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# Asperger's Disorder in Older Adulthood: The Unique Treatment Concerns and Implications for Applying Cognitive-Behavioral Therapy

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ASPERGER'S DISORDER IN OLDER ADULTHOOD:  
THE UNIQUE TREATMENT CONCERNS AND IMPLICATIONS FOR  
APPLYING COGNITIVE-BEHAVIORAL THERAPY

A DOCTORAL PAPER  
PRESENTED TO THE FACULTY OF THE  
GRADUATE SCHOOL OF PROFESSIONAL PSYCHOLOGY  
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UNIVERSITY OF DENVER

IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE  
DOCTOR OF PSYCHOLOGY

BY  
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JULY 8<sup>th</sup>, 2014

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**Abstract**

This article provides a theoretical consideration for the problems faced by older adults diagnosed with Asperger's Disorder as well as implications for applying Cognitive Behavioral Therapy with this distinct population. The author presents the relevant literature concerning the unique presentation and common problems of each, traditionally distinct population: (a) older adults and (b) Asperger's Disorder. The author then extrapolates this data into a theoretical conceptualization of the unique clinical presentation and treatment considerations for the underrepresented population of older adults with Asperger's Disorder. The author then presents a review of the relevant literature concerning the application of Cognitive Behavioral Therapy with each distinct population. From this review, the author presents a conceptual framework for providing older adults with Asperger's Disorder with Cognitive Behavioral Therapy to address their unique presenting problems.

As the baby boomer population continues to age, by the year 2030 one in five Americans will be aged sixty-five years old or above (Erber, 2010). A large portion of these older adults will face a range of unique medical and psychological health related challenges associated with aging. For the 0.7 percent of this population with Asperger's Disorder, these transitions may be especially difficult. Although the diagnosis of Asperger's Disorder in childhood is on the rise, there are very few diagnosed cases of this disorder among older adults. Given that Asperger's Disorder is classified as a Pervasive Developmental Delay, and hence not something that a person outgrows, these contradicting statistics beg the question—where are these people?

One explanation for these undiagnosed cases is that prior to the increase in public recognition of Asperger's Disorder, these individuals were likely misdiagnosed, or given their relatively high functioning nature, simply unrecognized by the mental health field (Stoddart, Burke, & King, 2012; Volkmar, 2011; Armstrong & Kimonis, 2012). As these individuals aged, they likely faced a range of challenges as they transitioned through each stage of life. Arguably, the most challenging transition that these individuals would have faced is the transition into older adulthood. During this time, they likely faced the same challenges met by most people as they age (e.g., death of friends and family, retirement, health problems, etc.). However, these challenges would have been increasingly complicated by the idiosyncratic symptoms characteristic of Asperger's Disorder (e.g., theory of mind deficits, lack of empathy, few social supports, heavy reliance on caregivers, etc.).

While people with Asperger's Disorder would likely have faced the challenges of aging largely on their own, the mental health field can support them by developing interventions to assist them in these transitions. Specifically, Cognitive Behavioral Therapy has been found to be especially effective in assisting both populations that will be addressed in this paper: those

diagnosed with Asperger's Disorder (Donoghue, Stallard, & Kucia, 2011) and the older adult segment of the population (Stanley et al., 2013). This paper will provide a conceptual analysis and synthesis of the inadequately studied population of older adults with Asperger's Disorder. Furthermore, this author will recommend and elaborate upon the application of Cognitive Behavioral Therapy to assist these individuals in facing their unique challenges.

### **Older Adults**

This paper will follow Erber's (2010) definition of "older adult," which is those individuals who are aged sixty-five years old and beyond. While categorizing a specific segment of the general population can be helpful in investigating the unique needs and treatment implications of that specific group of people, it is equally important to emphasize that the individual differences within this group are pronounced, and should be heavily considered for each idiosyncratic case. With this in mind, all individuals are faced with unique challenges, stressors, and medical and mental health concerns at each developmental stage of life. This phenomenon is especially true for older adults as they transition into retirement, experience health decline, struggle with existential dilemmas and other common late-life challenges (Erber, 2010). Despite these prevalent stressors and their implications for the mental health field, the psychological study and treatment of older adulthood was not formalized in the United States until the mid-20<sup>th</sup> century. One can speculate that the cultural devaluation of older adults by Western society may be one of the contributing factors to this delay. This belief is evidenced by the theory of human development held prior to the mid-1940s; namely, that psychological as well as physical development peaks during early adulthood, and slowly declines as the individual progresses into late-adulthood (Erber, 2010). Fortunately, this belief has greatly shifted in the last fifty years, as the professional and lay communities alike have come to appreciate the

complexity and unique challenges involved in transitioning into this stage of life (Erber, 2010). With this appreciation has come an increasing amount of literature and consideration for the treatment of this growing segment of the population.

### **Common Problems and Treatment Considerations**

As the baby-boomer population enters into older adulthood, by the year 2030, one in five Americans will be aged sixty-five or older (Erber, 2010). This trend is seen throughout developing and developed nations alike, as the world will likely see a 238.4 percent increase in the number of older adults by the year 2050 (Ryan & Coughlan, 2011). As advances in medical science continue to improve the life expectancy of each successive generation, an increasingly number of individuals will live into older adulthood. Specifically, as advances in telomere research continue to push the upward boundaries of life-expectancy, the percentage of older adults who live into the “oldest-old” stage of life—85 years-old or more—will also grow (Santrock, 2009). This rapid increase in the percentage of older adults will challenge the mental health field to provide comprehensive and efficacious treatment for this growing segment of the population. These interventions must address the multitude of stressors faced by older adults, including but not limited to physiological changes, health problems, decline in function, sleep problems, loss of autonomy and social support, as well as substance abuse, grief and loss and other mental health concerns.

Although aging will affect individuals in idiosyncratic ways, all older adults experience some form of physical degeneration as they age (Erber, 2010). Whether it is a reduction in sexual functioning, the deterioration of muscle and bone mass, or the loss of stamina, each of these biological changes has a heavy psychological impact. As older adults adjust to these biological changes, they can become increasingly susceptible to disease as these changes tax

their physical health. Diseases such as glaucoma, heart disease, and cancer pose both practical and existential obstacles to many older adults (Erber, 2010). Perhaps the most pervasive and challenging of these diseases are those that impact the brain.

Santrock (2009) reported that dementia likely affects 20 percent of adults over the age of 80. Although dementia is primarily considered a medical issue, undoubtedly it also has psychological relevance. Alzheimer's as well as less debilitating forms of dementia are often associated with increased anxiety, symptoms and agitation, as well as decreased independence and quality of life (Robinson et al., 2011). While the biological and cognitive degenerative changes associated with dementia cannot be remedied by psychotherapy, these secondary symptoms are grist for the psychological mill. In addition to the older adult with dementia, the family members and social supports of these individual are particularly susceptible to develop mental health problems and can greatly benefit from involvement in the older adult's treatment, as well as from their own individual psychotherapy (Fialho, Koenig, dos Santos, Barbosa, & Caramelli, 2012).

These medical concerns contribute greatly to the array of mental health problems seen in the older adult population. Older adults are particularly susceptible to developing anxiety and mood disorders, as well as expressing personality disorders that were unresolved during earlier developmental stages. Considering anxiety as a typical response to change, it is not surprising to find that older adults are particularly prone to developing anxiety disorders (Kessler et al., 2005). This anxiety can manifest itself as dementia related confusion, health anxiety, or specific and social phobias related to drastic changes in their living situation and/or vocational status.

The array of stressors and biological changes affecting older adults makes them particularly prone to developing depressive symptoms as they age (Karel & Hinrichsen, 2000).

While prevalence rates of major depressive disorders in older adulthood are comparable to the rest of the population, older adults are particularly prone to developing subclinical, late-life depression. Although often directly related to the functional disability resulting from chronic illness, older adults, their family, and the medical community often misattribute these symptoms to medical illness, physiological changes, or worse, simply part of the aging process (Karel & Hinrichsen, 2000). As a result of misdiagnosis, these symptoms are often treated with pharmacological interventions alone. While these interventions have been shown to be somewhat effective in treating late-life depression (Dolder, Nelson, & Stump, 2010), many older adults respond better to adjunctive psychotherapeutic interventions (Martire et al., 2010), or to psychotherapy alone (Garner, 2003; Wong & Laidlaw, 2012; Karel & Hinrichsen, 2000; Knight & Satre, 2006).

