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Older Adults and Depression : the Relationships Between Distorted Thinking, Quality of Life and Depressive Themes

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Philadelphia College of Osteopathic Medicine

Department of Psychology

OLDER ADULTS AND DEPRESSION:

THE RELATIONSHIPS BETWEEN DISTORTED THINKING

QUALITY OF LIFE AND DEPRESSIVE THEMES

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Submitted in Partial Fulfillment of the Requirements of the Degree of

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DEPARTMENT OF PSYCHOLOGY

Dissertation Approval

This is to certify that the thesis presented to us by _Carissa Ferguson-Thomas_

on the _4TH_ day of _December_, 20_06_, in partial fulfillment of the

requirements for the degree of Doctor of Psychology, has been examined and is

acceptable in both scholarship and literary quality.

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Abstract

This study analyzed the relationships between depression, distorted thinking and quality of life in an elderly population. Ninety non-depressed and 72 depressed individuals were interviewed and administered 3 self report measures. The study results demonstrate that: (a) Those who reported greater numbers of cognitive distortions, reported lower quality of life than those who reported less cognitive distortions; (b) depressed individuals reported lower quality of life than non-depressed individuals; (c) depressed individuals endorsed more distorted thinking phrases than non-depressed individuals and (d) depressed individuals reported more subcategories of cognitive distortions than non-depressed individuals. The results of this study support the ideas that depressed older adults exhibit more distorted thinking and have a lower quality of life than the non-depressed.

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Overview

Depression in older adults, although prevalent, is under-diagnosed and under-treated. In order to better address this concern, it is increasingly important that an understanding of the thinking patterns of depressed older adult patients be developed. A study of their thinking, including the quality of thoughts and themes that run through their thoughts will impart a better understanding about the depressed older adults' perceptions of their quality of life; it will also be beneficial in helping them improve their overall well being. Understanding will increase the ability to help alleviate the suffering of older adults with depression and help them to distinguish reality-based worries from distorted thinking.

History

Depression has been witnessed in humans since ancient times (Nester, Barrot, DiLeone, Eisch, Gold, & Monteggia, 2002). Hippocrates first used the expression "melancholia" which literally translates to "black bile" in Greek, to describe the symptoms of depression (Nestler, et al., 2002). Although the Greeks pointed out many of the same symptoms and causes of melancholia that we see in today's depression, it was not until the 19th century that researchers began to indicate the brain as a role player in the disorder (Nestler, et al, 2002). Today, it is recognized that physiology, emotions, and behavior all play a role in depression.

Factors Contributing to Geriatric Depression

Research has shown that there are many factors associated with the development of a depressive disorder (Blazer & Hybes, 2005; Laidlaw, et al., 2004; Nestler, et al., 2002; NIH, 2005). Older adults are vulnerable to all of the contributing factors of depression that younger individuals experience. However, the elderly are susceptible to other factors that are not typically experienced by the younger population.

The factors associated with geriatric depression can be classified into the two categories of (a) biological/ internal factors and (b) environmental/ external factors. Biological or internal factors include genetics/heredity, brain dysfunction, personality, cognitive distortions and illness. Environmental/external factors include stressful events, bereavement and the stress of the individual's social situation.

Internal Factors

To begin the discussion of internal causes of depression, one must look at predisposition. Until recently there has been little promise in the isolation of a particular gene that actually causes depression. Even so, studies have shown that depression is heritable (Nestler, et al., 2002). This point is relevant for older adults who have a history of depression, but less so for older adults experiencing depression for the first time. Blazer (2005) stated the following: "Although a heredity predisposition to depression is less likely among persons in late life who are experiencing a first onset of depression, a number of biological factors are associated with late-life depression" (p. 1).

As stated earlier, researchers have not been successful in uncovering a "depression" gene. However, the NIMH (2005) has revealed research indicating that there may be a link between a gene that helps humans manage stress, and the

development of depression. The gene, which is "a chemical transporter called 5-HTT" appears to help denote which individuals are more able to handle stressful situations (NIMH, 2005, p. 13). The study revealed that individuals who 1) Have 2 short versions of the gene (inherited from his or her parents) and 2) are experiencing many major life stressors, are more likely to develop depression (NIMH, 2005).

This new research is important because of its significance for older adults who have no history of depression. The research implies that some older adults may become depressed if they have the short versions of 5-HTT and are beginning to experience numerous stressors that were not there before. In many older adults, losses often bring about significant and high numbers of stressors, which in turn, would make those older adults more susceptible to depression.

Since the 1800's, depression has been linked to problems in the brain. Today, the identified problems include changes in the secretion of certain neurotransmitters, problems with the endocrine system of which the hypothalamus and pituitary gland are integral parts, and abnormalities of the frontal lobes.

The neurotransmitters that have been associated with depression are serotonin, norepinephrine, and dopamine (Blazer & Hybels, 2005; Price, 2004). It has been found that these neurotransmitters function within structures of the brain that regulate emotions, reactions to stress, and various physical drives such as sleep, appetite, and sexuality (Price, 2004). However, the exact role of each neurotransmitter in the development and maintenance of depression is uncertain.

Research into the way that antidepressant medication functions has provided the greatest insight into how neurotransmitters affect or are affected by depression. Because

many of the antidepressants increase the number of the neurotransmitters associated with depression, it has been suggested by various researchers that chemical imbalance is a possible factor in depression (Grohol, 2001). The above information reflects most of what is found in the literature regarding neurotransmitters and depression, revealing that much more research needs to be conducted on the subject.

The endocrine changes identified as having an effect on geriatric depression include hyper-secretion of corticotrophin-releasing factor (CRF), lower levels of testosterone, anatomical changes, and increased cortisol secretion (Blazer and Hybels, 2005).

More recent studies link frontal lobe dysfunction with late-life depression (Alexopoulos, 2002; Alexopoulos, Kiosses, Klimstra, Kalayam, & Bruce, 2002; Burke, 2005). Alexopoulos et al. (2002) conducted a study that demonstrated the connection between frontal lobe dysfunction and depression in older adults. The two major findings resulting from the study were that 1) executive dysfunction is found in a large percentage of depressed older adults and 2) executive dysfunction appears to have an influence on the course of depression in older adults. The study also revealed that this influence is not seen with other cognitive abnormalities.

Alexopoulos (2002), in his review of the research on frontal lobe dysfunction and depression in late life, discussed the two sets of findings that suggest a relationship between frontostriatal dysfunction and geriatric depression. In his discussion on the first set of findings, the author referred to the association between executive dysfunction and depression with emphasis on the impairments of the executive functions in depressed elderly patients and how those impairments improved as the depression subsided.

The second set of findings referred to by Alexopoulos (2002) revolved around the idea that depression frequently makes disorders involving frontostriatal connections more difficult to diagnose and treat. This discussion points to the connection of frontal lobe dysfunction and depression by noting that subcortical dementing disorders often lead to depression in the older adult, whereas cortical dementias do not.

To further the research on frontal lobe dysfunction and geriatric depression, Almeida, Burton, Ferrier, McKeith, & O'Brien (2005) chose to study actual brain volume and composition in older adults experiencing their first depressive episodes. The authors then compared the brains of the first-time depressed patients with the brains of those who have experienced depression in the past. They found that the right frontal lobe of those patients with late onset depression was noticeably smaller than the lobes of the other patients (Almeida, et al., 2005). The authors called this phenomenon "right frontal lobe atrophy" (p. 679) and believe that it serves as some proof that not only does brain dysfunction play a role in geriatric depression but also that structural brain changes may play a part in the development of late onset depression (Almeida, et al., 2005, p. 679).

Another internal aspect that influences depression in older adults is personality. Blazer & Hybels (2005) note that personality disorders in older adults should be of concern. The authors reviewed the research and found that older patients with a personality disorder were four times more likely to experience maintenance or re-emergence of depressive symptoms compared to those without a personality disorder.

Personality traits are also a noted cause of depression in the elderly. Simply, if advanced age brings about unwanted changes in the way an individual is used to thinking, behaving and living, it stands to reason that the risk for depression increases.

For example, loss of control for a strong, independent individual may bring about depression. Although it is clear that many older adults enjoy healthy, independent lives, those who are unable to enjoy this kind of living but who have a strong desire to do so, are more susceptible to depressive disorders (Laidlaw, et al.).

Cognitive distortions have also been cited as another cause for depression in older adults. According to Blazer & Hybels (2005), the overreaction to and/or the misinterpretation of events, which is characteristic of cognitive distortions often leads to depressive disorders in older adult. Cognitive distortions will be discussed later in this paper.

Of the internal causes of depression, one would think that physical illness would be of least concern, considering the fact that most illnesses are treatable. However, this is not the case with the geriatric population because most illnesses causing depression also 1) make it difficult to differentiate and treat both the depression and the medical illness because of the entanglement of the symptoms and 2) involve treatment with medications that complicate or worsen depression (Alexopoulos, et al., 2001).

Some of the physical illnesses that contribute to depression in older adults include Parkinson's disease, stroke, heart attack, vitamin B12 deficiency, hyper- or hypothyroidism, multiple sclerosis, systemic lupus erythematosus, certain kinds of cancers, vascular dementia, and Alzheimer's disease (Alexopoulos, et al. 2001). It is important that medical and mental health professionals familiarize themselves with these illnesses because of the possible contraindications to the diagnosis and treatment to geriatric depression.

Many physicians and researchers have found that cardiac problems can contribute to the development of a depressive disorder (Straus, 2004; Havranek, Spertus, Masoudi, Jones & Rumsfeld, 2004; National Institute of Mental Health (NIMH), 2001; Hauschildt, 2004). Dr. Joshua Straus, (2004) in an interview held at Northwestern University stated that it is not unusual for patients hospitalized for cardiac problems to develop major depression. Havranek, et al. (2004), in their research on heart failure as a predictor of depression, found that the incidence rate in the development of depression increased, depending not only on the heart failure but also on the number of adverse social and health factors experienced by the individual. The greater the number of factors experienced, the greater the number of patients developing depressive symptoms within one year of the heart failure. The NIMH (2001) also noted that individuals with cardiac problems are more likely to develop a depressive disorder than are healthy individuals, with the difference spiking from one in 20 for otherwise healthy people to one in three for individuals who have survived a heart attack.

Thyroid dysfunction has been cited as a factor in the development of depression in older adults. The most common thyroid problems in older adults are hypothyroidism, and hyperthyroidism (Goldenberg, 2000). Unlike the presentation of the two illnesses in younger patients, hyperthyroidism and hypothyroidism look similar to one another in older adults, leading to great difficulty in distinguishing the illnesses. Goldenberg (2000) noted that in older adults, the presentation both of hyperthyroidism and of hypothyroidism includes depression along with failure to thrive, confusion, mobility problems, heart failure and bowel problems. The author also stated that because

these conditions exhibit signs of other common illnesses that attack older adults,

hypothyroidism and hyperthyroidism often go undiagnosed and therefore untreated.

Parkinson's disease is a movement disorder that affects the central nervous

system. It has been linked with depression in older adults because depression has been

cited as a common symptom of the disease. Dr. Abraham Lieberman (2004) in an article

written for the National Parkinson Foundation stated that older adults with Parkinson's

are more likely to develop depression than other older adults suffering from other

illnesses that are as debilitating as Parkinson's. Other researchers have shown that not

only does Parkinson's and depression often appear together in older adults, but that

Parkinson's disease may also make depression difficult to diagnose and treat. Leentjens

(2004) reported that Parkinson's and depression have symptom that overlap and have

some shared pathophysiology. Because of this, depression may not be recognized in

Parkinson's patients and when it is, treatment of the depression could have effects on

motor or cognitive functions thus making treatment of both disorders difficult.

Older adults who suffer a stroke are also subject to depression. It has been

estimated that over one quarter of older adults who suffer a stroke will become depressed

(NIMH, 2002). Eyles (2006) reported that depression, although common in recovering

stroke patients, often goes untreated in this population because of the health

professionals' focus on the more obvious physical consequences of stroke.

Many of the above-mentioned medical illnesses, as well as other medical

problems, require medications that have depression or have depressive symptoms as a

side effect. Included in these medications are some of the drugs used to treat Parkinson's

disease, high blood pressure, cancer, heart disease, chronic pain, arthritis and seizures (Hillman, 2005; Fouts & Kotabe, 2003).

