat Disagree (1), Are Undecided (2), Somewhat Agree (3), or Agree (4):

11 There are certain problems which should not be discussed outside of one’s immediate family ................................................................. 0 1 2 3 4

12 I would have a very good idea of what to do and who to talk to if I decided to seek professional help for psychological problems .......................... 0 1 2 3 4
Disagree (0), Somewhat Disagree (1), Are Undecided (2), Somewhat Agree (3), or Agree (4):

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<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>Agree</th>
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<tbody>
<tr>
<td>13</td>
<td>I would not want my significant other (spouse, partner, etc.) to know if I were suffering from psychological problems</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>14</td>
<td>Keeping one’s mind on a job is a good solution for avoiding personal worries and concerns</td>
<td>0 1 2 3 4</td>
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<td>15</td>
<td>If good friends asked my advice about a psychological problem, I might recommend that they see a professional</td>
<td>0 1 2 3 4</td>
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<tr>
<td>16</td>
<td>Having been mentally ill carries with it a burden of shame</td>
<td>0 1 2 3 4</td>
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<tr>
<td>17</td>
<td>It is probably best not to know <em>everything</em> about oneself</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>18</td>
<td>If I were experiencing a serious psychological problem at this point in my life, I would be confident that I could find relief in psychotherapy</td>
<td>0 1 2 3 4</td>
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<tr>
<td>19</td>
<td>People should work out their own problems; getting professional help should be a last resort</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>20</td>
<td>If I were to experience psychological problems I could get professional help if I wanted to</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>21</td>
<td>Important people in my life would think less of me if they were to find out that I was experiencing psychological problems</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>22</td>
<td>Psychological problems, like many things, tend to work out by themselves</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>23</td>
<td>It would be relatively easy for me to find the time to see a professional for psychological problems</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>24</td>
<td>There are experiences in my life I would not discuss with anyone</td>
<td>0 1 2 3 4</td>
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Older Adults’ Intentions

Disagree (0), Somewhat Disagree (1), Are Undecided (2), Somewhat Agree (3), or Agree (4):

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<tr>
<td>25</td>
<td>I would want to get professional help if I were worried or upset for a long period of time</td>
</tr>
<tr>
<td>26</td>
<td>I would be uncomfortable seeking professional help for psychological problems because people in my social or business circles might find out about it</td>
</tr>
<tr>
<td>27</td>
<td>Having been diagnosed with a mental disorder is a blot on a person’s life</td>
</tr>
<tr>
<td>28</td>
<td>There is something admirable in the attitude of people who are willing to cope with their conflicts and fears without resorting to professional help</td>
</tr>
<tr>
<td>29</td>
<td>If I believed I were having a mental breakdown, my first inclination would be to get professional attention</td>
</tr>
<tr>
<td>30</td>
<td>I would feel uneasy going to a professional because of what some people would think</td>
</tr>
<tr>
<td>31</td>
<td>People with strong characters can get over psychological problems by themselves and would have little need for professional help</td>
</tr>
<tr>
<td>32</td>
<td>I would willingly confide intimate matters to an appropriate person if I thought it might help me or a member of my family</td>
</tr>
<tr>
<td>33</td>
<td>Had I received treatment for psychological problems, I would not feel that it ought to be “covered up”</td>
</tr>
<tr>
<td>34</td>
<td>I would be embarrassed if my neighbor saw me going into the office of a professional who deals with psychological problems</td>
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</tbody>
</table>
Instructions: Please read the following statements and rate them using the scale provided. Place your ratings to the left of each statement by recording the number that most accurately reflects your attitudes and beliefs about seeking mental health counseling. There are no “wrong” answers, just rate the statements as you honestly feel or believe. It is important that you answer every item.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
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<td>1</td>
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35. If a good friend asked my advice about a serious problem, I would recommend that he/she see a mental health counselor.

36. I would be willing to confide my intimate concerns to a mental health counselor.

37. Seeing mental health counselor is helpful when you are going through a difficult time in your life.

38. At some future time, I might want to see a mental health counselor.

39. I would feel uneasy going to a mental health counselor because of what some people might think.

40. If I believed I was having a serious problem, my first inclination would be to see a mental health counselor.

41. Because of their training, mental health counselors can help you find solutions to your problems.

42. Going to a mental health counselor means that I am a weak person.

43. Mental health counselors are good to talk to because they do not blame you for the mistakes you have made.
<table>
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<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
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<tbody>
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<td>2</td>
</tr>
</tbody>
</table>

