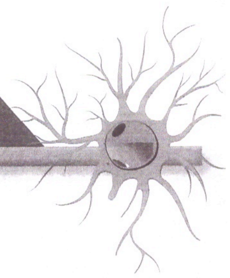

The complexity of cognitive decline, Part 2

Part 1 of this series (published in the November 2018 issue) was concerned with types of cognitive decline, ranging from normal decline to preclinical signs to mild cognitive impairment (MCI) to dementia. This month, we will focus on reliability of diagnosis, possible reversal of MCI/dementia, medications, and social justice issues.

Reliability of diagnoses and possible reversal

Evidence is clear that a formal diagnosis of MCI or Alzheimer's disease can be incorrect. A 2012 review in *Dementia and Geriatric Cognitive Disorders* found that only 58 percent of 195 randomly selected first-time registered cases of dementia diagnoses in patients younger than 65 could be confirmed using criteria from the *International Classification of Diseases* and the *Diagnostic and Statistical Manual of Mental Disorders*.

With anxious patients and families seeking definitive information about the possible presence of dementia, it is easy to see how the diagnosis may be incomplete or wrong. With many patients who experience cognitive decline, the immediate fear is, "This could be Alzheimer's." Although it may be normal behavior for individuals to lose their glasses, keys and even their wallets, these events often spark real anxiety and tension. If an individual actually does start the slow decline and the signs become clearer, each day can be filled with worry. As the individual (and the individual's family) experiences the associated stress, this alone can hasten decline or even produce symptoms when no pathology exists.

A diagnosis that is too early or incorrect can cause clients and families to suffer unneeded strife and worry. Furthermore, these early or incorrect diagnoses can lead the worried client and family to *expect* things to get worse, thus producing a self-fulfilling prophesy. On the other hand, positive or optimistic expectations can also be self-fulfilling. We suggest that counseling's major role is to be supportive, to provide basic facts and to show clients and their families what can be done *now* to deal constructively with cognitive issues, whether those issues involve normal aging, MCI or even dementia.

Sorting out what is and what isn't a path to dementia (and, consequently, what is and what isn't merely normal aging) can be an agonizing process. Although referral to a physician is necessary, the question is whether the physician will provide useful information and support while also recognizing that early diagnosis always should be tentative. It should also be noted that recovery from illness and trauma or resolution of psychological issues such as depression may be sufficient to return some clients diagnosed with MCI or dementia to previous cognitive and behavioral levels.

We need to be especially aware that reversal of MCI is possible and frequent. A 2017 study by Hiroyuki Shimada and colleagues found that approximately 4,200 older residents of a community in Japan had been diagnosed with MCI. Four years later, 46 percent of those diagnosed had returned to normal functioning. The Sydney (Australia) Memory and Ageing study (2010) found that 66 of 223 participants (29.6 percent) reverted to normal. Thomas Koepsell and Sarah Monsell (2012) studied 3,020 individuals diagnosed with MCI and found that approximately 16 percent of these individuals had returned to normal cognitive functioning at a one-year follow-up. A 2014 Mayo Clinic study found reversion to normal cognitive functioning in about 35 percent of participants. In each of these studies, the positive reversion was not permanent for all participants, but the majority continued to function well.

Also in 2014, UCLA professor of neurology Dale Bredesen published stunning research in which 9 out of 10 MCI and Alzheimer's patients displayed improvement in their memories within three to six months. Six fully diagnosed patients returned to work, and follow-up has shown continued improvement. Bredesen's book, *The End of Alzheimer's: The First Program to Prevent and Reverse Cognitive Decline* (2017), has many adherents and has received many positive recommendations, but it has also been challenged because controlled studies have yet to be conducted on its results. However, Bredesen states that his extremely rigorous treatment program has been successful with more than 1,000 patients. (To learn more about the program, see *drbredesen.com*.)

Bredesen's complex program focuses on metabolic flexibility and involves more than 30 tests that are directly or indirectly related to cognitive decline. Most of these have research data related to health issues,

including metabolism, epigenetics and DNA changes. His treatment program uses a low carbohydrate diet (known as "Ketoflex"), a flexitarian diet in which meat becomes a condiment rather than a central protein source (fish is optional). Vegetables become central, and sugar is avoided as completely as possible. He recommends against dairy and gluten.