As noted above, depressed older adults who are also physically ill often have to take many medications. Prescribing the proper medications, the right dosages and in the proper combinations is a difficult balancing act for physicians. This polypharmacy is of great concern in the older adult population because of the many possible harmful effects. For example, Cummings (1998) found that unfavorable drug interactions are common in the recommended treatment of depression in older adult patients with Parkinson's disease. The author noted that the adverse interactions of antiparkinsonian and antidepressant drugs happen often enough to preclude administering the drugs together. Beta-blockers are a category of drugs that are used to treat high blood pressure. It has been found that this drug class has a potential for adverse interactions with MAOIs (Thomas Healthcare, 2005). Prozac, an antidepressant medication, has also been shown to be contraindicated for beta blockers as well as for other medications such as anticonvulsants (Tegretol).

Many physicians and researchers have voiced concerns regarding polypharmacy in older adults in general and in depressed older adults in particular (Cummings, 1998; Brummel-Smith, 1998; Fouts & Kotabe, 2003), with emphasis on how to reduce the number of drugs taken by this vulnerable population. Brummel-Smith (1998) stated that the first rule of thumb when prescribing for older adults is that every drug should be given only when based on a concrete diagnosis. The author noted that often drugs are given for the wrong reasons such as in the case of dementia for which antipsychotics may be given. However he noted that antipsychotics are useful only if the patient has

psychotic symptoms such as delusions or hallucinations. To that end, Brummel-Smith (1998) suggested that any drug that is not connected to a diagnosis should be eliminated and that every visit an older adult makes to a medical professional should be an opportunity to review and reduce medications taken by the older adult.

Internal causes of geriatric depression include physiological, biological and mental problems. Many of these problems and how they cause and/or maintain depression are not fully understood. However, in most cases, there is adequate information to make some changes in the way professionals uncover, view and treat depression in older adults.

External factors

Environmental/external factors are as varied as the internal causes of depression in the elderly; however, many of these environmental/external causes fall under the category of stress, with a majority of the stress stemming from some form of loss. Laidlaw and his colleagues (2004) noted that older adults are often plagued by losses that can lead to stress. Some of these loses include family, social connections, money and health. The authors also note that because people are living longer, the possibility of older adults experiencing significant losses has increased. For example, increases in age increases the possibility of developing a chronic medical condition (Laidlaw, et al., 2004).

Nestler, et al., (2002) also commented on the seriousness of the effects of stress on the elderly and its connection to depressive disorders. In their research, the authors have found that some evidence points to the idea that episodes of depression occur during some form of stress (Nestler, et al., 2002).

Another stressor that may not result in a loss per se, but that is as significant for the older adult and has been cited as a cause of depression is unreconciled, past traumatic events such as war, migration, and abuse (Elderly Suicide Prevention Network (ESPN), 2005).

Many of today's older adults have served in World War II (1939-1945), the Korean War (1950-1953) or the Vietnam War (1945-1975). Unfortunately, many soldiers returned from the wars with mental health problems, some of which were never addressed. Depression is one of the mental health problems experienced by some of the war veterans.

A history of migration is another possible cause for stress in some older adults. As one ages and begins to review his or her life, some individuals long for their "real" home or the "old country". Many older adults were uprooted as children by their parents, by other family members or by kind strangers. However, as children they may not have had a proper understanding about why it was necessary to leave home. Although in some cases the reasoning was very clear, the older adult may still have been traumatized. Examples include the victims of the holocaust (1933-1947) and African Americans who fled the South to escape death.

Past abuse is also an issue that may plague an older adult's life today. One of the main reasons for this phenomenon is the fact that in their time, the abused individual was not encouraged to disclose abuse, so there was little opportunity to deal with, look at, or reconcile the effects of such a trauma. Leaving the trauma untreated can lead to the resurfacing of the effects at any time in the future, leaving the person vulnerable to depression later in life.

Although the previous list of factors is not exhaustive, it is important to understand that there are internal and external, biological and environmental factors in the etiology of depression in older adults. It is also imperative that an understanding is developed that emphasizes that these factors occur within a rich context of the older person's life. It is uncommon that experiencing one of the aforementioned factors will lead directly to a depressive disorder for every older adult. Usually a combination of the cited factors results in depression (Blazer & Hybels, 2005; ESPN, 2005; Nestler, et al., 2002).

Many researchers share the opinion that internal and external factors are important aspects to consider when looking at depression. Nestler, et al. (2002) stated that depression is a disorder that should be examined in the context both of biological factors and of environmental factors. The National Institute of Health (NIMH), in its 2005 Budget Report also point to the importance of this inclusion when examining depression. In their review of recent studies, they found that "...genetics and environment cannot be examined separately; the environment sculpts our biological responses as surely as our genetics influence behavior" (p. 13). With this in mind, it may become possible for researchers to study prevention possibilities by singling out and/or intercepting some of the factors before there is a chance of interacting with the other factors to cause depression. In the mean time, mental health practitioners must be aware of the possible causes and contributing factors experienced by the older adult in order to help alleviate or prevent his or her depressive state.

Prevalence and Incidence

Depression is reportedly one of the most prevalent psychiatric disorders observed in the elderly. Prevalence refers to the number of older adults who, at a given time, are depressed. According to most statistics, the numbers of older adults suffering from depression are staggering (UDHHS, 1999; Kelly, 2003; Klap, Tschantz, Unutzer, 2003; Lyness, Noel, Cox, King, Conwell, & Caine). In a study conducted by Jeffrey Lyness and his associates (1997), it was found that of 130 primary care patients aged 60 or above who visited three primary care internists, 25 percent were diagnosed with a depressive disorder. Lyness et al. (1997) concluded that the large number of depressive disorders in the older adult population in primary care has resulted in a major public health problem. These trends are mimicked in the older adult population of the City of Philadelphia.

The Philadelphia Corporation for the Aging (PCA), in their June 2004 Summary of Findings: The Socio-Economic and Health Characteristics of the Philadelphia Elderly Population publication, approximates the number of elderly persons in Philadelphia to be 204,971 of whom 18-25% have a mental illness. In addition, according to PCA's (2004b) findings, it is estimated that one in five elderly persons reported symptoms of depression.

Philadelphia Health Management Corporation (PHMC, 2004), which maintains The Community Health Data Base, also provides an in-depth look at the older adults of Philadelphia. The database is compiled by collecting local data through the Southeastern Pennsylvania Household Health Survey, which is a five-county survey on the health status, use of services, and access to health care of area residents. The following was found in the 2004 survey:

"In Southeastern Pennsylvania, while only 8.9% of older adults reported

having a diagnosed mental health condition, when screened for symptoms of

depression, 12.8% of older adults reported major depression. Among older

adults who are in fair or poor health, 23.5% reported major depression" (p. 1).

As demonstrated in the previously cited statistics, many sources have discussed

the prevalence of depression in the elderly. Looking at the numbers, it is clear that the

prevalence of depression in the older adult population differs, depending on the author of

the study and the sample being studied. However, most researchers agree that depression

is a disorder that is experienced by a significant number of older adults.

Although there are many publications and studies that focus on the prevalence

rates of depression, the same cannot be said for incidence of depression. As noted by

other researchers (Dooneief, Mirabello, Bell, Marder, Stern, & Mayeux, 1992, Patten,

1999, Berger, Small, Forsell, Winblad & Backman 1998) incidence rates for depression

in the general population are scarce. Often in the research literature, incidence of

depression is studied in the context of another disorder or problem. There is research on

the incidence of depression in bereavement (Sook & Shuchter, 1991), in smoking

cessation (Tsoh, Humfleet, Munoz, Reus, Hartz, & Hall, 2000), in Alzheimer Disease

(Weiner, Edland & Luszczynska, 1994) and in Parkinson's Disease (Dooneief, et., al.,

1992).

The incidence of depression in the elderly refers to the annual diagnosis rate or

the number of new cases of older adults who are diagnosed with depression each year.

Dooneief, et al. (1992) noted that there are very few published estimates of the incidence

of depression for the general population. Although the statement was made more than 10

years ago, it still rings true today.   The authors also stated that in their research on

depression incidence, two studies were found. The first study declared the annual

incidence of depression in individuals over the age of 40 to be 0.17% and the other study

listed the annual incidence of depression in people over the age of 50 to be 0.14% in men

and 0.29% in women.

The same appears to be true nearly 15 years after the claim by Dooneief et al.

(1992). There is anecdotal information and a great number of estimates on incidence but

little research. This pattern continues in other countries as well. In Canada, Patten

(1999) reported in his discussion of the National Population Health Survey (NPHS) that

estimates of the incidence of depression have not been available. Fortunately this survey

was used to make estimates of the incidence of depression in the country. Based on the

findings, the annual incidence rate was estimated for four different age groups both for

men and for women. The results were as follows:

Table #1.1

Incidence of Depression

Age	Annual Incidence
Men	
12-24	2.9
25-44	3.3
45-64	1.8
>65	1.8
Women	
12-24	7.1

25-44	4.5
45-64	4.1
>65	1.3

(p. 714).

Research on the prevalence and incidence of depression in older adults mimics the

previously cited research of the general population: There is much literature on

prevalence and very little on incidence (Berger, et al., 1998). However, Berger et al.

concluded that incidence data was lacking in the literature because of sampling issues.

The authors stated that the incidence data is lacking because studies had not utilized

samples large enough to generate the proper data.

Although researchers have an idea of the incidence of depression in older adults,

much of the data is derived from anecdotal information and not actual reliable studies.

This lack of statistical data provides the research community with an opportunity and a

challenge to conduct valid and reliable studies to gather this information.

Types of Depression in the Geriatric Population

There are several types of depressive disorders seen frequently in older adults.

Theses disorders include major depression, subsyndromal depressive symptoms, vascular

depression, psychotic depression, Depression–executive dysfunction (DED), and

dysthymia.

Major Depression in older adults can be a disorder continued from earlier in life

or a new encounter, which is then called "late onset" depression. This is a serious

disorder involving feelings of depression and loss of pleasure that does not seem to go away for at least a two-week period (symptomology will be discussed later). Major Depressive disorder, according to The Diagnostic and Statistical Manual – Fourth Edition - Text Revision (DSM-IV- TR, 2000) cannot be diagnosed until the patient has been symptomatic for two weeks and has had significant disturbances in his or her life due to the depression.

Major depression is common in older adults: However what is more common are "subsyndromal depressive symptoms" (Delano-Wood and Abeles, 2005). Subsyndromal depressive symptoms seem to aid major depression's escape from detection, because the older adult is experiencing some of the diagnosable symptoms of depression but not quite enough to be diagnosed. Even if the older adult does not meet full diagnosable criteria, however, the depressive symptoms still have a very significant impact on the older adults' quality of life.

Although major depression is of great concern because of its neurological implications, vascular depression continues to be studied intensely. Vascular depression is described as a recently acknowledged type of depression common in persons over 60 years old, denoting the involvement of cardiovascular disease as a part of the illness (Marano, 2002). Alexopoulos, Meyers, Young, Kakuma, Silbersweig & Charlson (1997) concluded that vascular depression in older adults is characterized by a different presentation than non- vascular depression. Delano-Wood & Abeles (2005) noted that what they defined as the "vascular hypothesis of geriatric depression", points to the conclusion that older adults are more susceptible to late-life depression if they are experiencing vascular risk factors. Alexopoulos et al. (1997) concluded that "late- onset

depression associated with vascular risk factors is characterized by cognitive dysfunction, disability, retardation, lack of insight, and limited depressive ideation" (p. 564).

Krishnan, Hays & Blazer (1997) drew the same conclusion as the above mentioned researchers in their study of vascular depression. The authors found that patients with vascular depression had a greater chance of being elderly, nonpsychotic, and developing a late-onset depressive disorder" (Krishnan, et al., 1997).

It has been speculated that vascular depression is associated with lesions in the basal ganglia and possibly other areas of the brain; as a result, it is associated with greater cognitive difficulties (Alexopoulos, et al., 1997).