44. Having received help from a mental health counselor stigmatizes a person's life.  
45. There are certain problems that should not be discussed with a stranger such as a mental health counselor.  
46. I would see a mental health counselor if I was worried or upset for a long period of time.  
47. Mental health counselors make people feel that they cannot deal with their problems.  
48. It is good to talk to someone like a mental health counselor because everything you say is confidential.  
49. Talking about problems with a mental health counselor strikes me as a poor way to get rid of emotional conflicts.  
50. Mental health counselors provide valuable advice because of their knowledge about human behavior.  
51. It is difficult to talk about personal issues with highly educated people such as mental health counselors.  
52. If I thought I needed mental health counseling, I would get this help no matter who knew I was receiving assistance.
53. We are interested in reasons why a person would or would not seek mental health services. If you have any other opinions that you have not already shared in the questions you just answered please share them below.
Appendix C

Communications Center Mailing 1

Hello,

My name is Nazar Seyala and I am a counseling psychology doctoral student at Ball State University conducting research for my dissertation. You have been selected to participate in a study that is part of an effort to understand the thoughts and beliefs that people have about mental health and mental health services. Only by asking people for their honest opinions can we learn what people think about mental health. The results of this survey will help researchers and mental health service providers understand the perceptions people have about mental health. The survey will take approximately 20 minutes to complete. You must meet the following criteria in order to participate:

- **Born in the United States**
- **Born before the year 1965**
- **Must not be born in the year 1945**

The survey will be accessible by visiting:

http://www.surveymonkey.com/ballstate

Your participation is voluntary, and you may withdraw from the study at any time and for any reason. There is no penalty for not participating or withdrawing. There are no costs to you or any other party. By having you complete and submit the survey, your consent will be assumed. Only the results of grouped data will be disclosed and there will be no way to identify individual responses.

If you have any questions or concerns, please do not hesitate to contact me or my research advisor. This project has been reviewed according to Ball State's procedures governing your participation in this research.

Thank you very much for helping with this important study.

Sincerely,

Nazar Seyala, M.A.

Donald Nicholas, Ph.D.

David Haber, Ph.D.

Nazar Seyala, M.A.

Donald Nicholas, Ph.D.

David Haber, Ph.D.

Doctoral Candidate

Professor of Psychology

Distinguished Professor of

Ball State University

Ball State University

Wellness and Gerontology

(301) 404-2274

(765) 285-8058

(765) 285-2961
Appendix D

Communications Center Mailing 2

Hello,

A few days ago you received an invitation to participate in a study that is part of an effort to understand the thoughts and beliefs that people have about mental health and mental health services. Only by asking people for their honest opinions can we learn what people do and do not think about mental health. The results of this survey will help researchers and mental health service providers understand the perceptions people have about mental health. **If you have already completed the survey, please accept our sincere thanks.** **If not, please do so if you are able.** We are especially grateful for your help because it is only by asking people like you to share your opinions that we can understand people’s thoughts and feelings about mental health.

The survey will take approximately **20 minutes** to complete. You must meet the following criteria in order to participate:

- **Born in the United States**
- **Born before the year 1965**
- **Must not be born in the year 1945**

The survey will be accessible by visiting:

http://www.surveymonkey.com/ballstate

Your participation is voluntary, and you may withdraw from the study at any time and for any reason. There is no penalty for not participating or withdrawing. There are no costs to you or any other party. By having you complete and submit the survey, your consent will be assumed. Only the results of grouped data will be disclosed and there will be no way to identify individual responses.

If you have any questions or concerns, please do not hesitate to contact me or my research advisor. This project has been reviewed according to Ball State's procedures governing your participation in this research.

Thank you very much for helping with this important study.

Sincerely,

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Professor of Psychology  
Ball State University  
(765) 285-8058

David Haber, Ph.D.  
Distinguished Professor of Wellness and Gerontology 
Ball State University  
(765) 285-2961
Appendix E
Demographic Questionnaire

11. What is your gender?
   ___ Male
   ___ Female

12. What is your date of birth? (e.g. 1/5/1949) _____/_____/_________

13. What is the highest level of education that you have completed?
   ___ Some High School
   ___ High School Graduate – high school diploma or the equivalent (for example: GED)
   ___ Some College
   ___ Associate degree (for example: AA, AS)
   ___ Bachelor’s degree (for example: BA, AB, BS)
   ___ Master’s degree (for example: MA, MS, MEng, MEd, MSW, MBA)
   ___ Professional/Doctorate degree (for example: MD, DDS, JD, PhD, EdD)

14. Were you born in the United States?
   ___ Yes
   ___ No

**If no, you may stop the questionnaire at this time.

15. What is your race? (Mark one or more races)
   ___ Spanish/Hispanic/Latino
   ___ White
   ___ Black/African American
   ___ American Indian or Alaska Native
   ___ Asian/Asian American/Pacific Islander
   ___ Other (please specify) _________________________

16. What is your current marital status?
   ___ Married
   ___ Divorced
   ___ Widowed
   ___ Never Been Married
17. Do you have any previous experience receiving mental health services from a traditional mental health service provider (such as a psychologist, psychiatrist, counselor, or social worker?)
   ___ Yes
   ___ No

18. If yes, please check the people you have received mental health services from (check all that apply).
   ___ Psychologist
   ___ Psychiatrist
   ___ Counselor
   ___ Social Worker

19. Have you ever gone to your primary care doctor for mental health services?
   ___ Yes
   ___ No

20. Does your health insurance provider cover mental health services?
   ___ Yes
   ___ No
   ___ I Don’t Know
   ___ I Don’t Have Health Insurance
Appendix F

Inventory of Attitudes toward Seeking Mental Health Services (IASMHS)

The term *professional* refers to individuals who have been trained to deal with mental health problems (e.g. psychologists, psychiatrists, social workers and family physicians).