Perhaps the most challenging life event faced by anyone is the death of a loved one. Unfortunately, most older adults will experience this stressor multiple times throughout the last stage of their lives. These losses can be very taxing on an older adult's emotional well-being, as well as posing significant practical difficulties in the form of loss of social and familial emotional support, financial support, et cetera. While the death of a loved one is a notable stressor for any person, 10-40% of grievors will experience extended grief and preoccupation with the deceased, referred to as complicated grief (Newson, Boelen, Hek, Hofman, & Tiemeier, 2011). For these individuals, mental health interventions can be especially helpful in resolving disbelief regarding the death of the loved one, and ultimately recovering from their loss.

These unique stressors related to aging can push the previously successful coping skills of many older adults to the limit, leading many down the path toward substance abuse (Santrock, 2009). While generally speaking, alcohol use decreases as people age, there is a large portion of

the older adult population who are prone to “late-onset alcoholism” (Santrock, 2009). This trend is particularly troubling when considering the significant risks of the combined use of alcohol with analgesics and sedatives that many older adults are prescribed (Santrock, 2009). Older adults are particularly vulnerable to developing over-the-counter, illegal and prescription drug abuse problems as they are often prescribed multiple addictive medications for sleep aid, pain management, and other health related problems (Outlaw et al., 2012).

Given the inherent stressors involved in transitioning into the older adult stage of life, one would think older adults to be prime candidates for psychotherapy. Unfortunately, a great proportion of older adults is under-referred for mental health interventions, and is instead referred for unnecessary and ineffective medical interventions (Garner, 2003). However, those who are properly referred for mental health treatment often benefit greatly from these interventions (Garner, 2003). As will be discussed later, among these interventions, CBT has been found to be an especially effective treatment in addressing the plethora of presenting concerns of the older adult population.

### **Asperger's Disorder**

Asperger Disorder (AD) is a neurodevelopmental pervasive developmental disorder that involves impairments in communication and social interactions, and restricted interests and repetitive behavior (American Psychiatric Association, 2000). AD is one of many Pervasive Developmental Disorders (PDDs) that can be classified as an Autism Spectrum Disorder (ASD). Although the newly published DSM 5 has subsumed the diagnosis under the ASD, renaming it High Functioning Autism (American Psychiatric Association, 2013), for the sake of clarity, the diagnosis of Asperger's Disorder will continue to be used throughout this paper.

Despite being first described in 1941 by Hans Asperger, Asperger's Disorder was not brought to the attention of the Western mental health community until 1981 by Lorna Wing (Woodbury-Smith & Volkmar, 2009). Similar to autism, AD is most often diagnosed in early childhood; however, AD is distinct from low functioning autism (LFA), as it is not characterized by abnormal cognitive and language development. Rather, AD is referred to as a social disorder, often diagnosed after the age of three when the individual begins to interact with peers (Woodbury-Smith & Volkmar, 2009). This understanding of AD as a social disorder is well described by Attwood (2007): "In solitude, the child does not have a qualitative impairment in social interaction...if the child is alone there will be no evidence of any impairment" (p. 55). As the awareness and understanding of AD has increased over the years, so too has the consideration for the treatment of this population.

### **Common Problems and Treatment Considerations**

AD is believed to affect approximately 0.7 % of the population (Stoddart, Burke & King, 2012). Typically presenting with an idiosyncratic verbal communication, these individuals are often described as "little professors" (Volkmar, 2011), and unlike their LFA counterparts, children with AD often demonstrate accelerated verbal abilities. Despite this unique strength in verbal capacity, these individuals have impaired nonverbal communication skills. Additionally, when children with AD are in social situations, they often struggle with expressing themselves and interacting well with peers. As a result, they are often socially isolated, and struggle to learn subtle and even obvious social cues. Yet another distinction from their LFA peers, most AD individuals yearn for these relationships, and respond to this rejection with anxiety and self-hatred (Attwood, 2007).

To address these social deficits, Stoddart, Burke and King (2012) emphasized the importance of early detection and diagnosis of AD. Early detection affords these individuals special attention and care, aiding them in meeting developmental tasks that they would otherwise fail to meet. However, identifying AD can be difficult given the large proportion of AD children presenting with comorbid behavioral difficulties (Armstrong & Kimonis, 2012). Presently, and especially prior to the 1980s, individuals with AD are often misdiagnosed with a plethora of inaccurate diagnoses; e.g., cognitively disabled, oppositional defiant disorder, conduct disorder, schizoid, schizophrenic, right hemisphere learning disability, and personality disorders (Stoddart, Burke, & King, 2012; Volkmar, 2011; Armstrong & Kimonis, 2012). As a result of this history of misdiagnosis, it is likely that many of these individuals have received limited, none, or inappropriate treatment for their disorder.

Even when diagnosed correctly, children with AD are constantly challenged by the stigma associated with their disorder (Shtayermman, 2009). This stigma becomes especially challenging for AD individuals and their families when they become school aged. In an exploratory study, Shtayermman (2009) presented findings that AD adolescents reported a high level of peer victimization. Additionally, peer victimization was found to be negatively correlated with AD symptomology. These surprising results can be interpreted as reflective of the commonly reported issue that high functioning AD individuals can “pass” as “normal,” and therefore do not receive the attention and accommodations that their lower functioning peers receive. As a result of this inattention to their unique needs, AD individuals are more prone to academic struggles as well as victimization by their peers (Shtayermman, 2009).

Unfortunately, these inadequacies in providing necessary accommodations are not limited to the primary or secondary education levels. A survey of post-secondary AD students indicated

that Disabled Student Services are consistently understaffed and unprepared to accommodate the unique needs of AD students (Smith, 2007). This is an important issue to consider, as the demand for college educated employees rises in an increasingly competitive job market.

Further exacerbating their academic struggles in the classroom, AD individuals often fail to notice social nuances and hence do not properly adhere to classroom norms (Volkmar, 2011). As a result, these individuals can prove frustrating for peers and teachers alike, and are often mislabeled as emotionally or behaviorally disturbed. In turn, these conditions often lead to poor academic placements, in which they are more prone to further victimization and social isolation (Volkmar, 2011). The chronic social ineptitude of these individuals often impedes the development of close peer relationships. As a result, these individuals often live socially isolated lives, primarily interacting with their family and primary caregivers (Volkmar, 2011).

Whether they attend college or not, after leaving high school, the struggles faced by AD individuals continue to be significant obstacles as they transition to adulthood. These struggles vary from simple difficulties with completing ADLs, to finding an employer willing to accommodate their unique and often overlooked needs (Lawrence, Alleckson & Bjorklund, 2010). Having developed few close social supports, these individuals continue to rely heavily on their parents and family as they struggle to find a place for themselves in the job market and society as a whole (Lawrence et al., 2010).

While there are several case reports of some higher functioning individuals with AD finding a niche career in which they can thrive (James, Mukaetova-Ladinska, Reichelt, Briel, & Scully, 2006), most AD individuals struggle with unemployment throughout their lives (Lawrence et al., 2010). A study by Nesbitt (2000) investigated the themes and considerations involved in an employer's decision whether to hire an individual with AD. Nesbitt found the

flexibility of the work environment to be the primary predictor of an AD individual being hired. Companies that had a rigidly established work process expected their employees to behave in specific ways, and were much less likely to employ AD individuals. These results are not surprising, yet emphasize the importance of AD individuals finding employment in which the employer is willing to accommodate their peculiar and somewhat inflexible personalities (Nesbitt, 2000).

While their LFA peers typically are more easily identified and connected with well-established societal supports, AD individuals often fall through social safety nets (Lawrence et al., 2010). Lacking an established Social Service system to accommodate and support them, AD families are often trapped in a perpetual referral loop between their physician, school system and Social Services (Lawrence et al., 2010). While trapped in this loop, many young adults with AD become entangled in the criminal justice system, which is ill prepared to manage their idiosyncratic communicative and behavioral difficulties (Browning & Caulfield, 2011). Of those who are fortunate enough to transition successfully to adulthood, about 50% develop a comorbid mental health disorder—primarily anxiety and mood disorders (Gillberg, Hallerba, & Lugnega, 2011). With limited supports, these individuals often rely heavily on their families and primary caregivers throughout their adult lives. In addition to their families and caregivers, psychotherapy can also serve as a support for individuals with AD.