Psychotic depression is characterized by delusions and hallucinations associated with a major depressive disorder. According to Alexopoulos, Katz, Reynolds & Ross (2001), psychotic depression is most common in late life. Psychotic depression includes many difficult to treat symptoms including hallucinations, delusions paranoia, weight loss due to not eating and dehydration due to not drinking.

Flint & Rifat (1998) found that for older adults with psychotic depression, relapse and recurrence were frequent. The authors stated that although the older adults with psychotic depression had attained remission and were then maintained on a full-dose regimen of antidepressant medication, they remained high-risk for relapse or recurrence. This appeared to be truer for the patients with psychotic depression than for older adults with nonpsychotic depression. The reason for this phenomenon was not made clear by the authors.

Depressive Executive-Dysfunction (DED) syndrome was initially studied by Alexopoulos et al in 2002. The authors believed that frontal lobe dysfunction resulted in

a specific type of depression in older adults. Upon completion of the study, the authors

developed a list of the symptoms and characteristics to describe DED. Alexopoulos et al.

(2002) listed the symptoms of decreased fluency, problems with visual naming,

psychomotor retardation, anhedonia, and paranoia.

To further their conclusion that geriatric depression and executive dysfunction are

intertwined and create a distinct syndrome, Alexopoulos et al. (2002) concluded that:

"Depressive symptomatology, and especially psychomotor retardation and loss of

interest in activities, contributed to disability in DED patients, whereas these

depressive symptoms did not influence the functioning of depressed patients without

significant executive impairment..... The clinical presentation of DED, and

particularly the symptoms of psychomotor retardation, loss of interest in activities, and

impaired fluency, resembles the behavioral abnormalities of patients with medial

frontal lobe syndromes. The impairment in visual retention noted in patients with DED

also occurs in frontal lobe syndromes as a result of disruption of visual attention and

visual scanning. However, the DED syndrome is distinguished from frontal lobe

syndromes by the presence of depressed mood, depressive ideation, and initial,

middle, and terminal insomnia, all of which are symptoms of depression" (p. 102).

Dysthymia, although diagnosed in younger populations, has also been cited as a

type of geriatric depression because of its different presentation in older adults.

Devanand, Nobler, Singer, Kiersky, Turret, Roose and Sackeim (1994), in their study of

dysthymia in older adults, found that a significant percentage of elderly dysthymic

patients seemed to be older adults who did not have dysthymia when they were young.

The authors also raised the issue that perhaps the DSM-III-R subtyping of dysthymia into

the categories of early/late onset and primary/secondary may not apply to older adults with dysthymia.

The various types of depression seen in the geriatric population are fraught with intricacies and complications; however, research, as cited earlier, is making great headway in the discovery of particular syndromes, treatment options and new information that will help in the diagnosing of older adults with any type of depression.

Symptoms of Geriatric Depression

Depression is often classified as "feeling sad", "down" or "blue". However, the lack of these classic expressions may be the very reason that professionals sometimes fail to diagnose depression quickly in older adults.

The DSM- IV-TR (2000) Fourth Edition, Text Revision, describes Major Depression Disorder as:

"A. Presence of two or more Major depressive Episodes." (p. 174)

A Depressive episode is described in the DSM-IV-TR (2000) as consisting of a change in mood that results in five or more of the following symptoms, exhibited during a two-week period:

1) Depressed mood most of the day nearly every day, as indicated either by subjective report or observation made by others.

2) Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly everyday.

3) Significant weight loss when not dieting or significant weight gain.

4) Insomnia or hypersomnia nearly every day

5) Psychomotor agitation or retardation nearly day.

6) Fatigue or loss of energy nearly every day

7) Feelings of worthlessness or excessive or inappropriate guilt

8) Diminished ability to think or concentrate, or indecisiveness, nearly every day

(p. 168-169)

It is also stated that the symptoms must cause "clinically significant distress or

impairment in social, occupational or other important areas of functioning (p. 169) and,

of the five symptoms, one must be "either depressed mood or loss of interest or pleasure"

(p. 168).

Although the above criteria appear to be inclusive enough, it has been well

documented that older adults do not always exhibit the same symptoms as younger

populations.

Research has shown that one of the major differences in the older adults'

expressions of depression is that they may not admit to or exhibit extreme sadness

(Gareri, Fazio, & De Sarro, 2002; Laidlaw, Thompson, Dick-Siskin & Gallagher-

Thompson, 2004; Lebowitz, Pearson, Schneider, Reynolds). Because most people –

clinicians-included- are familiar with the "sadness" of depression, absence of this well

known symptom may cause depression to be overlooked as a diagnosis.

Other symptoms that are typical of geriatric depression include somatic

complaints, cognitive impairment, persistent anhedonia or loss of pleasure, behavior

changes and the pronounced presentation of negative personality traits (Elderly Suicide

Prevention Network, 2005; Blazer, 2005). The United States Department of Health and

Human Services, Surgeon General's Report (1999) stated that, "older people with mental

disorders may present with different symptoms than younger people—emphasizing

somatic complaints rather than psychological troubles ..." (p. 340)

Because of the deviation from the DSM IV-TR diagnostic criteria, some

researchers believe that the diagnostic criteria for depression, as pointed out earlier in the

case of dysthymia, may need to be modified for older adults (Ahmed & Takeshita, 1997,

Burke, 2005). Burke (2005), in his presentation on how to recognize depression in older

adults, stated that the DSM IV-TR criteria is better suited for a younger population

because they are not taking as much medication, nor do they have as many co-morbid

illnesses as older adults.

In summary, the older adult who is depressed, rarely experiences the pleasures of

life, thinks negatively, and has problems functioning in his or her daily life. He or she

may also ignore health care needs which can lead to or exacerbate physical health

problems. Because of the above mentioned symptoms, depression among older adults is

an issue of great concern. Depressed older adults need psychological attention in order

to overcome the depression and increase or improve their quality of life. Because they are

particularly vulnerable, they warrant increased attention by health and mental health

professionals.

Diagnosing Geriatric Depression

Because of the difference in presentation of geriatric depression, diagnosing

depression in older adults warrants a different approach from diagnosing depression in

younger populations. Because this is the case, there has been the development of

depression screening tools designed specifically for the older adult population.

Depression screening tools help the clinician make a definitive diagnosis of depression in

the older adult. The tools are used in conjunction with a thorough medical examination and an in-depth clinical interview of the patient as well as his or her family members. Interviewing the family helps the clinician gain insight into past history of illness as well as current indicators of depression, and offers more information to form a better conceptualization of the symptomatology as it is seen outside of the clinician's office.

The standardized, geriatric population-specific, depression screening tools includes the Geriatric Depression Scale (GDS; Yesavage, Brink, Rose, Lum, Huang, Adey, & Leirer, 1983), the Center for Epidemiological Studies- Depression (CES-D; Radloff, et. al., 1977) and the Duke Depression Evaluation Schedule for the Elderly (DDES).

The GDS is a brief, self-rating questionnaire in yes or no format. It was designed specifically for use with the older adult population so the yes or no format was chosen to reduce confusion and facilitate uncomplicated administration. Also, the developers of the scale constructed the questions in a way that will not intimidate older adults.

In order to validate this scale, Yesavage, et al. (1982-83), conducted a study of 100 older adults who were administered three depression screening tools. The participants were placed into the categories of "normal", "mildly depressed" or "severely depressed" in order to allow the researchers to draw conclusions about validity at the end of the study (Yesavage, et al. 198-83). As hypothesized, the normal subjects had lower scores on the GDS than the mildly or severely depressed subjects and the severely depressed subjects had higher GDS scores than the subjects in the other categories, thus demonstrating the validity of the scale (Yesavage, et al. 198-83). The researchers also computed four measures of internal consistency upon completion of the study. This

testing resulted in finding that the GDS was internally consistent, or showed that all the items in the scale measured the same underlying construct. The researchers' reliability and validity testing also indicated that the GDS had a high test-retest reliability of 0.85 (Yesavage, et al. 1982-83). However, this measure has also drawn criticism due to the low number of items directed at somatic complaints characteristic of geriatric depression (King, Heisel, & Lyness, 2005).

Because of its validity and reliability, the GDS has been widely cited as the tool of choice for diagnosing geriatric depression (Kurlowicz, 1999). Sample items on the scale include the following: "Are you basically satisfied with your life?"; "Do you feel that your situation is helpless?"; "Do you often feel down hearted and blue?" (Yesavage, et al. 1983)

The CES-D is a self-report, 20-item tool that can also be administered as an interview.   The answers are in the form of 1) rarely or none of the time, 2) some or little of the time, 3) occasionally or a moderate amount of the time or 4) most or all of the time. Depression is indicated by a score of 16 and above. The CES-D was developed by the National Institute of Mental Health to determine depressive symptoms in the general population. However, it was also found to be valid for use with the older adult population through a study of a randomly chosen sample of older adults in the Netherlands (Tiemeier, Bakker, Hofman, Koudstaal & Breteler, 2002). Sample items on the tool included the following: "I had trouble keeping my mind on what I was doing"; "My sleep was restless"; "I enjoyed life" (Radloff, 1977). The questions relate to how the individual felt during the previous week.

The CES-D is a tool that is used frequently in studies of elderly depression (Irwin, Artin, & Oxman, 1999; Krishnan, et al., 1997; King, et al., 2005, Arean & Ayalon, 2005). However, like the GDS, the CES-D has its share of criticism, most of which is aimed at its length and complexity (Arean & Ayalon, 2005; Irwin, Artin, & Oxman, 1999). Irwin, et al. (1999) state: "While the CES-D is convenient to use in most settings, it can present problems for elderly respondents who may find the response format confusing, the questions emotionally stressful, and the time to complete burdensome" (p. 1701)

The GDS was compared with the CES-D in a study of older adults in three primary care practices. The study concluded that both the CES-D and the GDS had excellent properties in screening for major depression (Lyness, Noel, Cox, King, Conwell, & Caine, 1997). "The optimum cutoff point for the CES-D was 21, yielding a sensitivity of 92% and the specificity of 87%. The optimum cutoff point for the GDS was 10, yielding a sensitivity of 100% and a specificity of 84%." (Lyness, et al. 1997, p. 449). It was recommended, however, that physicians consider the GDS for routine use in primary care because of its yes or no format. However, because of many reasons, one of which is physician time constraints, various versions have been developed to shorten testing time.

The DDES is an amalgamated diagnostic interview instrument that includes other tools including the CES-D, the Carroll Rating Scale for depression (CRS), sections of the NIMH Diagnostic Interview Schedule (DIS), Mini-Mental State Exam (MMSE) and the Montgomery –Asberg Depression rating Scale (Krishnan, et al., 1997; Steffens, Hays and Krishnan, 1999).

Treatment for Geriatric Depression

There are three categories of treatment for depression: Psychotherapy,

Pharmacotherapy and Electroconvulsive therapy (ECT). Each of the therapies has shown

proof of effectiveness in the depressed older adult population (Wei, Sambamoorthi,

Olfson, Walkup, & Crystal, 2005; Reynolds, Alexopoulos, &Katz, 2002; Laidlaw, et al.,

2004; NIMH, 2002).

Psychotherapy

Psychotherapy is a form of treatment that involves talking with the patient to help

alleviate his or her depressive state. However the content and topic of the therapeutic

conversation depends on the type of therapy being utilized. Of the psychotherapy

treatments for depression, Cognitive Behavioral Therapy (CBT) and Interpersonal

Therapy (IPT) have been cited in much of the literature as being highly effective for use

with older adults (Laidlaw, et al., 2004; Nestler, et al., 2002; Rowet, 2002; Young,

Weinberger, & Beck, 2001; Gillies, 2001; National Alliance for the Mentally Ill , 2005).

CBT is a brief treatment strategy that involves teaching the patient to understand

the relationship between and among his or her thoughts, feelings and behaviors. Gilles

(2001) stated the following: "CBT is an effective treatment for depressive disorders in a

wide variety of older adult patients, ranging from psychotically immobilized individuals

to those having adjustment problems stemming from a recent stressful life transition,

such as retirement" (p. 20). Gilles (2001) also noted that other forms of therapy have

been deemed effective; however, it is the diversity of patient and situation in which it can

be utilized successfully that makes CBT an attractive choice for treatment in older adults.

