

Dementia Prevention Across the Life Span: An Emerging Role for Counselors

Kathryn Z. Douthit

Alzheimer's disease (AD) is a devastating, degenerative neurological disorder generally associated with later life. Although the hallmark of AD is the progressive memory loss that results from destruction of brain cells, the disorder is actually associated with many other symptoms of cognitive decline including deterioration of language skills, disorientation, degeneration of the ability to execute routine tasks, impaired judgment, and personality changes that are particularly stressful for family members and caregivers. These manifestations of cognitive decline are collectively known as dementia of the Alzheimer's type (DAT) and are detailed in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR*; American Psychiatric Association, 2000).

Brain cell destruction related to AD eventually extends beyond the realm of cognitive function to impact general body systems and results in the death of its victims. Upon autopsy, the brain tissue taken from AD victims displays the so-called beta-amyloid plaques and neurofibrillary tangles (often simply called plaques and tangles) that are characteristic of the disease. There is a wide range in the rate of disease progression with the period from the onset to death ranging between 3 and 20 years. Data provided by the Alzheimer's Association (2003) assert that "(a)s many as 10 percent of people 65 years of age and older have Alzheimer's, and nearly 50 percent of people 85 and older have the disease" (p. 1). While there is some evidence that genes play a role in AD, the evidence for genetic involvement is much stronger for early onset AD, i.e., prior to age 65, than late onset, which occurs after age 65 (Selkoe, 2001).

It is likely the large population of aging baby boomers will directly contribute to a rise in the number of individuals afflicted with AD. While this increase in the size of the AD population will most certainly put increased strain on medical personnel, it will also trigger an increased demand for extended care facilities and psychological support services for AD victims and their caregivers. A crucial question that arises in the face of

this disturbing prediction is whether or not it is possible to stem the tide of AD, thus easing the burdens imposed by the disorder.

Medical research in fact has suggested that some manifestations of dementia of the Alzheimer's type are preventable, and certain aspects of that prevention fall within the purview of counseling practice. This article explores a variety of avenues, germane to the counseling profession, that demonstrate considerable promise in controlling the future of AD. Interestingly, much of what medical science has taught us about control of DAT is consistent with core counseling practices. Because a comprehensive review of all of the possible avenues of counseling-related DAT preventive intervention is well beyond the scope of this article, attention here is focused on counseling opportunities related to stress, depression, cardiovascular disease, and general wellness.

Stress, Depression, Cardiovascular Disease, and DAT

For counselors practicing in the milieu created by 21st century social and cultural institutions, high levels of stress provide a substrate for numerous forms of psychological challenge. Popular media commonly expound the damaging effects of chronic stress, and prodigious sales of antacids, sleep aids, alcoholic beverages, and other stress-busting tonics are a testimony to contemporary Western life. In the context of AD, managing stress before its toxic effects take hold may play an important role in mitigating the symptoms of dementia of the Alzheimer's type. At least two conditions associated with chronic stress—depression and cardiovascular disease—appear to have a significant relationship with the devastating effects of DAT. Beginning with a brief overview describing current understanding of the association between DAT and depression, this article explores the relationship between stress, depression, and DAT with a particular emphasis on the implications for counseling practice. Our attention then turns to research in the area of

cardiovascular disease and DAT with special attention given to the role of the counselor in breaking the toxic cycle linking stress, cardiovascular disease, and DAT.

DAT and Depression

Although research in the biomedical sciences has yet to elucidate a specific causal mechanism linking depression and dementia of the Alzheimer's type, several facts have been clearly established. First, when compared with normal subjects, there is a significantly higher chance that DAT will develop in subjects who manifested symptoms of depression between 1 and 25 years prior to the onset of the AD (Green et al., 2003). Second, men and women diagnosed with AD who concurrently develop depression suffer from more severe DAT symptoms than subjects who are not depressed (Lyketos et al., 1997).

Brain imaging studies strongly suggest that the hippocampus, a brain structure important in memory, emotion, and learning, shrinks during the course of untreated depression (Bremner et al., 2000). This finding has led neuroscientists to hypothesize that the toxic effects of untreated depression on the hippocampus may play an important role in shaping DAT symptoms. Whatever the exact nature of the relationship, it is clear that depression exacerbates DAT symptoms in those with AD and is predictive of the disease in previously healthy subjects. It follows, therefore, that counselors could play a major role in preventing or mitigating the effects of DAT by attending to the destructive impact of untreated depression.

The relationship between dementia of the Alzheimer's type and depression is particularly germane in the context of counseling's commitment to social justice and attention to contextual adversity. The notoriously difficult conditions that characterize a life in poverty are not only likely to explain the high incidence of depression associated with privation (Perl, 2004), but they also increase the likelihood that the resources needed to treat depression will be unavailable. Thus, counselors can assume a centrally important role in helping to alleviate the symptoms of depression, and potentially DAT, in poor and marginalized populations by serving as advocates and activists in the struggle to establish mental health resources and build healthy communities.

The Stress Link to Depression and DAT

Although there are undoubtedly a number of root causes of depression, unremitting stress has become a prime suspect in the etiology of some types of depressive disorder. Biomedical science has made great strides in elucidating the complex pathways that link stress and depression, and familiar substances such as

cortisol, adrenalin, and norepinephrine are now thought to mediate the depressive effects of chronic stress (Wilson et al., 2003).