### **Psychotherapy.**

Since Wing brought Asperger's Disorder to the awareness of the Western scientific community, there has been a great expansion in research on AD. Unfortunately, the amount of literature focused on psychotherapy interventions is limited (Volkmar, 2011). Given the social

and communicative difficulties characteristic of the disorder, one can intuitively appreciate that AD individuals can greatly benefit from the relational nature of psychotherapy.

The early detection of AD is widely accepted as one of the most important factors in predicting positive outcomes for individuals with an ASD (Warren & Stone, 2011). Although there is competing research over which specific interventions are most effective, Warren and Stone (2011) stated that there is general agreement that the earlier the interventions are provided, the better the prognosis for the individual with AD.

Given the age that AD is typically diagnosed, early interventions are often behavioral in nature. These interventions specifically focus on behavior management, emotional regulation and parent coaching (Blankenship & Minshawi, 2010; Armstrong & Kimonis, 2012). However, once the child's behavioral difficulties are improved, treatment inevitably focuses primarily on promoting social competence (Toth & King, 2008). This promotion of social competence is often conceptualized in terms of theory of mind (ToM), which was first applied to ASDs by Baron-Cohen, Leslie, & Frith (1985).

Theory of mind can be defined as “the ability to interpret another's mental states—encompassing desires, beliefs, and intentions—which may conflict with the observer's own knowledge or with reality” (Bull, Phillips, & Conway, 2008, p. 664). Although ToM deficits are most commonly observed in lower functioning individuals on the Autism Spectrum, this concept has begun to be applied in the conceptualization of AD individuals as well (Jacobsen, 2003). Jacobsen argued that although some of her clients with AD can objectively demonstrate ToM, they do so in an atypical manner. While most children naturally develop ToM after the age of four, the AD children who are capable of learning ToM do so by applying logic to social interactions. Jacobsen observed this in a session in which a client solved a ToM task in a similar

way to a math problem—essentially proofing that one character in a story could not possibly know that the other character had moved an object while the former was out of the room (Jacobsen, 2003). Jacobson observed her clients carefully solving this problem, taking much more time than their same-age peers. This can be seen as evidence that AD individuals are able to develop theory of mind, albeit through a painstaking reliance on logicity.

AD individuals' capability to develop ToM is believed to be one distinguishing characteristic from their LFA peers, and psychotherapy can be an effective intervention through which to develop this ability (Jacobsen, 2003). Specifically, Cognitive Behavioral Therapy is one of the most widely applied psychotherapeutic approaches used for treating ToM deficits in AD individuals (Jacobsen, 2003; Lawrence et al., 2010). While this point will be elaborated on in more detail later in the paper, first we will consider the unique presentation of older adults with AD.

### **Older Adults with Asperger's Disorder**

Although the public attention granted to Asperger's Disorder (AD) has risen in the past few decades, this attention has been primarily limited to AD in children, adolescents and early adulthood. This unfortunate trend is unsurprising given the relative recent discovery of AD, as well as the fact that most developmental disabilities are diagnosed in early childhood. Although there has been a shift in the mental health field toward investigating treatment concerns of adults with AD, there remains a dearth of research exploring how AD presents in older adulthood. Considering this fact, along with the life-long impact of developmental disabilities, leads one to believe that there is an underserved segment of the older adult population with unrecognized AD. This section of the paper will attempt to serve this population by reviewing the limited literature

on AD in older adulthood while also extrapolating the relevant literature regarding the two distinct populations.

### **Where are they?**

Although AD is often thought of as a childhood disorder, Woodbury-Smith & Volkmar (2009) reported that recent studies indicate only 20% of people with AS “grow out” of the disorder. While a portion of the remaining 80% may improve their functioning over time, they will still meet diagnostic criteria for AD as they progress into adulthood and eventually older adulthood. Additionally, a recent epidemiological study from the U.K. reported a 1% prevalence rate of ASD in adults—comparable to the rate found in children (Brugha et al., 2011). These studies support the supposition that AD is a lifelong developmental disorder that must be a focus of clinical attention throughout the life cycle. Considering the commonly accepted AD prevalence rate of 3-7 in 1,000 (James et al., 2006), a conservative estimate of the number of older adults with AD is around two hundred thousand in the United States alone (U. S. Census Bureau, 2011). Given this staggering number as compared to the small amount of published literature regarding this population, the first question that must be considered is: where are they?

As discussed previously, AD was not brought to the attention of the Western mental health field until the 1980s (Woodbury-Smith & Volkmar, 2009). This fact leads one to presume that prior to the 1980s, a large portion of the AD population was misdiagnosed by members of the mental health and medical fields. While many older adults with AD may have accommodated to their AD in such a way that they do not present with mental health symptoms, it is perhaps more likely that misdiagnosis has played a masking role in the detection of many instances of AD in older adults. Additionally, many older adults with AD have likely adapted to their undetected AD, and have learned to accommodate many of their symptoms. However, as

the routines of life are altered and late-life stressors build, some of these symptoms may re-emerge in the older adult with latent AD (Naidu, James, Mukatoeva-Ladinska, & Briel, 2006).

When these symptoms re-emerge, it can be especially difficult to determine if they are reflective of recent developments or indicative of a pervasive personality pattern present since early childhood (James et al., 2006). For this reason, it is necessary for mental health professionals working with older adults to be aware of the range of autism spectrum disorder symptoms, and how they may present in older adults who have adapted to their disorder in idiosyncratic ways.

Regardless of their clinical and diagnostic knowledge and skills, mental health professionals who suspect a diagnosis of AD in an older adult are faced with a significantly challenging task. Older adults with AD can be socially anxious and poor historians who are often brought into treatment against their will (James et al., 2006). To systematically address these diagnostic difficulties James et al. (2006) recommended completing a comprehensive evaluation of the older adult with suspected AD. He recommended that this assessment comprise of a thorough developmental history, diagnostic questionnaires, and administration of cognitive instruments.

Incomplete school and health records, loss of parents and cognitive decline can prove to be significant obstacles to obtaining a detailed developmental history of many older adult clients, and is further exacerbated in the case of an older adult with AD. To overcome these obstacles, it is important that the therapist consult with family and friends of the client to fill in the developmental gaps left by the client. Overall, it is important that therapists be creative and ensure that they corroborate the history across multiple sources as they acquire the client's developmental history (James et al., 2006).

After obtaining a detailed developmental history, it is important for the therapist to integrate objective data into their diagnostic assessment. However, this aspect of the diagnosis process can be equally challenging, given that most AD assessments are currently designed for detecting AD in childhood. Fortunately, there are some AD assessments which have been specifically adopted for use in adults and have proven validity (e.g., Autism-Spectrum Quotient, Friendship Questionnaire, and Empathy Quotient) (James et al., 2006). To date, no assessments have been developed for the diagnosis of AD specifically among older adults; however, the three instruments listed above have demonstrated validity in detecting AD in older adults, and can be used in the interim.

Cognitive testing is the final means James et al. recommended for accurately diagnosing AD in older adults (2006). This aspect of the diagnostic process is important in two regards: first to preclude the confounding variable of intellectual disability and secondly to test for trends in intellectual functioning common in AD individuals. Older adults with AD should not present with intellectual disability and should also provide similar cognitive profiles to their younger counterparts—namely, higher scores in verbal comprehension as compared to performance IQ abilities, and overall average or above average intellectual abilities (James et al., 2006). This thorough examination of an older adult individual has the dual purpose of both ensuring the client is properly diagnosed, as well as facilitating the client and client's family's acceptance of the disorder.

Conventional wisdom would say that convincing a sixty-five year-old person that he or she has been suffering with a pervasive developmental disability since birth would be a difficult task. Considering the innate logicity of AD individuals, the efficacy of conducting a thorough, scientific, objective evaluation of the client becomes increasingly apparent. In instances of

resistance to the diagnosis of AD, providing thorough and comprehensive evidence of an AD diagnosis can ease the client and their family toward acceptance of the diagnosis. However, many older adults with AD and in particular, their families, have responded to this diagnosis with relief (James et al., 2006), as they regard the diagnosis as a justification of a lifetime of interpersonal struggles. Regardless of the initial response of the older adult and their family, an accurate diagnosis and eventual acceptance of the AD diagnosis is only the first step in alleviating the client's symptoms.