Although CBT is an efficacious treatment for depression, there may need to be adjustments when utilized with depressed older adults. One such adjustment is the framework of therapy sessions. Zahn & Diefenbeck (2005) stated that treatment should be modified by shortening the length of the treatment sessions and also by having the older adult come to therapy more frequently.

Other examples of modifications to the typical CBT protocol that may be useful when working with the elderly include 1) providing frequent summaries of the information presented by the older adult; 2) dispelling the myths of aging to foster positive expectations; 3) presenting new information in ways that are easy to understand (Laidlaw, et al., 2004).

IPT, like CBT, is a brief, time-limited treatment intervention that provides the patient with education about depression. In IPT depression is seen as playing out in the patient's interpersonal relationships, no matter what the actual cause of the depression (Miller, Frank, Cornes, Houck, & Reynolds, 2003). To attain symptom relief, the therapist and the patient explore depression in the context of the patient's current interpersonal episodes. However when working with older adults, the therapist may not encourage amelioration of relationships that have caused role disputes. Instead, the older adult may be encouraged to tolerate the dispute (Gillies, 2002). A study conducted by Lenze, Dew, Mazumdar, Begley, Cornes, Miller, Imber, Frank, Kupfer, & Reynolds (2002), found that patients over 60 recovering from recurrent major depression who had received both nortriptyline and IPT were able to maintain better social adjustment after one year than patients receiving monotherapy of either type.

In its leaflet on major depression, NAMI (2005) provides a succinct and easy to understand description of CBT and IPT:

"CBT helps to change the negative thinking and behavior associated with depression while teaching people how to unlearn the behavioral patterns that contribute to their illness and IPT focuses on improving disturbed personal relationships that may worsen a person's depression" (p 2).

Although there is adequate research confirming the efficacy of psychotherapy, researchers continue to find that it is not utilized enough in the older adult population (Wei, et al., 2005).   In a study published just this year, Wei, et al. (2005) concluded, that despite the proven efficacy of psychotherapy as treatment for depression in older adults, it continues to be seldom utilized.

Pharmacotherapy

Pharmacotherapy for older adults, as stated earlier, has been found effective. Antidepressant drugs work by changing the level of particular neurotransmitters in the brain. The neurotransmitters affected depend on the type of medication. The drugs usually have to be in the patient's system between two and four weeks before becoming effective.

There are a number of medications used for depression in older adults including selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants (TCAs), and Monoamine oxidase inhibitors (MAOIs). These categories of antidepressants appear to be the most often cited categories of antidepressants for older adults.

As with most medications, antidepressants have side effects. Some of the side effects include such serious problems as hypertension if the patient eats certain foods

(MAOIs), or arrhythmias and hypotension (TCAs) (Kennedy and Marcus, 2005). However, the SSRI medications provide smaller levels of risk to the older adult. Side effects of the SSRIs include nausea, insomnia, diarrhea and agitation (Kennedy & Marcus, 2005) and although these side effects can be problematic, they are relatively mild when compared to the side effects of the other categories of antidepressants. For this reason, SSRIs have been cited as the most often prescribed as well as the safest of the antidepressants for older adults due to the favorable side effect profile (Reynolds, et al., 2002; Nestler, et al., 2002).

Although antidepressants are effective, some researchers urge caution when prescribing psychotropic drugs to older adults. Gareri et al (2002) discuss the various concerns that should be considered by the prescribing physician such as the differences in drug absorption, in distribution and in elimination in older adults. Kennedy and Marcus (2005) also urge prescribers to be mindful of polypharmacy and the physical illnesses that accompany depression in older adults.

Pharmacologic treatment for depression in older adults is an effective option for symptom relief. However, individuals who prescribe medications to geriatric patients should be well versed in the types of antidepressants available, in the side effects and in the physical health status of the patient before making a determination about the type, dosage and length of treatment intervention.

Electroconvulsive Therapy

ECT is often used when the depressed older adult is not responding to pharmacologic or psychotherapeutic treatment or when the patient is experiencing "life threatening complications" (Kelly & Zisselman, 2000, p. 560). ECT, although involving

the introduction of currents of electricity to the brain, is deemed a low risk and effective

procedure (Kelly & Zisselman, 2000). The treatment is often given two to three times

weekly, for approximately six to 12 treatments.

Kelly & Zisselman (2002) report that older adults are more likely to receive ECT

than younger depressed patients. The authors state that this development is possibly due

to a higher prevalence of delusional and/or medication resistant depression in the elderly

population.

The possible complications of ECT range from cardiac issues to delirium (Kelly

& Zisselman, 2002). However, the efficacy rates and the overall low risk of the

procedure make for a viable treatment option for depression in older adults.

Depression in older adults is highly treatable. Using therapy, medication and

ECT, therapists and physicians have all that is needed to help older adults overcome this

sometimes-debilitating disorder. Although some professionals in the medical community

typically advocate medication as the first line of treatment, all agree that treatment in any

form or combination of forms may improve the overall quality of life of older adults.

Depressed Older Adults and Mental Health Services

It has been shown in many studies that older adults underutilize traditional mental

health services (Robb, Haley, Becker, Polivka and Chwa, 2003; Oxman & Dietrich,

2002; Untzer, Patrick, Simon, Grembowski, Walker, Rutter, & Katon, 1997; Lyness,

Caine, King, Cox, & Yoediono, 1999; Klap, Tschantz, & Unutzer, 2003). The same has

been true for the older adult population in the City of Philadelphia, even though

Philadelphia agencies such as PCA and PHMC document the fact that a significant

percentage of all older adults in Philadelphia are struggling with a mental health problem

(PCA, 2004; PHMC, 2004). It is estimated that of the individuals suffering from mental

illness, only 2% currently receive appropriate services (Volkert, 2004, p. 5).

Documentation from the Philadelphia Department of Health shows that the Community

Mental Health Centers are serving only about 3% of the older adult population (City of

Philadelphia, 2004). Although the numbers may differ from agency to agency, there is

no doubt that a significant number of older adults in Philadelphia are not receiving the

needed mental health services.

Many reasons have been cited as causes for older adults not utilizing traditional

mental health services; these include community mental health centers, partial

hospitalization programs and outpatient services at hospitals or other facilities. The

USDHHS (1999) emphasizes the presence of three categories of barriers in the mental

health treatment of older adults. The categories are:

"1) Patient barriers, 2) Provider barriers, and 3) Delivery system barriers. The patient

barriers include (a) preference for primary care, (b) tendency to emphasize somatic

problems and (c) reluctance to disclose psychological symptoms. The provider

barriers include (a) lack of awareness of the manifestations of mental disorders, (b)

complexity of treatment and (c) reluctance to inform patients of a diagnosis. The

mental health delivery system barriers include (a) time pressures and (b)

reimbursement policies (p. 341).

Robb et al. (2003) conducted a study on attitudes towards mental health care in

younger and older adults and found that the barriers to seeking mental health care for

older adults include many of the same barriers mentioned in the USDHHS 1999 report.

Stigma is another strong barrier mentioned in the literature. Many authors believe that stigma keeps older adults from entering treatment (Mental Health Association (MHA, 2004) and others believe stigma to be a determining factor in the continuation of treatment (Sirey, Bruce, Alexopoulos, Perlick, Raue, Friedman, & Meyers, 2001).

There are many questions that need answering around this topic, but one that is most pressing is: If older adults are not utilizing the traditional mental health services, where do they go for treatment? It has been well documented that older adults often present at the primary care physicians' offices when they are experiencing psychological stress (UDHHS, 1999; Harman, Crystal, Walkup & Olfson, 2003; Lyness, et al, 1999). As stated in the U.S. Department of Health and Human Services. Surgeon General's 1999 Mental Health report, "Primary care providers carry much of the burden for diagnosis of mental disorders in older adults, and, unfortunately, the rates at which they recognize and properly identify disorders often are low" (p. 341).

Often the older adult presents at the PCP and complains of physical symptoms such as headache, insomnia, stomach problems and other aches and pains (UDHHS, 1999; Harman, et al., 2003; Kelley, 2003); this making a definitive diagnosis of depression difficult for the PCP. This is especially so in the case of patients presenting with pseudo-dementia or "masked depression". This phenomenon occurs when the patient's depression is "masked" by dementia-like symptoms such as memory problems. In pseudo-dementia, the patient is often able to describe the symptoms or deficits in detail and will most likely complain about the problems he or she is encountering. The patient in this instance is more likely to be depressed than to be experiencing dementia. It is

more common for older adults experiencing true symptoms of dementia to either not to be aware of the symptoms or to attempt to hide the symptoms (Zahn, 2005).

Some studies have been conducted on the confidence level and the perceived ability of primary care physicians in assessing and diagnosing mental illness in older adults. It has been shown that a large percentage of primary care physicians are ill equipped and uncomfortable in making mental health diagnoses (Kaplan, Adamek, & Martin, 2001; Borowsky, Rubenstein, Meredith, Camp, Jackson-Triche, & Wells, 2001; Gallo, Zubritsky, Maxwell, Nazar, Bogner, Quijano, Syropoulos, Cheal, Chen, Sanchez, Dodson, Levkof, & PRISM-E Investigators, 2004; Callahan, Nienaber, Hendrie, & Tierney, 1992).

The lack of proper screening has shown to be the leading cause of the under-diagnosis and under-treatment of late-life depression in the primary care setting. In a study conducted of 141 primary care physicians, 66.7% of the doctors indicated they did not utilize a standardized assessment tool to screen for depression in the elderly and 24.2 % stated that time constraints kept them from regularly screening for depression in the elderly (Manisses Communications, 1997). This situation appears to be usual across the board, even though use of the proper tool could potentially improve diagnostic recognition.

Because assessment and diagnosis of mental disorders in older people can be particularly difficult, there is significant underdiagnosis of mental illness in this cohort of primary care providers. One survey of primary care physicians found that just over half felt confident in diagnosing depression and only 35% felt confident in prescribing antidepressant medications to older people (Callahan, et al. 1992).

Many new initiatives for getting older adults with mental health problems into treatment have begun in Philadelphia and across the nation. Outreach programs, in-home treatment, stigma reduction campaigns, and behavioral health integration with physical health services are projects that have been implemented in various locations. The Philadelphia Behavioral Health System has implemented a form of each of these in its efforts to engage older adults. There are few outcome studies on these initiatives and most do not look at how or why the successful programs work for older adults.

The literature suggests that the growing number of older adults in the United States is causing the mental health system to look at how services are presented and provided to these individuals. Because of their historical under-utilization of mental health services, new and innovative interventions must be designed and implemented in order to find and treat older adults who are unable or unwilling to access mental health services. However, these treatments cannot be designed if professionals are limited in our understanding of the cognitive processes of older adults. It is imperative that research be conducted to determine how older adults think. This will give more insight into the need for diagnostic strategies and types of treatment models best suited for these individuals.

Quality of Life of Depressed Older Adults

Quality of life is an important concept for older adults. When it is reasonable, it denotes a life that is fulfilled, healthy, stable and secure. More specifically, Fry (2000) found that older adults want to live the lives that they have individually chosen for themselves without the constant need for interference from outside sources. Fry's (2000) study concluded:

"Contrary to stereotypic notions that elderly persons are frail, vulnerable, and resigned to deteriorating conditions of well-being in late life, the results of both the qualitative and quantitative components of the study showed the majority of respondents as having clear demands for autonomy, control, and independence in making decisions, including the decision to terminate life" (p. 361).

Depression, on one end of the spectrum, impairs and inhibits the older adults' abilities to enjoy the aforementioned aspects of normal aging that constitutes a reasonable quality of life. At the other end of the spectrum, it may lower life expectancy because it can often exacerbate medical problems, which reduces life expectancy.

Depression can also cause death by way of suicide. Suicide data printed by the National Center for Injury Prevention and Control under the National Center for Disease Control (MMWR, 2004) shows that older adults have disproportionately higher suicide rates when compared to other age groups.

Depression negatively affects quality of life for the elderly in many ways. Some of what is discussed has been previously cited in this paper but a comprehensive list is in order.

- Depression can increase problems associated with a medical disorder and hamper its improvement.

- Depression greatly increases the likelihood of death from physical illnesses.

- Depression can interfere with a patient's ability to follow necessary treatment regimens (both for others illnesses as well as the depression) or the ability to participate in a treatment program.