A note on medications

A combination of cholinesterase inhibitors (e.g., Aricept) and memantine, drugs approved for treatment of Alzheimer's disease, improves symptoms and is believed to slow progress and improve memory. The Mayo Clinic points out that medication offers some help with symptoms, but the clinic focuses instead on lifestyle, family, pet therapy, music, massage and support groups (which we will cover in Part 3 of this series).

Not all patients respond well to these medications. Linda Brookes, in a 2018 article titled "Deprescribing Cholinesterase Inhibitors and Memantine in People with Dementia," summarized new clinical guidelines focused on the discontinuation of cholinesterase inhibitors and memantine. As Brookes observed, "As many as one-third of cholinesterase inhibitor prescriptions are inappropriate."

Polypharmacy is a major issue for older adults and another factor of which counselors and therapists need to be aware. Obtaining a list of our clients' current medications often needs to be part of our practice. Aging is often accompanied by many prescriptions — sometimes too many. These prescriptions can conflict, and this can itself cause cognitive concerns. This issue and deprescribing are well-summarized in a video by Barbara Farrell (see *tinyurl.com/YouTubeFarrell*).

Newer medications are being tested. For example, early research has found that metformin, which has been shown effective with both diabetes and some cancers, may combat cognitive decline. Perhaps more significant is that, according to several reports, inflammation may be more harmful than the plaques and tangles we associate with dementia. An older 25-year study by Reinhold Schmidt and colleagues found that midlife inflammation (C-reactive protein) tripled the possibility of dementia. Issues of inflammation and metabolic syndrome will be discussed in Part 3 of this series.

MCI and Alzheimer's are social justice issues

Those who are poor, have experienced abuse or trauma, have received poor medical services, or have experienced multiple and continual stressors are more subject to inflammation and metabolic syndrome. The possible negative effects of their living environments make them more vulnerable. African Americans are two times more likely than Caucasians to develop late-onset Alzheimer's disease. They are also less likely to receive a diagnosis, resulting in less treatment or no treatment at all, both of which lead to a more rapid decline. Mental health services may also be less effective.

We now know that early life stress and deprivation increase the risk of poor health outcomes — mental and physical — later in life. Inflammation and metabolic issues, coupled with heart and other issues, reduce blood flow not only

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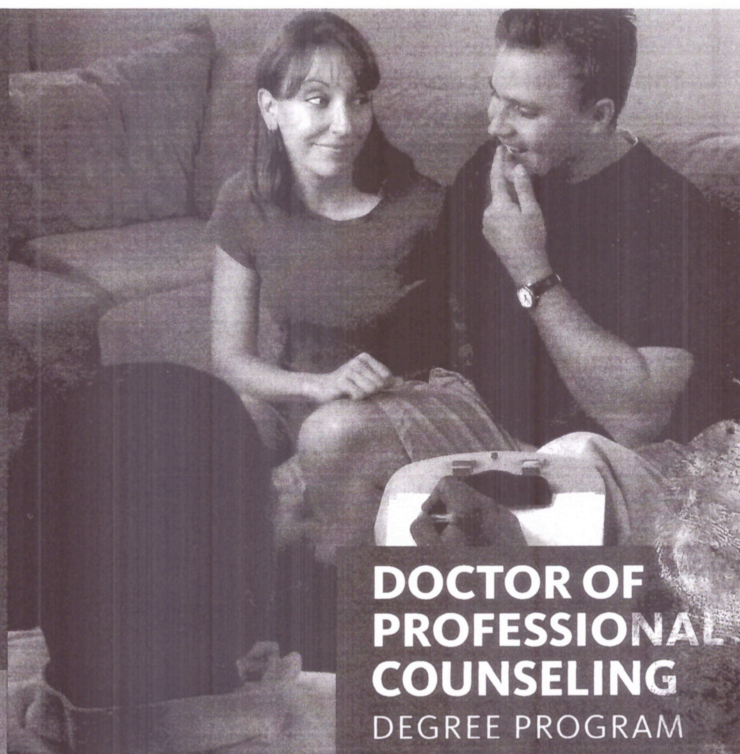