### **Common Problems and Treatment Considerations**

While many older adults with AD can live productive lives that include maintaining employment, living independently, and perhaps even marrying and starting a family; many more will struggle throughout their lives with unresolved developmental problems since childhood (James et al., 2006). While the children, adolescents and young adults who have been diagnosed more recently with AD will likely struggle with these same issues, they will have the benefit of an appropriate diagnosis and community support to aid them in these transitions. However, older adults yet to be diagnosed with AD have lived a life of "passing for normal," and require extensive consideration as they are the segment of this population who likely are in the most need of quality mental health interventions.

In considering the treatment concerns for individuals diagnosed with AD in older adulthood, it may be helpful to first present an example of such a case. As a case study, Naidu et al., (2006) described their work with an older adult who initially presented to treatment with depression. After multiple sessions, it became evident that the treatment was ineffective for this irritable and socially withdrawn man. The team re-evaluated their case formulation of this client, and in doing so decided to gather more extensive information on his developmental history from

the family. From this investigation, they discovered that this client's withdrawn behaviors were much more than a symptom of depression. The family reported the client had always been a "loner" as a child, was socially anxious throughout his life, had many obsessional traits, and had restricted interests in music and collecting ties that he never wore. After this information filled in the developmental gaps left by the client, the staff decided to conduct a more thorough assessment involving diagnostic questionnaires and cognitive testing. The results of this assessment provided the staff with the insight that the client's social withdrawal was not a symptom of depression, but rather a coping skill used to manage his social anxiety associated with undiagnosed AD.

The insight and thoroughness of the case formulation demonstrated by these researchers allowed for the recognition of this unique presentation, and as a result this client was able to receive treatment guided by his diagnoses of AD. Without the care taken by these researchers, this man's secluded nature and rigid personality would likely have been misunderstood as treatment resistance. Using this example as a foundation, one can begin to see how the challenges of AD will uniquely affect individuals as they progress into older adulthood. Specifically, many older adults with AD will likely struggle financially, present with few social supports, have difficulty managing grief and loss and other late-life transitions.

As discussed previously, many individuals with AD will struggle transitioning into college and into the workforce post-academia (Volkmar, 2011). While there are reports of willingness by employers to hire AD adults (Nesbit, 2000), these flexible and accommodating employers were likely scarce during the era when contemporary older adults with AD were seeking employment. With limited employment options, it is likely that many older adults with AD relied heavily on their parents and immediate family members for financial and housing

support. As they and their family age, these supports will dwindle while the individual with AD's own physical health declines, thereby requiring expensive medical interventions.

Although these older adults will qualify for some Social Security benefits, unfortunately they will likely have limited savings as a result of long-term unemployment and a Social Service system ill-equipped to recognize and provide for their needs throughout their adulthood (Lawrence et al., 2010).

Those older adults with AD who are able to find a unique employment niche will not likely struggle with financial difficulties, but instead with the transition into retirement. One case study by Hodges, Luken, and Hubbard (2004) illustrated the immense anxiety that surrounds retirement for an older adult with AD. As discussed earlier, individuals with AD are typically inflexible and restricted in their interests and behavior. Consequently, to an individual with AD, the prospect of retiring from a career represents the upheaval of a lifestyle that has given them structure, and purpose in their life. This change can be a challenge to any individual, but considering the unique characteristics of AD, retirement for this population is an especially daunting transition.

For many older adults, an ideal transition into retirement entails an improvement in their level of functioning and general satisfaction as they devote more time to hobbies and time spent with loved ones. For an older adult with AD, however, this transition will likely be more challenging. By the nature of their disorder, older adults with AD have struggled with a lifetime of social ineptitude, and as a result likely have limited social supports outside of their immediate family. This can be a significant problem for retired individuals with AD, as they may withdraw further into their restricted and potentially isolating hobbies. In addition to these limited options for social interactions, older adults with AD likely struggle with the transition into retirement due

to their obsessional and ritualistic characteristics. It is the opinion of this writer that many older adults with AD will experience significant anxiety as the routine and rituals they have practiced all their adult lives is interrupted.

Perhaps one of the most important factors in the successful transition into retirement is the protective factor of social support. Outside of their immediate family, many older adults with AD will be lacking in this area. Social support can be an important factor in managing transitions, as same-age peers provide both relational, emotional support as well as practical, logistical support. Many older adults rely heavily on their friends for support, as they struggle with similar late-life challenges and thereby assist each other with transportation needs, and share medical information and resources. Although, many older adults with AD may partner and form their own nuclear family (James et al., 2006), these relationships may also be strained and tenuous as the AD individual's Theory of Mind (ToM) deficits limit their ability to relate to and empathize with their family members (Jacobsen 2003).

With few social supports, older adults with AD are particularly prone to develop complicated grief responses. With each successive loss these individuals face, the older adult with AD relies more heavily on their remaining loved ones for support and nurturance. For older adults with AD, limited social support becomes increasingly strained as they age and their family members and friends die, or become incapable of caring for them. As a result, many older adults struggle with complicated grief responses, as their increasing dependence on others coincides with their declining support network. Additionally, these individuals' obsessional tendencies further exacerbate their grief responses, as each loss impinges on their routine and structured way of navigating the world.

As the AD older adult's support network becomes exhausted, like many older adults, they likely will need to transition into assisted living. This transition can be especially taxing for older adults with AD as it challenges their ToM deficits, social anxiety, and obsessional thinking. Struggling to empathize with others, older adults with AD may fail to follow the social norms expected of them as their previously successful coping skill of isolation may be challenged by nursing home staff. As a result, it is this author's opinion that many older adults with AD will experience heightened anxiety responses while transitioning into assisted living, resulting in increased likelihood of acting out and consequently further social isolation. Simultaneously, AD individuals with obsessional traits may struggle in adjusting to a foreign environment in which rules, restrictions and expectations are placed on them. Fortunately, these individuals have likely demonstrated a lifetime of adaptation and CBT can be one effective intervention for facilitating this adjustment.

### **Cognitive Behavioral Therapy**

Cognitive Behavioral Therapy is a widely used and empirically validated treatment for a plethora of mental health concerns, with varying populations, in an array of diverse settings. The application of Cognitive Behavioral Therapy to older adults with Asperger's Disorder may be especially effective, but given the limited supportive research, first we must consider its application to the distinct subgroups of this unique population.

#### **Older Adults**

Combining cognitive and behavioral aspects of treatment, Cognitive Behavioral Therapy (CBT) is well suited for working with older adults. As older adults age, schemas that were developed during earlier stages of their lives will likely not align with the changes and stressors discussed previously. In these instances, CBT can be an effective psychotherapeutic intervention

focused on restructuring the older adult's outdated beliefs while simultaneously challenging them to disprove these beliefs through behavioral activation. Additionally, CBT provides a therapeutic frame in which it is prudent to focus on multiple areas of the client's functioning, as well as involving caregivers and family members in treatment planning and implementation. Another consideration is that the inherent structured nature of CBT reduces the ambiguity of psychotherapy and the potential stigma associated with more psychodynamic therapies. This is an especially important factor to consider as the older adult population is particularly prone to having negative biases about psychotherapy (Karel & Hinrichsen, 2000). Overall, CBT provides a solution-focused yet flexible treatment approach readily adaptable to the range of treatment concerns that older adults commonly have. One such presenting problem is the distress associated with adapting to the physiological changes inherent in the aging process.

It is unsurprising that older adults experience anxiety about the deterioration of their health. However, many older adults have difficulty managing this anxiety, further compromising their physical as well as mental health. While CBT has been found to be effective in treating diagnosable cases of somatization syndromes (Kroenke & Swindle, 2000), it can also be helpful in alleviating common subclinical health related anxiety among older adults (Bourgault-Fagnou & Hadjistavropoulos, 2013). By challenging negative and unrealistic beliefs concerning the individual's health, the cognitive behavioral therapist can reduce the distress resulting from the physiological changes of aging. Additionally, the behavioral aspects of CBT encourage the client to disrupt the disability cycle, which is often seen in older adults with significant health related anxiety.

This cycle is further interrupted in instances where the older adult is experiencing debilitating pain as a result of chronic illness. As a common complaint of many older adults,

chronic pain has begun to be appreciated as a condition that can benefit from mental health treatment, in combination with prescribed analgesics (Anderson, Johansson, Nordlander & Asmundson, 2012). CBT interventions that are focused on psychoeducation regarding the mind-body connection and applying pain coping skills to pain management can be empowering for older adults facing chronic illness and subsequent disability. Additionally, these interventions can challenge the older adult's unproductive belief that they are powerless in the face of the physical limitations their body places on them as they age. Closely related to the work with health anxiety, these interventions can derail the distress-disability cycle, and return the older adult client to normal, healthy functioning.