- Depressed seniors are more likely to report their health as fair or poor, to have frequent visits to an emergency room, and have more primary care doctor visits than non-depressed older adults. (Doraiswamya, Khan, Donahue, & Richard, 2002; Noel, Williams, Unutzer, Worchel, Lee, Cornell, Katon, Harpole, & Hunkeler, 2004; Helpguide, 2005; Wulsin, Vaillant, & Wells, 1999).

Treatment of depression positively affects quality of life in older adults. Some of the improvements that are observed are:

- Treatment of depression can result in more effective treatment and better outcome for the commonly co-occurring anxiety disorders.

- Treatment of depression frequently improves the treatment success rate for a variety of medical conditions.

- Treatment of depression can help resolve a substance abuse disorder (including alcohol and prescription drugs) that is the result of self-medication for symptoms. (Noel, et. al., 2004; Helpguide, 2005).

Because there is some understanding of the connection between quality of life and depression, it behooves researchers to continue to study this connection to gain an even clearer and more comprehensive understanding of the connection.

This study is important because depression can be a debilitating disorder that interferes in wellness and quality of life, causes or aggravates medical problems and sometimes leads to the death of the depressed older adult. NIMH, in its 2005 budget statement indicated that "depression is currently the leading cause of disability and second leading cause of disease burden in America" (p. 1). With this being said, the urgency to find ways to treat and, perhaps, cure depression becomes apparent.

Chapter 2

Purpose of Study

The overall purpose of this study is to determine the relationships between depression, distorted thinking and perceived quality of life, which will be broken down into the following areas. The researcher intends to determine if depressed older adults are experiencing cognitive distortions. The researcher will determine if depressed older adults have a lower perceived quality of life than non-depressed older adults. The researcher intend to determine if there are distinct depressive thinking styles that are expressed by depressed older adults that may not be found in non-depressed older adults. For example, do older adults who are depressed appear to exhibit more "all or nothing" thinking than non-depressed older adults?

Rationale

As illustrated in the previously stated depression symptoms, the depressed older adult may experience negative feelings. These feelings of guilt or worthlessness have both been proven to originate from negative thinking.

The cognitive theory of depression is based on the idea that the depressed individual has a negative view of self, the world and the future. This model is called the "cognitive triad", a phrase that was initially coined by Dr. Aaron Beck in 1976. Freeman et al. (1990) further elaborate on the cognitive triad with the following statement: "This cognitive triad is manifested in the content of the individual's "automatic thoughts", his or her immediate involuntary, nonreflective cognitive response to a situation (p. 88)". In other words, the negative thoughts experienced by the depressed person are the very first natural responses that he or she has to a given situation.

Moore & Garland (2003), in their discussion of the manifestation of depression, stress the idea that an individual's past plays a major role in his or her negative thoughts. The authors state that earlier experiences shape one's ideas and "influence the development of beliefs and attitudes (Moore & Garland, p. 21)". This idea is important to understand because it imparts a picture of the depth of the depressed patient's illness and its origins.

Moore and Garland (2003) also elaborate on how depression is maintained by negative thoughts. The authors state the following:

When these negative automatic thoughts come to mind, they trigger feelings

of misery and despair or exacerbate an existing low mood state. Negative

emotions or low mood can prime these negative thoughts, making them more

likely to come to mind and more believable when they do. As low mood

primes the negative thoughts, which then further exacerbate low mood, a

vicious circle is set up whereby the person's mood can spiral downward (p. 22).

Many authors have also shown that negative thoughts contribute to depression; however, these thoughts can also result in alterations in the individuals thinking processes. These alterations are known as cognitive distortions.
Cognitive distortions are "errors in logic... (that) can lead individuals to erroneous conclusions even if their perception of the situation is accurate" (Freeman, Pretzer, Fleming, & Simon, 1990, p. 5). As stated by Tagg (1996) "People do not choose their cognitive distortions. Indeed, most people would disavow the kind of reasoning that is behind their automatic thoughts (p.2)". Individuals often act on cognitive distortions

without being aware of them because the thoughts are automatic and usually seem plausible.

Beck (1963) provides an in depth look at cognitive distortions, at their characteristics and the role they play in depression. In his first article on depression and thinking, Beck listed five distortions that he found at every level of depression. The five distortions were "1) arbitrary inference, 2) selective abstraction, 3) over-generalization, 4) exaggeration, and 5) inexact labeling" (Beck, 1963, p. 328). As the years have gone by and research has progressed, more distortions have been cited and in 1990, Freeman et al., noted that there are 12 common cognitive distortions, which include the five cited by Beck.

In his characterization of the various cognitive distortions, Beck (1963) also describes the various "themes" under which the cognitive distortions seem to fall or combine to create. He noted that there are six themes most prominent in depressed patients. The themes are "1) Low self regard, 2) ideas of deprivation, 3) self-criticisms and self blame, 4) overwhelming problems and duties, 5) self commands and injunctions, and 6) escape and suicidal wishes (p. 327)".

Zahn& Diefenbeck (2005) proposed many of the same themes when working with depressed older adults. Furthermore, the authors found other themes that may be central to an aging person, such as issues of perceived failure in parenting or personal life, being a burden to others and loss of autonomy and control.

It is important to understand the types of distortions experienced by older adults in general, in order to develop ways of changing these thought patterns. It is even more important to understand the cognitive distortions common among the depressed elderly.

Therefore it is not enough to know that older adults are experiencing cognitive distortions, it is also necessary to recognize what these distortions are if help is to be made available to change the distortions.

Related Research

There has been a significant amount of research done on cognition and depression (Solomon, Arnow, Gotlib, & Wind, 2003; Dent, & Teasdale, 1988; Beck, 1964). Most of this research focuses on negative cognition and how it affects the level of depression or cognitions are studied to predict specific depressive tendencies. However there has been little research on cognitive distortions presented by the depressed older adult. Of the research that exists, much is geared towards children, adolescents or young adults (Thurber, Crow, Thurber, & Woffington, 1990; Deal & Williams, 1998; Michael & Funabiki, 1985; Hammen, 1978; Beck, 1963).

Although this paper will be studying older adults, a couple of the authors of adolescent and adult studies offer some insight into cognitive distortions and depression in general. For example, Deal and Williams (1998), in their study of distortions and life stress as predictors of depression, found that cognitive distortion has a more significant relationship with depression than does stressful events in the lives of adolescents. More specifically, the distortions are "more closely related to an outcome of depression than the number of stressful life event" (p 488). They also concluded that there is a possibility that the more optimistic the adolescent, the less he or she may distort and perceive a situation to be stressful.

Although there is some research on the cognitions of depressed older adults, much of that research is geared toward thinking styles, thinking patterns, or the effects of

medication on cognition (Stoudemire, Hill, Morris, Martino-Saltzman, & Lewinson, 1993; Lichtenberg, Ross, Manning & Manning, 1995). Also of importance is the fact that much of the research –the above included- does not include cognitive distortions as part of their exploration of cognition.

As stated above, very few researches have delved into the cognitive distortions of depressed individuals in general, with even fewer focusing on cognitive distortions in older adults. However, there a few authors who hint at the question of cognitive distortion versus reality based worry.

Adams (2001), in a study conducted on depressive symptoms, asked the question "When is Geriatric "Depression" Not Depression" (p. 768) but failed to provide adequate discussion about cognitive distortions in depressed older adults. She, however, makes several relevant points about the difficulty of diagnosing depression in this group because of the difficulty of sometimes distinguishing depression from changes that are expected to come about as a person ages.

Upon reviewing the literature, it is obvious that more research needs to be conducted on depression in older adults in general. However there are many important areas in particular that need attention. Some of the areas include closer investigation of the causes of depression, the incidence in the geriatric population and more in-depth studies of treatment options. In addition, the field of psychology would benefit a great deal from research on the cognitive distortions manifested in depression; how these distortions are maintained and how they play out in the day-to-day life of the older adult.

Specific Hypothesis

This research project proposes the theory that there are significant relationships between cognitive distortions, quality of life and depression in older adults. More specifically, this study will test the following:

(1)   There will be a significant negative relationship between distorted thinking as defined by the ICD and quality of life as defined by the QOLI.

(2)   There will be a significant negative relationship between depression as measured by the GDS and quality of life as defined by the QOLI.

(3)   There will be a significant positive relationship between scores on the ICD and depression as measured by the GDS.

(4)   There will be a positive significant relationship between scores on the GDS and the number of depressive factors identified by the subscales of the ICD.

(5)   Older adults who are depressed as measured by the GDS will report lower quality of life scores as measured by the QOLI than older adults who do not meet criteria for depression.

(6)   Older adults who are depressed as measured by the GDS will report higher numbers of cognitive distortions as measured by the ICD than older adults who do not meet criteria for depression.

THE PROPOSED RELATIONSHIP BETWEEN DEPRESSION,
DISTORTED THINKING AND QUALITY OF LIFE

DEPRESSION

DISTORTED THINKING   QUALITY OF LIFE
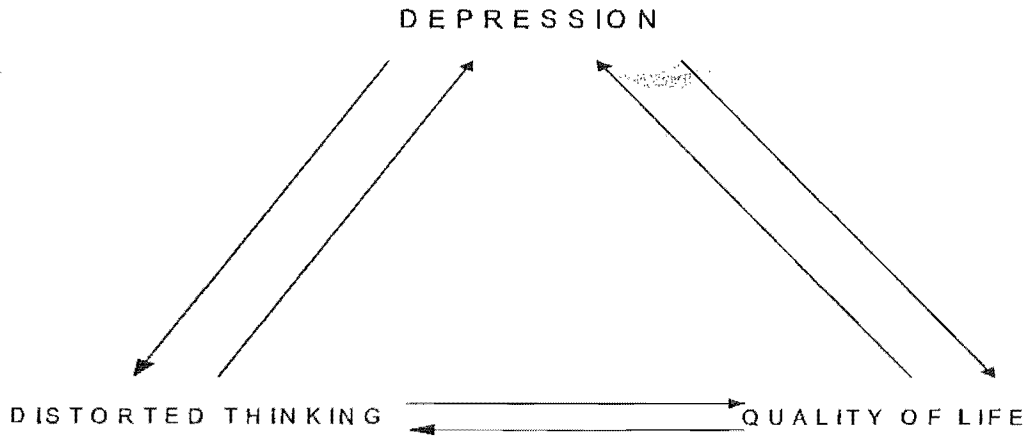
Distorted thinking and quality of life will be mediated by depression.

Figure 2.1

Chapter 3

Method

Participants

The participants will be chosen based on their willingness to participate in this research study. Two hundred older adults, ages 65-80, will be chosen from the general population of older adults in the Philadelphia area. Some of the potential participants will be recruited at places where older adults gather such as senior centers and functions specifically tailored for the older adult community. Others will be recruited at older adult residential and treatment facilities such as nursing homes, community living arrangements and clinics. The participants will include 100 older adults who meet the criteria for depression as defined by the Geriatric Depression Scale (GDS) and 100 who will not meet the criteria for depression. All participants will be guaranteed anonymity and will not be asked to reveal identifying information.

The sample will exclude anyone who has a detectable dementia, as indicated by the results of the Mini-Mental State Examination. The assessment tools that will be utilized in this study do not directly assess suicidality; therefore, identification of individuals at risk is not an issue in this study. However, anyone who states that he or she is suicidal will also be excluded from this study. These exclusions will control for the possibility of multiple treatment interference, as well as the possibility of the above-mentioned factors interfering in the outcome of the study.

Overview of Research Design

This proposed quantitative research study would use a cross- sectional, case-control design in which depressed older adults will be compared with non-depressed

older adults to determine how the groups differ in relation to perceived quality of life and distorted thinking.

The design will be a case control design because the relationship among variables will be observed but not manipulated and the results of this study will be correlational and not predictive. The study will attempt to show that some significant relationships exist. However, it will not denote whether or not cognitive distortions precede or determine levels of depression or quality of life.

This study will also use applied research because all the participants will be older adults found in varying locations in the community and not individuals who will be seen in a laboratory setting.

Measures

Mini-mental state exam (MMSE).