The tempo of 21st century living, family divisions emerging from our mobile society, instability of the job market, and demands imposed by technology are just a few of the factors that lead to chronic stress in all segments of contemporary Western society. Conditions of poverty, discrimination, and disability only serve to exacerbate feelings of stress and contribute to its chronicity. Dilapidated housing, substandard medical and dental care, proximity to violent crime, financial insecurity, need for affordable child care, bankrupt public schools, and lack of a functional community infrastructure all contribute, over time, to the symptoms of depression. If research ultimately confirms that stress-induced depression is a causal factor in DAT pathology, counselors can assume a principal role in DAT prevention by working with clients to break the stress-depression cycle. The interruption of this cycle can be achieved through interventions that are familiar to counselors such as stress management, client advocacy, empowerment counseling, and group support.

Cardiovascular Health and DAT

Poor cardiovascular health in later life, particularly in relation to the blood vessels that supply oxygen and nutrients to brain tissue, is correlated with dementia of the Alzheimer's type (Bowler, 2004). The famous Nun Study (Snowdon, 2002) investigated the relationship between the presence of plaques and tangles in the brains of autopsied subjects, brain blood vessel health, and DAT symptoms. Findings indicated that when the presence of plaques and tangles was combined with evidence of one or more strokes, subjects were more likely to have had DAT symptoms than subjects with either stroke or plaques and tangles alone. In fact, some of the study's subjects with healthy blood vessels had few DAT symptoms even though the plaques and tangles in their autopsied brains clearly indicated that they had fully developed cases of AD (Snowdon et al., 1997) These findings raise many questions regarding the actual mechanism involved in producing DAT symptoms and provide counselors with opportunities to fruitfully engage in preventive practices that are elaborated in the following section.

Cardiovascular Health, DAT, and Stress

Although it seems logical that an association between cardiovascular health and dementia of the Alzheimer's type would be outside the purview of counseling practice, in reality, an essential role for counseling emerges as our understanding of this

association grows. Endocrinologists have long established that environmental stress is linked to cardiovascular disease. Conditions of stress cause release of the stress hormone cortisol, which over prolonged periods causes a type of weight gain that is particularly damaging to the cardiovascular system. Although excessive weight gain is always a threat to cardiovascular health, the types of fat deposits that occur as a result of chronic stress are strongly correlated with heart attack and stroke (Samaras et al., 2000).

Thus, for adults living with stress-induced obesity, be it from the demands of contemporary culture, conditions of poverty, discrimination, family tribulations, or the myriad of other possible life challenges, higher incidence and greater severity of DAT is a real concern. As in the case of stress-related depression, prevention predicated on stress-reduction intervention could play a major role in combating DAT symptoms. By helping clients to manage life stressors, and by working to build stronger families and communities through client advocacy and empowerment, counselors can become centrally important players in the fight against this devastating condition.

Using the Wheel of Wellness to Promote Brain Health

As we have seen from the discussion so far, living a life of well-managed stress contributes significantly to good brain health in old age. Stress management is actually one of the many benefits that come from living a generally healthy lifestyle, and not surprisingly, many of the individual factors that comprise a holistic wellness program have been shown to combat AD.

Myers, Sweeney, and Witmer (2000) have provided the counseling profession with a multidimensional model of wellness that includes factors such as diet, exercise, social engagement, and self-efficacy. Many of the same factors that provide the foundation of this comprehensive wellness program have also been studied, with positive results, in relation to dementia of the Alzheimer's type. For example, exercise, a key factor in maintaining wellness, has been shown in a number of studies to aid in DAT prevention. This is not surprising since exercise helps to lower toxic stress, control weight, and increase the flow of blood, and hence the availability of oxygen and nutrients, to brain cells (Colcombe et al., 2003). Social engagement and certain forms of intellectual stimulation, both germane to wellness, appear to play a role in DAT prevention (Snowdon, 2002), while wellness-oriented activities and interventions that foster increased self-efficacy and an internal locus of control are associated

with lower incidence of depression, a known correlate of DAT (Myers et al., 2000).

In his popular accounting of the Nun Study, *Aging With Grace*, Snowdon (2002) provided compelling anecdotal descriptions of elderly nuns who maintain these principles of wellness while escaping the symptoms of DAT. In any case, wellness and prevention, as a central aspect of counselor identity, may provide a venue for counselors to make significant contributions in the struggle against AD.

Conclusion

Although counselors have been well positioned to assist families in coping with the grief and stress of caring for a loved one suffering from DAT, the devastating physical effects of AD have been the purview of the biomedical community. Research in DAT prevention, however, has created new venues for counselor participation in the fight against this tragic disorder. Counseling practices such as depression intervention, stress reduction, social activism and advocacy, and promotion of a healthy lifestyle through diet, exercise, social engagement, self-efficacy, and intellectual stimulation are all likely to be fruitful areas of DAT prevention. AD is one of many physical disorders for which new understanding of the mind-body connection will provide exciting new vistas for the counseling profession.

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