In addition to its application to health related anxiety, CBT can be similarly applied to more severe and debilitating anxiety disorders seen in older adults. Specifically, CBT is widely accepted as an effective treatment for obsessive-compulsive disorder for clients of varying ages including older adults (Olatunji et al., 2012), as well as demonstrated efficacy in treating older adults with clinically significant hoarding behaviors (Ayers et al., 2012). Additionally, in a randomized clinical trial, Stanley et al., (2013) demonstrated the effectiveness of CBT in treating generalized anxiety disorder (GAD) among an older adult population. This CBT intervention adeptly combined cognitive skills (e.g., relaxation techniques, problem-solving skills and cognitive therapy) with behavioral interventions (e.g., exposure and behavioral sleep management), to successfully reduce worry severity as well as co-morbid depressive symptoms. Although these studies show promise for CBT with anxiety disorders with older adults, one must consider the complex presentation of anxiety with many older adults.

As Knight and Satre (2006) brought to light: "Conducting psychotherapy with emotionally distressed older adults very often means working with older adults who are

chronically ill, physically disabled, or both and who are struggling to adjust to these problems” (p. 195). Compared with most other age groups, psychotherapy with older adults must provide flexible and comprehensive treatment to address the uniquely complex presentation of these clients. CBT can be adapted to varying contexts (e.g., inpatient, outpatient, hospital, care facility, etc.), and has been demonstrated to be effective in treating mental disorders within the context of comorbid chronic illness.

One common condition that often presents with comorbid mental health symptoms is dementia. While it can be difficult to differentiate between dementia and anxiety symptoms, studies have shown that of the 20 percent of older adults who will be affected by dementia (Santrock, 2009), 35 percent will present with comorbid anxiety and related deficits in quality of life (Seignourel et al., 2008). This population does not respond optimally to medical and systemic interventions alone, and rather requires mental health interventions to address the comorbid anxiety symptoms. Paukert et al., (2010) developed a CBT intervention for the treatment of anxiety in persons with dementia, and demonstrated its effectiveness with this difficult population. The success of CBT with this population is unsurprising given the success in treating these symptoms in the general older adult population. However, this study provides support to the idea that individuals with dementia are capable of learning new skills and benefiting from structured, less ambiguous forms of psychotherapy.

Although CBT has been found to be effective in treating older adults with dementia, unique considerations are important in working with this population. In their 2009 study, Robinson et al. found that family involvement in treatment was important in the success of applying CBT in the treatment of anxiety with persons with dementia. While the structured nature of CBT helps persons with dementia be more organized and oriented in treatment,

caregivers can provide essential support to facilitate the application and practice of skills outside of the therapy room. Additionally, caregivers and family members benefited from involvement in treatment with reportedly improved communication and family cohesion (Robinson et al., 2009).

The gains seen in applying CBT to older adults is not limited to the treatment of anxiety disorders alone; it has been found to be effective in treating depression as well. Although depression is not as common in older adulthood as is stereotypically believed, subclinical depressive symptoms are relatively common in this population (Karel & Hinrichsen, 2000). The symptoms that meet the criteria for clinical depression among members of this group are often exacerbated by chronic illness and grieving (Knight & Satre, 2006), and require comprehensive treatment that can effectively address the range of contributing factors. CBT's plethora of interventions (e.g., teaching coping skills, challenging unproductive beliefs, behavioral activation, etc.) can be adapted and applied to the array of presenting problems seen in older adults with depression (Knight & Satre, 2006). This adaptability makes CBT an especially appropriate intervention for depressed older adults presenting with chronic illness and related disability.

Wong & Laidlaw (2012) demonstrated the efficacy of CBT with an older adult diagnosed with major depressive disorder and multiple sclerosis. In this instance, the coping skills and relaxation techniques typical for CBT were readily applied to symptoms of chronic illness (i.e. insomnia, chronic pain, etc.), as well as depression. These results are promising for CBT with older adults, and emphasize the importance of tailoring the varying CBT interventions to the needs of each idiosyncratic client.

Similarly with the anxiety disorder research discussed previously, CBT with depression works best when caregivers and family are involved in the older adult's treatment (Martire et al., 2010). Caregiver involvement in CBT for depression can be very beneficial, as they can assist the older adult in applying the CBT skills at home. This practice is especially important when one considers the foundational role that homework plays in developing CBT based coping skills. This involvement in treatment benefits not only the older adults, but also the caregiver themselves. As an older adult's symptoms of depression improve and caregivers are provided with psychoeducation on how to assist with this process, caregivers can develop a less burdensome view of the older adult. These findings are promising when considering the protective role social support plays in the mental health of older adults.

Fassberg et al. (2012) demonstrated that older adult suicide attempters experienced a lack of social support, unlike their non-suicidal peers. These results are particularly important to consider within the context of the high suicide rates observed in almost all older adult populations across the world (Fassberg et al., 2012). A comprehensive treatment plan must include caregiver and familial involvement, and CBT offers a treatment frame in which outside involvement in the therapy is appropriate and in fact welcomed. Not only will family involvement in treatment help facilitate the practice of homework assignments, but their involvement can also improve the client's sense of being supported by their caregivers and family. However, it is important to consider the unique needs of the older adult, being sure not to compromise the therapeutic relationship by involving caregivers beyond the comfort level of the client.

Regardless of the older adult's level of social support, at some point in their lives, most older adults will experience the death of a loved one (Holland, Futterman, Thompson, Moran, &

Gallagher-Thompson, 2013). While most will recover from these losses over time, around five percent of these individuals will develop complicated grief and depressive symptomatology for an extended period after these losses (Newson et al., 2011). These complicated grief responses may be related to the non-acceptance of the death, and rumination on illogical and highly negative thoughts regarding the deceased and the future of the survivor (Holland et al., 2013). The cognitive aspects of CBT can be especially effective in challenging these negative ruminations, while the behavioral aspects can focus on improving the client's social functioning. In this way, CBT can effectively help the bereaved reconnect with their remaining loved ones and continue with their lives. One aspect of this "normal life" may include the resolution of one of the most common complaints of older adults—insomnia.

As has been outlined throughout this section, the ability of CBT to be tailored to the specific presenting problems of older adults is a great asset for working with this population. Insomnia is an especially common complaint among older adults, affecting 12-25 percent of this population (Knight & Satre, 2006). Although, people tend to require less sleep as they age, there is a portion of the older adult population who struggles with clinically significant insomnia (Belanger, LeBlanc, & Morin, 2012). Unfortunately, many of those who fall into this category misinterpret their struggles as a natural consequence of aging, and either accept their plight or pursue highly addictive sleep aids. Although there are conflicting theories on why insomnia is so prevalent among this population, there is little disagreement that CBT is one of the most effective and lasting interventions for insomnia among older adults (Rybarczyk, Lund, Garroway, & Mack, 2013). CBT first helps the client develop an understanding of how their behaviors impact their sleep patterns by providing psychoeducation regarding proper sleep hygiene. Cognitive techniques can then help by focusing on challenging anxiety provoking

beliefs regarding their sleep patterns, while behavioral interventions focus on practicing proper sleep hygiene and returning the client to a normal sleep schedule (Rybarczyk et al., 2013). This highly structured approach can be calming and reassuring for many older adult clients who are anxious regarding their sleep problems, and are seeking a simple and straightforward alternative to medication.

Given the plethora of stressors faced by older adults discussed to this point, it is unsurprising that many of these individuals struggle to cope with these challenges. While generally, there is a trend of decreasing substance use as individuals age, there is a portion of older adults who will resort to substance abuse as a coping mechanism (Cooper, 2012). This pattern is unsurprising when one considers the significant risk factors predisposing older adults to alcohol and drug abuse. Older adults often have access to potent and highly addictive prescription medications for managing chronic pain and other symptoms of chronic illness. Additionally, more than any other age group, older adults are disposed to functional disability due to chronic illness and health deterioration. This disability restricts many older adults to their homes by limiting transportation options, further isolating them and putting them at higher risk for abusing substances (Cooper, 2012). CBT can be an especially effective intervention for treating substance abuse among older adults. Cooper (2012) proposed a specific CBT intervention called HeLP (Healthy Living Plan). This plan effectively combines cognitive and behavioral interventions that focus on challenging drug-related thoughts, building social supports, increasing positive feelings and developing a relapse prevention plan (Cooper, 2012). This and similar CBT programs can be very effective in addressing this debilitating problem of substance abuse among the older adult population.