The MMSE (Folstein, Folstein & McHugh, 1975) is a measure that evaluates various cognitive functions (Polanski & Hinkle, 2000). It is an 11- item inventory with a possible score of 30, and "assesses basic language skills, orientation to time and place, registration and recall of objects, calculations and constructional ability" (Weiler, Chiriboga & Black, 1994, p. 545). The MMSE has been deemed valid through many studies. In a study of healthy older adults, conducted by Mitrushina & Satz (1991), the MMSE was "found to be accurate in correlations with neuropsychological measures" (p. 537). According to Groth- Marnat (1997), the MMSE also has interater and test—retest reliabilities above .80; the MMSE correlates with WAIS IQs (.78 for verbal IQ), and demonstrates sensitivity to global and left hemisphere deficits.   The MMSE will be utilized to determine if patients who wish to participate in the study suffer from

cognitive/ neuro-psychological impairment or dysfunction. The researcher will utilize the conventional cutoff score of 24 which has been determined to demonstrate impairment (Kukull, Larson, Teri, Bowen, McCormick, & Pfanschimdt, 1994).

Geriatric depression scale- short form (GDS15).

The GDS (Yesavage, et al., 1983) is a yes or no questionnaire that focuses on assessing depression in older adults. The original version has 30 questions and has been determined valid and reliable (Yesavage, et al., 1983; Adams, Matto, & Sanders, 2004).

There have been validation and reliability studies conducted on acutely ill older adults using the GDS15, GDS10 and GDS4 which are fifteen, ten and four-item scales respectively (Shah, Herbert, Lewis, Mahendran, Platt, & Bhattacharyya, 1997). Of these shortened versions, the GDS15 has been cited both as valid and as reliable with respect to older adults in general practice (Van Marwijk, Wallace, de Bock, Hermans, Kaptein, & Mulder, 1995) with a high correlation of r= .89 to the GDS- Long Form (Lesher & Berry Hill, 1995).

The GDS15 will be used in this study because of the population and the number of instruments that they will have to complete. The overall purpose of this measure is to determine if the participants meet the criteria for major depressive disorder.

Quality of life inventory (QOLI).

The QOLI (Frisch, 1988) is a 17-item, subjective test that measures well-being and life satisfaction (Frisch, 1992). Frisch (1992) states that this measure

"is based on an empirically validated, linear, additive model of life satisfaction

called Quality of Life Therapy (Frisch, Cornell, Villanueva, & Retzlaff, 1992)

that assumes that an individual's overall life satisfaction consist largely of the

sum of satisfaction in particular "domains" or areas of life deemed important"

(p. 29).

Because of its psychometric reliability, the QOLI is seen as one of the better measures of

life satisfaction or perceived quality of life (Frisch, 1992).

In addition to the participant's view of his or her quality of life, this measure will

be used to measure the participant's life satisfaction, and will allow the interviewer an in-

depth look at the areas of his or her life that are important to the participant.

Inventory of cognitive distortions (ICD).

The ICD (Yurica & DiTomasso, 2002) is a 69-item, self-report tool that is made

up of short sentences. The measure has been determined to be valid and reliable with a

test-retest coefficient reliability of .99 (Rosenfeld, 2004). This tool was developed to

assess the frequency of distorted thinking expressed by the respondent (Yurica, 2002).

The ICD provides a total score for the number of cognitive distortions; lower scores

indicate lower frequencies of distortions and higher scores indicate higher frequencies.

Clinical interview.

Each participant will be asked to give a brief three -question clinical interview

that will be used to gather further information on the participant. The focus of the

questions will be on depression history and present physical health. The questions will

include the following: 1) Have you ever been treated for depression? 2) Have you taken

medication for depression? 3) Have you ever seen a therapist for depression? This

interview will also serve as another screening tool to help the researcher determine

individuals who are currently being treated for depression. In the clinical interview,

participants will also be asked to answer a list of demographic questions that will help the researcher to categorize the results.

All measures were chosen based on validity and reliability as well as on the difficulty the participant will have in determining what the experimenter is attempting to study. This will increase the internal, external, and construct validity of the study.

Procedures

The research will take place in various settings throughout the city of Philadelphia. Many of the participants will be pre-screened for dementia using the MMSE, by clinically trained individuals with a minimum of a Masters Degree in Social Work or Psychology or a Bachelors Degree in Nursing. Other participants will be screened by the researcher at the time they are interviewed for the study. With the exception of the mentioned exclusion categories, all older adults will have an equal opportunity to be included in this study.

The subjects will be interviewed individually or in groups of no more than 10 participants. The group format will include the researcher who will read the questions for the group and an individual who will help to monitor the completion of the assessment tools. The monitor will not provide guidance on how to answer the questions but will ensure that answers are placed in the proper locations on the forms. Reading to the participants will also be utilized with individuals who are not being interviewed in a group if the participant reveals that he or she cannot read.

Each participant will follow the same assessment procedure. The assessment procedure will consist of four measures (MMSE, GDS-15, ICD and the QOLI) and the brief interview followed by receipt of a packet of information on depression symptoms,

on treatment and resources.   When participants are screened for dementia and receive scores above the cutoff score for impairment, they will be approved to move to the next phase of the study.   If, however, participants meet the exclusion criteria of dementia, they will be told that this is the conclusion of the interview and thanked for their time. The participants who are deemed appropriate for the study will then participate in a five minute clinical interview. The interview will be followed by the four measures in the above-mentioned order. The sessions will be conducted until 200 participants have been chosen. This will include 100 depressed older adults and 100 non-depressed older adults.

The testing session will begin with the brief self –report interview. In this interview, participants will answer demographic questions and information about depression. The researcher will use a prepared script of questions. The script reduces the risk of special treatment or reaction of controls, which may be elicited by the experimenter if she is allowed to conduct her own unscripted line of questioning.

The GDS will be administered next to determine criteria for depression. If the participant meets the criteria for depression, he or she will be placed in the depressed subject category. If he or she does not meet the criteria for depression, he or she will be placed in the non-depressed subject category. The GDS will be followed by the ICD and the QOLI. The researcher will ensure that each participant is exposed to the measures in the same order. Because of the length of ICD and the QOLI, each participant will be made aware at the beginning of the session that he or she may take a break at anytime during the assessment. At the conclusion of the assessment, each participant will be given detailed information on depression, its causes and presentation, a comprehensive list of treatment options that includes a list of agencies that provide treatment services for

depressed individuals and information on depression and suicide and how to obtain help

in a crisis situation.

Chapter 4

Plan for Statistical Analysis

An independent-measures test will be used to analyze the collected data. This test will evaluate the mean difference and compare the two sample groups of depressed and non-depressed older adults. A Pearson correlation will also be utilized to analyze data. In using the Pearson correlation, the researcher proposes to identify the degree and the direction of the linear relationships between the variables by locating the best-fitting straight line for the data set (Gravetter & Wallnau, 2000). In this study, the set of data includes depression, cognitive distortions and quality of life. The statistical analysis will help to determine the precise relationships between and among 1) cognitive distortions and quality of life, 2) depression and quality of life, and 3) cognitive distortions and depression in both the depressed and the non-depressed sample.

Anticipated Results

This research project proposes that there are relationships between and among cognitive distortions, quality of life and depression in older adults. This study will likely reveal that the proposed relationships are significant.

It is anticipated that the study results will reveal that the relationship between depression and cognitive distortions is one that is positive. In other words, when cognitive distortions are present, so too is depression, and as the frequency of distortion increases, so too will the level of depression of the older adult. The study results will also show that there are differences in the frequency of cognitive distortions in different sets of depressed older adults. For example, severely depressed older adults will have a higher frequency of distortions.

It is also anticipated that the study results will reveal that the relationship between cognitive distortions and quality of life is one that is negative. In other words, as cognitive distortions increase in frequency, the perceived quality of life will decrease. It is suspected that the same inverse relationship will be present for depression and quality of life, revealing that depressed older adults will have a lower perceived quality of life.

Further, it is anticipated that the study results will reveal that many of the depressive styles of thinking expressed by depressed patients will be seen in this older adult population. Furthermore, older adults who are depressed will have a lower perceived quality of life and higher cognitive distortions than non-depressed older adults.

If it is determined that cognitive distortions are positively related to depression level and quality of life, then greater possibilities for treatment may become evident. As it stands now and as stated earlier, the depressed older adult population is under treated. When looking at all the reasons for this as stated earlier, it is clear that a lack of understanding is prevalent in every one. Because of this, increasing the knowledge of treating physicians, of therapists and of others about this population may be the greatest contribution to the problem.

If there were a greater understanding of how depressed older adults think and the cognitive distortions and themes plaguing them, there could develop greater hope for a better treatment future. Therefore if this study rejects the null hypothesis and concludes that there is a high correlation between depression, cognitive distortions, and quality of life, treatment options may be refined. Because there are already well know and effective treatment options for depression, other options can be explored to treat the depressed

older adult if his or her disorder is characterized as cognitive distortions involving a perceived decrease in quality or a negative quality of life.

Achieving the expected outcome could also lead to research in the areas of causes and risk factors. Researchers have touched on the causes for cognitive distortions, depression and even the themes experienced by depressed individuals. However researchers may begin to explore the ideas of certain levels of depression being risk factors for particular cognitive distortions and themes or certain levels of depression being the cause for varying levels of perceived quality of life.

The areas of study would increase; there would be many more than previously mentioned and research about this population would flourish. All research in this area could potentially lead to better ways to treat these individuals and ultimately lead to increases in treatment options, and possibly decreases in perceived as well as actual quality of life for older adults.

Results that appear to show a correlation, however, will need to be further examined for possible moderators. Three possible moderators in this study include physical illnesses, the location where the individual is interviewed, and gender of the participant. The types of physical illnesses experienced by the participants could influence the relationships between the variables. This could take place in several ways but the most significant is the way in which the participant views the illness and its importance to his or her way of life. For example, an elderly man who is married and has erectile dysfunction may see this as the end of the world but if the same man has a problem with his hearing, he may not view this as important.

The location of the setting in which the participant is interviewed could possibly influence the relationship between depression and perceived quality of life because the location may influence the participant's definition of quality. For example, individuals living in a senior residence may show different ideas of quality that may be defined by greater independence or by living in his home or her home in the broader community. Therefore then, when comparing the individuals from each location, the results will be scattered and the external validity of the study may be called into question.

Limitations

If the results demonstrate that there is no relationship between depression, cognitive distortions and quality of life in the depressed older adult population, the researcher will have to accept the null hypothesis, which will be true. However, further studies will be able to attempt to find causal relationships as well as correlations by looking at depressed older adults and examining other factors that may become apparent. Further research could also look at the cognitive distortions and the overall depressive themes that are revealed.

There may be possible threats to the external validity of this study. For example, the sample characteristics may affect the generality to other age groups. Also of great concern is the threat of reactivity of experimental arrangements because the patients may answer the inquiries in ways that they would not normally answer if they did not know they were being studied.

Because there is one examiner, it may be difficult to control for attention and contact with the clients and experimenter expectancies, which may affect construct validity. In addition, construct validity could be increased if there was the use of more

than one measure for each construct being studied but this is not feasible because of the

population and the time constraints.

Chapter 5

Results

Sample

A correlational research design consisting of two groups was used to test several hypotheses about depressed versus non-depressed older adults. Depression was operationally defined as any score of five or above on the GDS. Using this cut-off score, the participants were divided into the groups of depressed and non-depressed older adults. These two groups composed the sample used for all analyses in this research study. The total sample size equaled 162 older adults.

Group 1 (56%, n = 90) consisted of non-depressed older adults who received a score of four or less on the GDS. Group 2 (44%, n = 72) consisted of depressed older adults who received a score of five or more on the GDS (see table # 1).

Table # 5.1

Group Statistics

GDS 0 = 4 or below (non-depressed) 1 = 5 or above (depressed)	N	MEAN	STANDARD DEVIATION	STD. ERROR MEAN
ICD Total .00 (non-depressed) 1.00 (depressed)	90 72	119.1556 200.9167	46.61507 58.46457	4.91366 6.89012
QOLI T-Score .00 (non-depressed) 1.00 (depressed)	90 72	54.2222 34.7083	10.52101 11.18908	1.10901 1.31865

Descriptive Statistics

The age of the participants ranged from 64 to 85. There were two 64-year-old participants who informed the evaluator they would be 65 within a couple of weeks of the data collection (August 2006). They were included in the sample, knowing that they would be 65 by the time the data was submitted. The mean age of the participants was 70. The ages of all participants and the frequencies of each age, as well as the percentage of the sample represented by each age, are presented in table # 2.