The term *psychological problems* refers to reasons one might visit a professional. Similar terms include mental health concerns, emotional problems, mental troubles, and personal difficulties.

***********

For each item indicate whether you disagree (0), somewhat disagree (1), are undecided (2), somewhat agree (3), or agree (4):

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<td>I would not want my significant other (spouse, partner, etc.) to know if I were suffering from psychological problems</td>
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<td>4</td>
<td>Keeping one’s mind on a job is a good solution for avoiding personal worries and concerns</td>
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<td>If good friends asked my advice about a psychological problem, I might recommend that they see a professional</td>
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<td>6</td>
<td>Having been mentally ill carries with it a burden of shame</td>
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<td>7</td>
<td>It is probably best not to know <em>everything</em> about oneself</td>
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</table>
If I were experiencing a serious psychological problem at this point in my life, I would be confident that I could find relief in psychotherapy ...

People should work out their own problems; getting professional help should be a last resort.

If I were to experience psychological problems I could get professional help if I wanted to.

Important people in my life would think less of me if they were to find out that I was experiencing psychological problems.

Psychological problems, like many things, tend to work out by themselves.

It would be relatively easy for me to find the time to see a professional for psychological problems.

There are experiences in my life I would not discuss with anyone.

I would want to get professional help if I were worried or upset for a long period of time.

I would be uncomfortable seeking professional help for psychological problems because people in my social or business circles might find out about it.

Having been diagnosed with a mental disorder is a blot on a person’s life.

There is something admirable in the attitude of people who are willing to cope with their conflicts and fears without resorting to professional help.

If I believed I were having a mental breakdown, my first inclination would be to get professional attention.
20 I would feel uneasy going to a professional because of what some people would think................................................................. [ 0 1 2 3 4 ]

21 People with strong characters can get over psychological problems by themselves and would have little need for professional help .................. [ 0 1 2 3 4 ]

22 I would willingly confide intimate matters to an appropriate person if I thought it might help me or a member of my family.......................... [ 0 1 2 3 4 ]

23 Had I received treatment for psychological problems, I would not feel that it ought to be “covered up” ....................................................... [ 0 1 2 3 4 ]

24 I would be embarrassed if my neighbor saw me going into the office of a professional who deals with psychological problems.................. [ 0 1 2 3 4 ]
Appendix G

Beliefs About Psychological Services

Instructions: Please read the following statements and rate them using the scale provided. Place your ratings to the left of each statement by recording the number that most accurately reflects your attitudes and beliefs about seeking mental health counseling. There are no “wrong” answers, just rate the statements as you honestly feel or believe. It is important that you answer every item.

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___ 1. If a good friend asked my advice about a serious problem, I would recommend that he/she see a mental health counselor.
___ 2. I would be willing to confide my intimate concerns to a mental health counselor.
___ 3. Seeing mental health counselor is helpful when you are going through a difficult time in your life.
___ 4. At some future time, I might want to see a mental health counselor.
___ 5. I would feel uneasy going to a mental health counselor because of what some people might think.
___ 6. If I believed I was having a serious problem, my first inclination would be to see a mental health counselor.
___ 7. Because of their training, mental health counselors can help you find solutions to your problems.
___ 8. Going to a mental health counselor means that I am a weak person.
___ 9. Mental health counselors are good to talk to because they do not blame you for the mistakes you have made.
___ 10. Having received help from a mental health counselor stigmatizes a person's life.
11. There are certain problems that should not be discussed with a stranger such as a mental health counselor.

12. I would see a mental health counselor if I was worried or upset for a long period of time.

13. Mental health counselors make people feel that they cannot deal with their problems.

14. It is good to talk to someone like a mental health counselor because everything you say is confidential.

15. Talking about problems with a mental health counselor strikes me as a poor way to get rid of emotional conflicts.

16. Mental health counselors provide valuable advice because of their knowledge about human behavior.

17. It is difficult to talk about personal issues with highly educated people such as mental health counselors.

18. If I thought I needed mental health counseling, I would get this help no matter who knew I was receiving assistance.
Appendix H

Open-ended Question

We are interested in reasons why a person would or would not seek mental health services. If you have any other opinions that you have not already shared in the questions you just answered please share them below.