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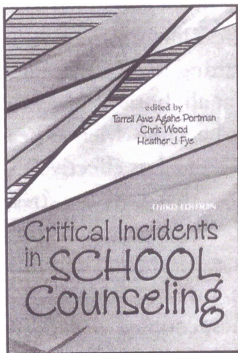

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to the body but to the brain. Sara Stanley and her team (2017) wanted to know whether people who grew up in harsher conditions were more likely to develop dementia. So, they looked at people who had been born in states with high infant mortality rates — an indicator of social problems such as poverty and limited access to medical care. The risk of white people developing dementia wasn't affected by their place of birth. But, according to Kaiser Permanente researcher Sharon Whitmer, African Americans were 40 percent more likely to develop dementia if they were born in a state with high infant mortality.

"The increased risk seems to be a matter of experience rather than ancestry," said Megan Zuelsdorff, a postdoctoral fellow in the Health Disparities Research Scholars Program at the University of Wisconsin-Madison. Stress brings with it high blood pressure and a greater risk of diabetes, which cause inflammation that affects the brain. Obesity, lack of exercise and other related issues increase the likelihood of multiple illnesses, leading many of these individuals to receive less positive and supportive care than they should receive. Original genetic inheritance is not an issue in these cases, but a negative environment deeply impacts the genes through epigenetics.

Tara Haelle (2018) presented data indicating that childhood adverse experiences carry over to many diseases, including heart disease and cancer, which are themselves sometimes precursors to dementia. The sum and substance of multiple life issues can lead to posttraumatic stress (PTS). Vasiliki Michopoulos and colleagues (2017) studied what is all too often termed "PTSD" (we recommend using "PTS" rather than "PTSD" because the "D" — for "disorder" — tends to put the problem in the client, whereas PTS correctly names environmental stress as the issue). They found among patients that "iterations in sympathetic nervous system activity, neuroendocrine systems and metabolism associated with [PTS] are similar to those present in traditional metabolic disorders, such as obesity and diabetes." These researchers suggested the possible importance of whole-body

interventions. Given some parallels between these metabolic disorders and dementia, whole-body interventions may be a vital part of treatment for dementia.

Rachel Whitmore and colleagues (2017) studied more than 1,300 people in their 50s and 60s, including 82 African Americans. Stressful experiences included having a parent with a drinking problem, financial insecurity, legal issues, divorce, being fired from a job and the death of a child. African Americans reported 60 percent more of these stressful events than did white Americans.

But that was only part of the difference. They found that the impact of these stressful events was stronger in African Americans than it was in non-Hispanic white participants. The team discovered this by administering tests that revealed the brain's speed and flexibility in doing certain tasks. These abilities normally decline with age. So, the team looked for evidence that stressful events were accelerating this decline. They found that among white participants, each stressful event added about a year and a half to normal brain aging; among African Americans, each event aged the brain an extra four years.

Summary and a look ahead

Counselors and therapists need to attend to the sequence of cognitive decline, preclinical issues, two types of MCI and dementia. However, we need full awareness of the difficulty of accurate diagnosis, the limitations of medications and treatments, and the research that tells us that decline can be slowed and even reversed. Social justice issues are also vital for consideration.

Part 3 of this series will focus on the impact of lifestyle counseling to prevent and slow cognitive decline (and perhaps be part of reversal). In addition, special attention will be paid to metabolic balance, which is a key factor in physical and mental health. This area needs central attention in counselors' practice. Why? Although you may not be working with elders currently, each of your clients hopefully will reach elder status in the future. Unless lifestyle issues are considered, cognitive decline will only continue to increase. ❖

Allen and Mary Bradford Ivey have worked together for many years on issues ranging from interviewing skills to multiculturalism to neuroscience. They are both fellows of the American Counseling Association and have keynoted throughout the world. Visit their joint website at *allenivey.com* for articles, books and videos on social justice, multiculturalism, microskills of listening and influencing, and neuroscience. Contact them at *allenivey@gmail.com* and *mary.b.ivey@gmail.com*, respectively.

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