Table # 5.2

Ages of Respondents

AGE	FREQUENCY	PERCENT
64 - 66	67	41.3
68 -70	34	20.9
71-73	23	14.2
74 -76	13	8.0
77 - 79	7	4.6
80 - 82	12	7.4
83 - 85	6	3.6
TOTAL	162	100

There were 63 males (39%) and 99 females (61%). 98 of the participants were African American (61%), 6 were Hispanic (4%), 36 Caucasian (22%), 8 were Asian or

Pacific Islander (5%) and 14 were of other races (9%). The other category included older

adults from the Caribbean (Jamaica, Trinidad, Haiti) and Africa (See tables # 3 & 4).

Table # 5.3

Gender

GENDER	FREQUENCY	PERCENT
Males	63	38.9
Females	99	61.1

Table # 5.4

Race

RACE	FREQUENCY	PERECNT
African American	98	60.5
Hispanic	6	3.7
Caucasian	36	22.2
Asian/ Pacific Islander	8	4.9
Other	14	8.6

Martial status distribution consisted of 37 (23%) participants who were single, 61

(38%) who were married, 17 (11%) divorced, 37 (23%) widowed and 9 (6%) who were

cohabitating. There was one participant who did not answer this question (see Table# 5)

Table # 5.5

Marital Status

STATUS	FREQUENCY	PERCENT
Single	37	22.8
Married	61	37.7
Divorced	17	10.5

Widowed	37	22.8
Cohabitating	9	5.6
No answer	1	.6

The mean number of children was 2.8 with only 22 (13.6%) of the older adults

reporting that they did not have any children. The number of children in the remaining

sample ranged from 1 (21%, n = 34) to 12 (1%, n = 2) with the majority of the

participants reporting they had between 1 and 4 children. The number of children and

frequencies are presented in Table # 6

Table # 5.6

Number of Children

NUMBER OF CHILDREN	FREQUENCY	PERCENT
0	22	13.6
1	34	21.0
2	25	15.4
3	29	17.9
4	27	16.7
5	9	5.6
6	6	3.7
7	2	1.2
8	2	1.2
9	2	1.2
10	2	1.2
12	2	1.2

Although 72% (n = 117) of the participants reported that they were not employed,

60% (n = 97) reported that they continued to live in their own homes. The remainder of

the participants lived with family (19%, n = 31), with a friend (6%, n = 9), in a senior

residence (13%, n = 21) or in an assisted living facility (3%, n = 4). Although the

majority of seniors were not employed, more than half participated in some leisure activity weekly (64%, n = 103). In addition, a large number of participants, reported that they were still driving (44%, n = 72) but the other older adults stated that they were either driven by family members (26%, n = 42) or they rode public transportation (30%, n = 48).

Table # 5.7

Employment and Leisure Activity Status

STATUS	FREQUENCY	PERCENT
Employed	45	27.8
Unemployed	117	72.2
Leisure	103	63.6
No Leisure	59	36.4

Table # 5.8

Living Situation

TYPE	FREQUENCY	PERCENT
Own Home	97	59.9
With Family	31	19.1
With Friend	9	5.6
Senior Residence	21	13.0
Assisted Living	4	2.5

Table # 5.9

Mobility

TYPE	FREQUENCY	PERCENT
Drive Self	72	44.4
Public Transportation	48	29.6
Driven by Family of Friend	42	25.9

Of the 162 older adults, 105 (64%) reported being under the care of a physician

with 107 (66%) taking prescription medication. This information presented a question

because a greater number of older adults reported the use of prescription medications

than the number who reported being under a doctor's care. Therefore, the question that

arises is where are the two older adults who reported taking prescription medications

getting their prescription medications, if they are not under the care of a physician?

Table # 5.10

Physician and Prescription Status

STATUS	FREQUENCY	PERCENT
Under a Doctor's Care	105	64.8
No Doctor's Care	57	35.2
Prescription Medication	107	66.0
No Prescription Medication	55	34

Most of the participants reported no use of substances (95%, n = 154) including

cigarettes (70%, n = 113), alcohol (70%, n = 113), cannabis (98%, n = 158) and cocaine

(99%, n = 161). However, of the cigarette smokers (n = 49), 30 stated that they smoked

less than a pack a day, with the remaining participants (n = 19) smoking more than a pack

a day. For the older adults who reported drinking alcohol (n = 49), the amount of

consumption ranged from 1 drink (n = 9) to 20 drinks per week (n = 1) with the mean

being 1.5 drinks per week. The number of drinks per week reported most frequently was

2 (7%, n = 12). 8 participants reported the use of other nonprescription drugs weekly (see

Table # 11).

Table # 5.11

Substance Use by Type of Substance

SUBSTANCE	# of USERS	PERCENT
Cigarettes	49	30.2
Alcohol	49	30.2
Cannabis	4	2.4
Cocaine	1	.6
Other	8	5.0

Testing the Hypotheses

In an attempt to distinguish the relationship between distorted thinking and

perceived quality of life, the answers to the questions on two measures were compiled

and evaluated. Distorted thinking was measured by the ICD, which consists of 69

questions that pertain to a person's thoughts about him/herself, others and situations. The scores on the ICD ranged from 69 to 327 with the lower scores translating into fewer cognitive distortions.

Perceived quality of life was measured by the QOLI, which also utilizes total scores to determine the overall feelings of the individual. This measure asks questions about the importance of various areas of life and the individual's overall satisfaction with each area. The scores are then combined to gain an overall quality of life score. The T-scores on the QOLI ranged from 4 to 77, with the lower scores indicating a lower quality of life. The results of this study indicated that there was a significant negative relationship ($p < .01$) between the number of cognitive distortions and the overall quality of life perception. This relationship suggested that the greater the number of cognitive distortions reported, the lower the reported quality of life. This relationship is demonstrated in Table # 12.

Table # 5.12

Correlation between the ICD and the QOLI

	QUALITY OF LIFE T-SCORE	ICD TOTAL
QOLI T-Score Pearson Correlation Sig. (1-tailed) N	1 162	-.621** .000 162
ICD Total Pearson Correlation Sig. (1-tailed) N	-.621** .000 162	1 162

**. Correlation is significant at the 0.01 level (1-tailed).

To establish the relationship between depression and perceived quality of life, T-scores from the QOLI were evaluated with the total scores from the GDS. It was predicted that higher scores on the GDS would correspond to lower scores on the QOLI. The GDS scores ranged from 1 to 14 with the lower numbers equaling less depressive symptoms. The results indicated that the greater the number of depressive symptoms reported, the lower the quality of life scores on the QOLI, thereby demonstrating that there was a significant negative relationship ($p < .01$) between quality of life perception and depression in this older adult sample. This correlation is posted in Table # 13.

Table # 5.13

Correlation of the GDS and QOLI

	QUALITY OF LIFE T-SCORE	GDS TOTAL
QOLI T-Score Pearson Correlation Sig. (1-tailed) N	1 162	-.740** .000 162
GDS Total Pearson Correlation Sig. (1-tailed) N	-.740** .000 162	1 162

**. Correlation is significant at the 0.01 level (1-tailed)

To determine the relationship between distorted thinking and depression, the total scores from the ICD were evaluated with the total scores from the GDS. The results indicated that higher scores on the ICD corresponded positively with higher scores on the GDS. This suggested a positive, significant relationship ($p < .01$) between scores on the ICD and depression, signifying that when compared to the non-depressed older

adults in this sample, the depressed older adults reported significantly more cognitive

distortions (see Table # 14).

Table # 5.14

Correlation between GDS and ICD

	GDS TOTAL	ICD TOTAL
GDS Total Pearson Correlation Sig. (1-tailed) N	1 162	.710** .000 162
ICD Total Pearson Correlation Sig. (1-tailed) N	.710** .000 162	1 162

**. Correlation is significant at the 0.01 level (1-tailed)

Table # 5.15

Difference between depressed and non depressed on the ICD

GDS 0= 4 or below 1= 6 or above	N	Mean	Standard Deviation
ICD Total .00	90	119.1556	4.91366
1.00	72	200.9167	6.89012

Table # 5.16

T-test for equality of means

	t	df	Sig. (2-tailed)
ICD Total Equal variances not assumed	-9.661	133.944	.000

There are 11 subcategories or factors of the ICD that describe varying types of distorted thinking patterns (Yurica, 2002). Each subcategory consists of a number of questions presented in the ICD; when reviewed collectively, these correspond to a specific type of distortion. The subcategories/factors are described below as defined by Yurica (2002).

1) Externalization of Self-Worth describes the individual's need for approval from others as well as his or her tendency to seek this approval to substantiate his/her self-worth.

2) Fortune –Telling indicates that the individual often focuses on negative details when reviewing current situations or predicts negative outcomes when reviewing the future. This intense focus on what is or what could go wrong and ignoring the positive aspects of the situation, often casts the individual's present and future in a negative light.

3) Magnification describes the tendency to grant too much importance to a specific trait, an event or situation encountered by the individual.

4) Labeling in the ICD refers to the individual's frequent use of derogatory names to label himself or herself or others.

5) Perfectionism refers to the individual's tendency to set standards of perfection for himself or herself or others without checking if the standards are logical and reasonable.

6) Comparison to Others reflects the individual's tendency to compare himself or herself to others but in a negative way that makes him or her feel more inadequate or not as good as others.

7) Emotional Reasoning indicates the individual's tendency to use his or her

emotions when drawing conclusions about him or herself, about others or about situations.

8) Arbitrary Inference, which is also called jumping to conclusions, is the process of coming to negative conclusions about a situation without actually having supportive evidence.

9) Emotional Decision Making describes individuals who rely on their emotions when making decisions.

10) Minimization is the tendency not to place significance on or disregard the importance of a trait or situation.

11) Mind Reading involves the belief that the individual can tell what others think about him or her. In this situation, the individual often draws the conclusion that the thoughts about him or her are negative.

The results revealed significant, positive relationships (p < .01) between the GDS and each of the ICD subcategories. The subcategories and their corresponding questions as well as their correlations to the GDS are listed in table # 17.

Table # 5.17

ICD and GDS correlations

ICD SUBCATEGORY	CORRELATION TO GDS	
Externalization of Self-Worth Item #s - 1, 3, 4, 7, 10, 15, 17, 18, 35, 41, 46, 50, 62, 63, 67	.694**	Pearson Correlation Sig. (1-tailed) N = 162
Fortune-Telling Item #s - 2, 9, 22, 23, 26, 34, 36, 38, 48, 51, 55	.724**	Pearson Correlation Sig. (1-tailed) N = 162
Magnification Item #s - 8, 20, 24, 27, 30, 32, 69	.675**	Pearson Correlation Sig. (1-tailed) N = 162

Labeling Item #s - 5, 11, 21, 29, 49	.696**	Pearson Correlation Sig. (1-tailed) N = 162
Perfectionism Item #s – 25, 37, 39, 57	.396**	Pearson Correlation Sig. (1-tailed) N = 162
Comparing Self to Others Item #s – 19, 31, 35, 62	.667**	Pearson Correlation Sig. (1-tailed) N = 162
Emotional Reasoning Item #s – 40, 56, 60, 64	.493**	Pearson Correlation Sig. (1-tailed) N = 162
Arbitrary Inferences Item #s - 43, 45, 47	.626**	Pearson Correlation Sig. (1-tailed) N = 162
Emotional Decision Making Item #s – 12, 66	.438**	Pearson Correlation Sig. (1-tailed) N = 162
Minimization Item #s – 45, 68	.438**	Pearson Correlation Sig. (1-tailed) N = 162
Mind Reading Item #s – 18, 54	.589**	Pearson Correlation Sig. (1-tailed) N = 162

**. Correlation is significant at the 0.01 level (1-tailed).

Correlation of measures.