Perhaps one of the most important factors to consider in developing comprehensive mental health treatment for older adults is access to care. As mentioned in earlier sections of this paper, older adults face many obstacles to accessing mental health treatment. Even when the obstacles of stigma and misdiagnosis are overcome, many older adults struggle to attend sessions due to financial limitations and mobility restrictions. With this in mind, it is important to consider the multiple avenues through which to provide older adults with accessible, high quality and affordable mental health care. One such intervention that has recently been explored is internet delivered cognitive behavioral therapy. Zou et al. (2012) designed a brief internet-delivered CBT intervention to specifically treat anxiety among older adults (2012). This intervention followed the basic principles of CBT including, (a) providing structured sessions that focused on psychoeducation regarding thoughts and their relationship to feelings and subsequent behaviors, (b) assigning homework, and (c) providing weekly telephone support from a therapist (Zou et al., 2012). The results of this trial were very promising, such as reduced anxiety and depressive symptoms, as well as reduced disability on the part of the clients. A later study by Dear et al. (2013) provided a similar treatment protocol that focused specifically on treating depression among older adults. The results of this study were equally promising, even when the psychologist maintained contact with the older adult via email alone. Additionally, these results demonstrated a lasting effect at the three month follow-up. Given the research supporting the importance of a strong therapeutic relationship in psychotherapy (Horvath, Del Re, Fluckiger, & Symonds, 2011), it is likely and indeed hopeful that internet delivered interventions will never replace traditional face-to-face psychotherapy. However, internet delivered CBT provides a reasonable alternative for older adults who are faced with mobility

restrictions, financial limitations and a stigmatized view of traditional mental health interventions.

### **Asperger's Disorder**

Although no studies have demonstrated that any particular therapy is an evidenced based treatment for AD, the structured, logic focused, systematic, and comprehensive nature of Cognitive Behavioral Therapy (CBT) uniquely complements the innate logicity and rigidity of AD individuals. While many other psychotherapies have been applied to working with AD clients, CBT appears to be one of the most effective and appropriate orientations from which to work with AD (Donoghue, Stallard, & Kucia, 2011).

Although there is evidence that Behavioral psychotherapies can be very effective in treating clients with ASDs (Eikeseth, 2009), these interventions are typically intended for younger and lower functioning individuals on the autism spectrum. In particular, as individuals with AD become increasingly independent as they age, behavioral interventions can become increasingly difficult to implement and hence less effective.

Psychodynamic therapies typically emphasize self-reflection in an ambiguous therapeutic relationship, which is an approach that can be anxiety provoking for clients with ToM deficits, who often respond to ambiguity with heightened anxiety. While there are studies that report the efficacy of psychodynamic therapy with AD clients (Rhode, 2011; Goodman & Athey-Lloyd, 2011), overall, psychodynamic theories have not been widely applied with ASDs (Goodman & Athey-Lloyd, 2011).

CBT provides a theoretical perspective that can combine positive aspects of both behavioral and psychodynamic orientations. From the outset of treatment, CBT establishes

specific and measurable goals that provide a concrete focus for AD individuals, all the while developing a strong therapeutic relationship through collaborative empiricism. In this way, CBT can promote the development of a healing relationship by providing a much needed structure and frame within which it may grow.

**Children and Adolescents.** The most pressing issue when working with children with AD is helping them recognize and learn to regulate and productively express their emotions. CBT's foundational focus on connecting thoughts, emotions and behaviors can provide rich affective education for these children (Anderson & Morris, 2006). This potentially daunting task is accomplished through CBT by applying both cognitive and behavioral interventions. Cognitive aspects of CBT focus on helping AD clients recognize how their thoughts impact their emotional state and subsequent behaviors, while the behavioral aspects are enacted through behavioral plans developed with and carried out by the parent of the child.

As with most children, AD children can become easily confused and frustrated if psychoeducation regarding emotions is presented in a complex or abstract manner (Donoghue, Stallard, & Kucia, 2011). As a result, CBT's specific interventions and homework assignments can be especially helpful in promoting affective recognition in children with AD. Specifically, using picture exercises that compare faces to emotions and other similar structured intervention have been found to be effective (Leather & Leardi, 2012). This use of non-verbal interventions is a common CBT technique for children, and is especially effective in working with AD children, who often struggle to express themselves verbally (Donoghue, Stallard, & Kucia, 2011).

The next step after AD children become capable of recognizing their own emotions and those of others is regulating their emotions. As with most young children, children with AD benefit greatly from behavioral CBT interventions that are focused primarily on working with the parents. These interventions can include developing a behavioral plan for parents to reinforce at home (Leather & Leardi, 2012). This plan can include cognitive aspects of the therapy (e.g., guided imageries to help the child calm down), but primarily focus on reducing the child's maladaptive behaviors and promoting more socially and developmentally acceptable behaviors.

Although many of the nonverbal interventions discussed above can be applied to adolescents with AD, Donoghue, Stallard, & Kucia (2011) emphasized the importance of considering the developmental stage of the AD client in determining specific CBT interventions. As AD children grow up, more abstract thought monitoring and challenging practices can be applied for treating a range of symptoms (Anderson & Morris, 2006). This foundational CBT technique focuses on challenging overly negative and unrealistic thoughts, and can be particularly helpful with AD clients who are especially prone to "all or nothing" thinking errors (Anderson & Morris, 2006). Once able to identify automatic thoughts, the innate logicity that AD clients commonly have can be a great asset in rationally challenging these thoughts and replacing them with more realistic ones. Given the deficits in executive functioning common among individuals with AD, Anderson and Morris (2006) especially recommended *in vivo* work to encourage the generalization of the skills learned in psychotherapy.

As children transition into the more socially nuanced age of adolescence, the impact of their social incompetence begins to carry larger implications for their long-term success. As a result, the application of emotion recognition and regulation skills learned during childhood

becomes a key focus in psychotherapy, as adolescents learn to read social cues and interact with peers in appropriate ways. Depending on the developmental level of the child or adolescent, these interventions can range from behavioral exercises such as reading comic strip conversations (Gray, 1998) and practicing conversing *in vivo*, to more cognitive thought monitoring exercises. Ultimately these interventions guide the child to gain a sense of efficacy in interacting with their peers, reducing their comorbid social anxiety (Donoghue, Stallard, & Kucia, 2011). As will be discussed later, this stage of skill building is crucial for helping these individuals forge the peer relationships that will afford them much needed support during the later stages of their lives.

One can see how, like many interventions with children, there are behavioral undertones for each of the interventions discussed above. The principle of exposure is an underlying premise in working with children with AD, as in all work with children who have clinically significant anxiety of any kind. Although many cognitive exercises are applied in working with AD children, given their characteristic social anxiety, exposure to intimate relationships seems to be a recurrent theme throughout all of these interventions. Considering this, it becomes evident that, although cognitive and behavioral interventions are applied while working with AD clients of all ages, a higher percentage of interventions are behavioral in nature for younger clients. These interventions become progressively more cognitive in nature, as the client ages and become increasingly independent.

**Adults.** While childhood AD has received an increasing amount of attention and research funding over the past few decades, the interest in AD seems to dwindle as the individual with

AD progresses through the life-span. As a result, there are relatively few studies investigating the efficacy of psychotherapy with adults with AD.

In treating adult AD, one must first consider the two cohorts of AD adults requiring treatment—the first being those undiagnosed in childhood (primarily born prior to the mid-seventies), and those who were diagnosed during childhood and received crucial early interventions (Gaus, 2010). The former population is largely represented in the older adult AD population and will be discussed later in this paper; the latter will be the focus of this section.

Gaus (2010) conceptualized the AD adult's presenting concerns in psychotherapy as falling into two categories: (a) symptoms that the AD individual will notice and (b) symptoms that the family will want to be addressed. The symptoms that the AD client will want addressed are likely to include social issues, dating and sexuality problems, and vocational and housing frustrations. In contrast, the family of adults with AD will report problems concerning disruptive behaviors and potential legal problems, lack of motivation, poor ADL skills, as well as obsessive-compulsive disorder and a range of other co-morbid anxiety and mood disorders (Gaus, 2010). Fortunately, CBT can draw from both its behavioral and cognitive approaches to offer a unique and comprehensive treatment plan to address each of these issues.