As revealed in the above analyses, there were significant correlations between the measures used in this study. It was predicted that the GDS would have a significant negative correlation with the QOLI. The results of this study suggested that the higher the GDS score, the lower the scores on the QOLI [r (162) = -.740, p > .01]. It was also predicted that the GDS would have a positive significant correlation with the ICD. This relationship was also demonstrated [r (162) = .710, p > .01], suggesting that the higher the GDS score, the higher the ICD score. In addition, there was a significant negative relationship between the ICD and the QOLI [r (162) = -.621, p > .01] suggesting that the

higher the ICD score, the lower the score on the QOLI. Table # lists the measures and

the resultant correlations.

Table # 5.18

Measure Correlations

	ICD Total	QOLI T-Score	GDS Total
ICD Total Pearson Correlation Sig. (1-tailed) N	1	-.621**	.710**
QOLI T-Score Pearson Correlation Sig. (1-tailed) N	-.621**	1	-.740**
GDS Total Pearson Correlation Sig. (1-tailed) N	.710**	-.740**	1

**. Correlation is significant at the 0.01 level (1-tailed).

Chapter 6

Discussion

The purpose of this study was to determine if there were significant relationships between depression, distorted thinking and perceived quality of life in an older adult population. The study yielded positive results, indicating that these relationships existed in this sample. The results of the study have been discussed in the previous chapter. This chapter will provide a discussion of the results, as well as the significance of this research for the future of assessment and treatment of depressed older adults.

Discussion of Research Findings

The results of this study supported the ideas that depressed older adults exhibit more distorted thinking and have a lower quality of life than non-depressed older adults.

Significant relationships were found in the evaluations both of the QOLI and of the ICD when compared with the GDS. These relationships included: (a) a significant negative relationship between the ICD and the QOLI; (b) a significant negative relationship between the GDS and the QOLI; (c) a significant positive relationship between the ICD and the GDS and (d) a significant positive relationship between the GDS and the ICD subcategories/factors.

The corresponding interpretations of the preceding results are as follows: (a) older adults who reported a greater numbers of cognitive distortions, reported a lower quality of life than older adults who reported fewer cognitive distortions; (b) depressed older adults reported a lower quality of life than non-depressed older adults; (c) depressed older adults endorsed more distorted thinking phrases than non-depressed older adults;

and (d) depressed older adults reported more subcategories of cognitive distortions than non-depressed older adults.

Implications of the findings

The results of the study are significant to the research literature because they uncover several implications for the assessment and treatment of older adults. As previously noted, the research indicates that depression is under-diagnosed and under-treated in older adults. There are a number of reasons previously cited for this phenomenon; however, a reason not mentioned is the lack of awareness of the connections between depression, quality of life and thinking patterns. With the discovery of the relationships found in the results of this study, primary care physicians, social workers, and other mental health professionals may now consider screening for depression when the other conditions (low quality of life and distorted thinking) are present. It also offers an opportunity to assess thinking styles and the life satisfaction of patients already diagnosed with depression.

As with assessment, treatment options expand when using the results of this study. As discussed in earlier sections of this paper, there are three main categories of treatment for depression in older adults. The categories include psychotherapy, pharmacologic therapy and electroconvulsive therapy. Of the treatment methods, psychotherapy would be the one to greatly benefit from this study. As it currently stands, when an older adults presents for therapy for depression, there are a myriad of treatment strategies that can be employed including CBT and IPT. Although each has its own protocol for the treatment of depression, CBT is the only method that includes looking at distorted thinking as a part of the treatment. Addressing cognitive distortions

is not a new idea for CBT; however, as innovative as CBT is in many areas, there has not been a discussion within CBT about the inclusion of quality of life in assessment and treatment of depression. If quality of life is assessed along with depression, the therapist could work with the client to reduce depressive symptoms and increase life satisfaction simultaneously in the areas of importance to the client.

Limitations of the Study

Although this study yielded positive results, several limitations should be discussed. The first limitation involved issues within the sample. It was preconceived that the sample would be inclusive because it would include a fair number of older adults from varying living situations in an attempt to ensure a representative sample. However, once the data gathering began, it quickly became clear that at least one group of older adults would not be included in this study. This aforementioned group included older adults residing in nursing homes. When attempting to gain entrance to several nursing homes, the researcher was always informed that research would not be allowed because of the Health Insurance Portability and Accountability Act (HIPAA) regulations. Although it was explained in each instance that the study would be anonymous and would not require any identifying information, nursing home administrations did not wish to have their patients participate. Therefore it is not known if the results apply to nursing home residents.

Another limitation of the sample involved the ethnicity of the participants. In the sample there were a disproportionately large number of African Americans (60.5%). This phenomenon, although unintentional, seemed to occur due to two situations. The first situation developed because the researcher's ethnicity is African American. This led

to being invited and welcomed into many African American institutions and venues. In addition, as word of mouth spread, many African Americans in the community expressed interest in supporting someone like themselves in achieving such a lofty goal as a Doctorate.

The second situation involved the other facilities that allowed the researcher to enter and speak with their clients. These facilities included the City of Philadelphia's District Health Centers and some of the agencies contracted by the city to provide various services, including mental health. The populations of these facilities, although showing some diversity, comprise a majority of African Americans. Because the data was not analyzed based on differences in race, it is not known if the results were an effect of ethnicity.

The second limitation was the sample size. Because correlational studies traditionally have more subjects (e. g. 400 – 800 subjects), this sample size would be considered small.

The third limitation involved the predictive ability of the results. Although it was determined that significant relationships existed among depression, quality of life and distorted thinking, causality was not determined. Therefore the results cannot be utilized to determine if depression causes distorted thinking or lower life quality, or both of these. Nor could it be determined if distorted thinking and/or a low quality of life leads to depression.

Recommendations for Future Research

This study brought to light many questions that open the door to future research. First, this study did not look at comparisons based on any of the demographic information. Considering that research continually demonstrates differences in depression in such factors as gender and marital status, areas can be researched in the context of quality of life and distorted thinking. For example, the presenting questions could be: "Do depressed older adult females have more or less distorted think than males and is their perceptions of their quality of life different than that of men?"

Second, new research could address differences in thinking styles and quality of life among various ethnicities. The current study involved a large number of African Americans but few of the other ethnic groups that represent the older adult population of Philadelphia. Future studies could evaluate and compare the other ethnic groups to one another or to the presented African American sample used in this study.

As noted earlier, due to unforeseen events, nursing home residents were omitted from the current study so there is no data included about this population. Further research could look exclusively at this population to acquire knowledge about any differences between residents who are depressed and those who are not. Alternatively, this population could also be studied in comparison to other group of older adults.

In addition, research could be conducted to measure treatment outcomes. If providers begin to assess depression, distorted thinking and quality of life as a whole, they will begin to address all in treatment. As treatment advances to this level, it will become necessary to determine if and how the treatment works for varying populations of

older adults. To that end, many research studies could be conducted to gather that information.

Lastly, an area of future research that is also gaining much fame in the literature is Positive Psychology (Seligman & Csikszentmihalyi, 2000; Duckworth, Steen & Seligman, 2005; Gable & Haidt, 2005; Seligman, Steen, Park & Peterson, 2005). Positive psychology is the study of the strengths and qualities that contribute to the functioning of individuals, groups and institutions and then building on those qualities to foster a return to or maintenance of optimal functioning (Gable & Haidt, 2005). Duckworth et al. (2005), stated that "positive psychology aims to broaden the focus of clinical psychology beyond suffering and its direct alleviation….positive psychology is the scientific study of strengths, well being and optimal functioning" (p. 631).

Research into positive psychology could play an important role for the adult population in determining the differences between optimal aging and problems in aging. One such area of study could be older adults who are not depressed, who do not have distorted thinking and report a high quality of life. Looking at this group of older adults to determine the factors that keep them happy and thinking in a non-distorted manner could initiate further exploration into preventive care for depression. For example, what are the conditions that distinguish the non-depressed older adult from the depressed older adult and how do professionals build on those conditions to enhance resilience? In addition, research of the strengths and qualities that function as buffers to cognitive distortions would open doors to prevention for older adults who have few internal resources to resist the negative thinking patterns.

Conclusion

Among this older adult sample, depressive symptoms were significantly related to quality of life and to distorted thinking. Research on depression in older adults, for the most part, focuses on assessment, treatment, types, and prevalence. To date, very little research has been conducted to investigate the relationships between depression, thinking styles and quality of life. When examined as a whole, the literature suggests factors on two levels that contribute to the problem of older adult depression. These factors include 1) internal/biological and 2) external/environmental. However, the discussion rarely focuses on the interconnectedness of the factors. This is the purpose of this study.

The problem of depression in older adults appears to involve a complex interplay of variables, but a single solution to the problem does not exist. For example, simply addressing depressive symptoms is not enough to change negative thinking patterns. Nor is it enough to attempt to change thinking patterns yet not address the older adults' life situations such as where they live and the quality of their relationships. Therefore, efforts to reduce depression in older adults must be made at every level of the problem. Efforts to decrease depression in the older adult population should include: 1) assessment and treatment of depressive symptoms and 2) evaluating and increasing quality of life. To this end, several recommendations will follow that may foster contemplation and/or steps towards making the aforementioned suggestions reality in treatment.

As previously mentioned in this paper, assessment and treatment of depression are crucial when working with older adults. However, until diagnosed, depression cannot be treated, which points to the relative importance of assessment. It is well documented that depressed older adults often present at their primary care physicians' offices before going

to other providers. It is also well documented that primary care physicians are not comfortable, are not well enough versed in mental health nor do they have the time needed to assess for depression in older adults (Ademek & Kaplan, 2000). Because of this, there has to be other means of assessing older adults in primary care settings. It is recommended that all methods involve collaborative approaches between physicians and mental health professionals.

Several researchers have concluded that depression in older adults is such a high priority concern that a new position should be included in physicians' offices to assess and treat patients in this setting. The position mentioned by several authors is "Depresssion Care Manager" (Adamek & Kaplan, 2000; Reynolds, 2003; Arean & Ayalon, 2005). This person would ideally be a mental health professional who has knowledge and experience in assessing and treating depression. This researcher, as well as others (Arean & Ayalon (2005); Brantly (2004)), acknowledge that a psychologist would be ideal for such a position. In this role, a psychologist would offer a thorough assessment of depressive symptoms and functional abilities involving the use of various tools, including interviews with those individuals who attend appointments with the older adult. This thorough assessment would in turn lead to better treatment of depression.

Reynolds (2003) cited a study in which depression care managers were utilized in a clinic in Pittsburgh, Pennsylvania. It was found that of the 129 older adult patients, "approximately three quarters of patients have been treated to remission" (p. 110). He also reported the following: "PROSPECT investigators have observed that the collaborative care model has been well received by primary care physicians. The ready

availability and helpfulness of mental health services was seen as a large advantage to both patients and providers" (p. 110).

As previously noted, primary care physicians, because of their limited knowledge and sometimes limited resources, are restricted in their abilities to assess older adults thoroughly. A very frequent disadvantage of this is that the physician may rely heavily of the word of the patient in making a diagnosis. This author is not implying that older adults are always unreliable; just that in many cases, collateral information will add another dimension to what is presented by the older adult. Research has shown that speaking with family or caregivers is a rarely practiced assessment activity (Adamek & Kaplan, 2000). This remains true despite the number of family members and caregivers who regularly attend doctors' appointments with older adults. These informants could present collateral information because they often spend substantial time with the older adult and therefore have observed things that may be overlooked or thought not important by the patient; this additional information would present a more comprehensive picture for diagnosing the older adult.

Along with the above-cited advantages, Psychologists could offer other services such as education for patients. For example, as it stands, patients receive very little time to talk over a diagnosis or treatment with the physician. Not only could a psychologist provide assessment and brief treatment, he or she could provide education to the patient about diagnosis and treatment options. This education would include detailed information about depression, about thinking styles and life satisfaction and how each affects and is affected by the others. In doing this, the psychologist would help the older adult not only to identify distorted thinking, but also to identify when and how this

thinking affects their mood states and feelings about their lives. This education along with brief therapy could be extremely valuable in the treatment of depressed older adults in primary care settings.

These findings offer recommendations for assessment of older adults in primary care settings but in no way cover all the possibilities. The important point that is stressed, however, is that whatever the chosen means of doing so, it is important that physicians find a way to include a depression screening, an assessment of thinking processes and a life quality assessment into the standard protocol when they see older adults.

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