It is important to tailor the intake and assessment to the unique needs of an AD client to determine that each of the presenting issues is assessed for and included in the treatment plan. As an example, it is especially important that the therapist remain patient with the AD client, as they are prone to explain their symptoms in an idiosyncratic manner and may become upset and frustrated with the therapist's persistent questioning. For these reasons, as well as the typical AD client's disposition to become overwhelmed by the intimate nature of psychotherapy, it is important to phrase questions and responses in more concrete terms than would be expected

(Gaus, 2010). Lastly, it is important to obtain consent to speak with the family of the AD client, in order to develop as complete an understanding of the client's presenting problems as possible.

Once a comprehensive conceptualization of the case has been formed, it is important to clarify the specific rules of psychotherapy, as well as the treatment goals (Gaus, 2010). This emphasis can have the effect of both reducing the client's anxiety regarding the ambiguous nature of psychotherapy, as well as demonstrating a systematic approach to addressing problems in the future—namely, outlining the problem, and logically and collaboratively exploring possible solutions. Regardless of the specific goals that are set, CBT offers a logic-focused and hence complementary approach to problem solving for AD clients.

When considering the range of presenting problems outlined above, it becomes apparent that two of the most common general domains of skill development needed in this population are social skills and coping skills (Gaus, 2010). Social skills development is accomplished actively through education regarding social norms, *in vivo* practice, and homework assignments, as well as the more latent, collaborative exploration of the therapeutic relationship. The development of coping skills can take the form of cognitive restructuring that is focused on challenging their maladaptive schemas, and replacing them with more logical and productive ones, as well as practicing basic breathing and guided imagery techniques.

As in most psychotherapy, work with AD adults not only focuses on the primary symptoms of their disorder, but also on a range of co-morbid disorders (Gaus, 2010). In treating these disorders, CBT is an optimal intervention given its widely accepted efficacy in treating a range of anxiety and mood disorders (Butler, Chapman, Forman, & Beck, 2006). The treatment of these co-morbid disorders should be essentially the same as CBT applied to any other individual presenting to psychotherapy with these conditions. However, as discussed above, AD

clients may require more emphasis on skill building, as well as additional attention to their rigid characterological tendencies (Gaus, 2010). Expanding on this last point, it is important to consider their typically rigid and mechanistic way of thinking, and the corresponding implications for the course of treatment. These clients, like many clients with obsessional tendencies, will require extra attention and patience in challenging their self-perceived logical manner of experiencing the world, and transforming this to a more productive and socially acceptable way of viewing themselves and others. For this reason, the development of a strong therapeutic bond is of the utmost importance in working with clients with AD.

### **Therapeutic Relationship**

While the structure of CBT sessions can be a very effective modality through which to organize psychotherapy with AD individuals, its emphasis on a collaborative therapeutic relationship may be the most important factor for its success. There is great evidence that, across orientations, the therapeutic relationship is one of the most important contributing factors to successful psychotherapy (Horvath, Del Re, Fluckiger, & Symonds, 2011). However, for AD clients the uniquely intimate nature of psychotherapy can be quite anxiety provoking, potentially limiting the development of a healing therapeutic relationship (Leather & Leardi, 2012). Distinct from many therapies, CBT provides a distinct structure to psychotherapy sessions, which affords AD clients the ability to forge a strong yet predictable therapeutic relationship with their psychotherapist (Anderson & Morris, 2006).

Many AD clients have social anxiety and as a result can be emotionally distant in psychotherapy, keeping the therapist at arm's length by responding to questions in a guarded manner, stating only concrete facts about themselves with little to no feeling (Leather & Leardi,

2012). It is especially important that the AD clients' anxiety provoking schemas of people as confusing and scary are not reinforced, and that instead their idiosyncratic behavior is met with patience and curiosity.

This leads us to another potential obstacle to the formation of a strong therapeutic bond—the therapist themselves. Many of the eccentric personality characteristics indicative of AD can frustrate even experienced professionals. Often AD individuals can present in therapy as arrogant and condescending, speaking in a monotone voice, using sophisticated vocabulary and becoming easily annoyed when forced to empathize and relate to the therapist. Considering this, it is especially important for psychotherapists who work with AD individuals to be patient, remembering that these contentious traits are a reflection of the client's disorder and not a dismissal of the therapeutic relationship (Leather & Leardi, 2012).

### **Cognitive Behavioral Therapy for Older Adults with Asperger's Disorder**

Although the published literature investigating the treatment of AD in older adulthood is scarce, the literature on cognitive-behavioral therapy for this population is almost non-existent. However, considering the demonstrated effectiveness of CBT in treating each distinct population—Asperger's Disorder and older adults—it logically follows that CBT would be equally effective in treating the unique treatment concerns of older adults presenting with AD. This section will make just such an argument, while considering the theoretically relevant literature in both areas, as well as the limited research on CBT with older adults with AD.

Considering, Naidu, James, Mukatoeva-Ladinska, & Briel's (2006) observation that an AD client's rigid and compulsive personality is the primary obstacle in psychotherapy, one would think CBT's aptly structured nature would channel this aversion into a strength. Further

supporting this point, Naidu et al. (2006) advocated for the use of behavioral and psychosocial interventions in the effective treatment of older adults with AD. The results of this study, in conjunction with the research on psychotherapy interventions with younger individuals with AD, lead one to believe that CBT is likely to be one of the most appropriate orientations from which to base psychotherapy for older adults with AD.

Older adults with AD are especially prone to developing unproductive schemas of themselves and others. In response to a lifetime of recurrent interpersonal failures, older adults with AD have developed the belief that they are incapable of relating to others effectively. CBT offers a treatment approach through which to systematically challenge this and other unproductive beliefs, thereby helping the individual with AD develop more healthy ways of perceiving and relating to themselves and others.

As discussed earlier, CBT's structured and logical approach is highly complementary to the innate logicity among AD individuals. This structure serves the dual purpose of easing the socially anxious AD client into therapy, as well as reducing the stigma associated with psychotherapy for many older adults. Additionally, the frame of CBT affords the opportunity to involve family members, caretakers, and other care facility staff in the treatment. This multidisciplinary approach affords the opportunity to coordinate the care of the older adult, ensuring the application of skills outside of the therapy room.

Similar to psychotherapy with younger AD clients, CBT's array of cognitive and behavioral interventions allow for the customization of the therapy to the unique developmental needs of the individual across multiple contexts. Behavioral interventions geared toward improving the individual's behavior outside of the therapy room can facilitate the older adult's transition into a care facility or another structured environment. Simultaneously, cognitive

interventions can range from restructuring exercises focused on altering the older adult's unhealthy beliefs, to relaxation exercises focused on managing their social anxiety.

As older adults with AD experience increasing changes in their environment, CBT can effectively help them develop social and problem solving skills to alter their circumstances, or develop coping skills to better manage unavoidable circumstances. In this way, CBT can be adapted to suit the needs of both the older adult with AD, as well as those of the care facility staff and/or family members.

Perhaps the most important indicator for the successful implementation of CBT in working with older adults with AD is the wealth of literature supporting the use of CBT for older adults with anxiety disorders (Olatunji et al., 2012; Stanley et al., 2013). The social isolation characteristic of AD may be a response to extreme social anxiety resulting from repeatedly failed interpersonal interactions. By teaching relaxation techniques and challenging negative cognitions within the context of desensitizing exposure therapy, CBT can help older adults with AD successfully learn to manage and overcome their debilitating social anxiety. These interventions can similarly be applied to the commonly reported health anxiety experienced by many older adults. This application may be especially important in working with older adults with AD, given the typical obsessive tendencies among AD individuals in general.

Considering CBT's efficacy in managing anxiety, it is important to consider one of the most anxiety provoking transitions of older adulthood—retirement. As discussed earlier, this transition can be especially challenging for individuals with AD, as their obsessional characteristics are activated when faced with drastic changes to their routine. CBT can assist with this transition on multiple levels. The flexible nature of CBT allows the therapist to focus on as rudimentary an intervention as leisure education, to more complex collaborative

exploration of the function work played for the client and how to incorporate these interests into new routines outside of work (Hodge & Wilhite, 1997).

In addition to anxiety, CBT is uniquely suited to treat depression among older adults with AD. As reported earlier, many individuals with AD develop mood disorders at some point in their lives. Considering the successful demonstration of CBT in treating late-life depression in older adults, it is likely that older adults with AD would respond similarly to CBT interventions. Similar to its application to anxiety, CBT can focus first on educating the older adult with AD on the connection between their thoughts, emotions and behaviors. This approach can be refreshing to an older adult with AD, who has likely felt ineffectual in their efforts to exact change in the world. By involving family members and/or care facility staff in treatment, behavioral activation interventions characteristic of CBT can focus on improving the social functioning of the older adult with AD. These interventions have the effect of not only improving the mood of the client, but also increasing their social skills as well as diminishing any social anxiety they may have.

Directly related to the issue of depression, suicide is a particularly alarming and important issue to consider in applying CBT to older adults with AD. Given the high rate of suicide in the older adult community, in combination with the relative social isolation of AD individuals, suicide could be a significant risk factor for older adults with AD. By diminishing anxiety, promoting social competence, and challenging negative ruminative thoughts, CBT can effectively manage this issue within the context of a supportive, yet structured and predictable therapeutic relationship.

While CBT can be an effective treatment approach for working with older adults with AD, there is great evidence for the conjunctive use of psychotropic medications. Woodbury-Smith & Volkmar (2009) recommended the use of psychopharmacological interventions in

treating older adults with AD. Specifically they advised the use of psychostimulants in treating ADHD symptoms, and SSRIs for rigidity, irritability/aggression, depression and anxiety. They additionally recommended the use of some SNRIs and Citalopram for depression, and Buspirone and B-Blockers for anxiety. These recommendations should be greatly weighted in working with older adults with AD, as their unique and complex presentation warrants an equally comprehensive, biopsychosocial treatment approach.

### **Summary**

Asperger's Disorder is a developmental disorder affecting all stages of the life cycle in unique ways. Although awareness of Asperger's Disorder is on the rise in the Western mental health field, there remains a significant portion of the older adult community who struggle with undiagnosed Asperger's Disorder. The treatment concerns for this unique segment of the population are varied and complex, as life-long symptoms of Asperger's Disorder are compounded by the effects of late-life challenges and transitions. These treatment concerns require equally comprehensive mental health interventions for older adults with Asperger's Disorder.

Presently, the empirical literature regarding this unique population is scarce. Hence, more research in this area is needed—beyond case studies and theoretical considerations—in order to gain a better understanding of these concerns and relevant interventions. Although the literature on psychotherapy with older adults diagnosed with Asperger's Disorder is limited, this paper makes the argument that the structured, adaptable, and collaborative nature of Cognitive Behavioral Therapy is a treatment approach aptly suited for the treatment of this underserved population.

## References

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (4<sup>th</sup> edn.)* – TR. Washington, DC: American Psychiatric Association Press.
- Anderson, G., Johansson, C., Nordlander, A., & Asmundson, G. J. G. (2012). Chronic pain in older adults: a controlled pilot trial of a brief cognitive-behavioural group treatment. *Behavioural and cognitive psychotherapy, 40*(2), 239–244.
- Armstrong, K., & Kimonis, E. (2012). Parent-child interaction therapy for the treatment of Asperger's Disorder in early childhood: a case study. *Clinical Case Studies, 12*(1), 60–72.
- Attwood, T. (2007). *The Complete Guide to Asperger's Syndrome*. Philadelphia, PA: Jessica Kingsley Publishers.
- Ayers, C. R., Bratiotis, C., Saxena, S., & Wetherell, J. L. (2012). Therapist and patient perspectives on cognitive-behavioral therapy for older adults with hoarding disorder: a collective case study. *Aging & mental health, 16*(7), 915–21.
- Baron-Cohen, S., Leslie, A. M., & Frith, U. (1985). Does the autistic child have a “theory of mind?” *Cognition, 21*(1), 37–46.
- Belanger, L., LeBlanc, M., & Morin, C. (2012). Cognitive Behavioral Therapy for Insomnia in Older Adults. *Cognitive and Behavioral Practice, 19*(1), 101–114.
- Blankenship, K., & Minshawi, N. F. (2010). Behavioral therapy with an individual with Asperger's disorder. *Psychiatry, 7*(8), 38-41.
- Bourgault-Fagnou, M., & Hadjistavropoulos, H. (2013). A randomized trial of two forms of cognitive behavior therapy for an older adult population with subclinical health anxiety. *Cognitive Behaviour Therapy, 42*(1), 31–44.

- Browning, A., & Caulfield, L. (2011). The prevalence and treatment of people with Asperger's Syndrome in the criminal justice system. *Criminology and Criminal Justice*, *11*(2), 165–180.
- Brugha, T. S., McManus, S., Bankart, J., Scott, F., Purdon, S., Smith, J., & Meltzer, H. (2011). Epidemiology of autism spectrum disorders in adults in the community in England. *Archives of General Psychiatry*, *68*(5), 459-466.
- Bull, R., Phillips, L. H., & Conway, C. A. (2008). The role of control functions in mentalizing: Dual-task studies of Theory of Mind and executive function. *Cognition*, *107*, 663–672.
- Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: a review of meta-analyses. *Clinical psychology review*, *26*(1), 17–31.
- Chowdhury, M., Benson, B. A., & Hillier, A. (2010). Changes in restricted repetitive behaviors with age: A study of high-functioning adults with autism spectrum disorders. *Research in Autism Spectrum Disorders*, *4*(2), 210-216.
- Cooper, L. (2012). Combined motivational interviewing and cognitive-behavioral therapy with older adult drug and alcohol abusers. *Health & Social Work*, *37*(3), 173–179.
- Dear, B. F., Zou, J., Titov, N., Lorain, C., Johnston, L., Spence, J., Anderson, T., Sachdev, P., Brodaty, H., & Knight, R. G. (2013). Internet-delivered cognitive behavioural therapy for depression: a feasibility open trial for open adults. *The Australian and New Zealand journal of psychiatry*, *47*(2), 169–176.
- Dolder, C., Nelson, M., & Stumpf, A. (2010). Pharmacological and Clinical Profile of Newer Antidepressants, Implications for the Treatment of Elderly Patients. *Drugs & Aging*, *27*(8), 625–640.

- Donoghue, K., Stallard, P., & Kucia, J. (2011). The clinical practice of Cognitive Behavioural Therapy for children and young people with a diagnosis of Asperger's Syndrome. *Clinical child psychology and psychiatry, 16*(1), 89–102.
- Eikeseth, S. (2009). Outcome of comprehensive psycho-educational interventions for young children with autism. *Research in developmental disabilities, 30*(1), 158–78.
- Enticott, P. G., Kennedy, H. A., Rinehart, N. J., Tonge, B. J., Bradshaw, J. L., Taffe, J. R., & Fitzgerald, P. B. (2012). Mirror neuron activity associated with social impairments but not age in autism spectrum disorder. *Biological Psychiatry, 71*(5), 427–433.
- Erber, J. T. (2010). *Aging and Older Adulthood*. United Kingdom: Wiley-Blackwell Publishing.
- Fassberg, M. M., van Orden, K.A., Duberstein, P., Erlangsen, A., Lapierre, S., Bodner, E., Canetto, S.S., De Leo, D., Szanto, K., & Waern, M. (2012). A systematic review of social factors and suicidal behavior in older adulthood. *International Journal of Environmental Research and Public Health, 9*(3), 722-745.
- Fialho, P., Koenig, A., dos Santos, M., Barbosa, M., & Caramelli, P. (2012). Positive effects of a cognitive-behavioral intervention program for family caregivers of demented elderly. *Arquivos De Neuro-Psiquiatria, 70*(10), 786–792.
- Gaus, V. (2010). Adult Asperger syndrome and the utility of cognitive-behavioral therapy. *Journal of Contemporary Psychotherapy, 41*(1) 47–56.
- Garner, J. (2003). Psychotherapies and older adults. *The Australian and New Zealand journal of psychiatry, 37*(5), 537–548.
- Gillberg, C., Hallerba, M., & Lugnega, T. (2011). Psychiatric comorbidity in young adults with a clinical diagnosis of Asperger syndrome. *Research in Developmental Disabilities, 32*(5), 1910–1017

- Goodman, G., & Athey-lloyd, L. (2011). Interaction structures between a child and two therapists in the psychodynamic treatment of a child with Asperger's disorder. *Journal of Child Psychotherapy*, 37(3), 311–326.
- Gray, C. (1998). Social stories and comic strip conversations with students with Asperger syndrome and high-functioning autism. In E. Schopler, G.B. Mesibov, & L.J. Kuncze (Eds.), *Asperger syndrome or high-functioning autism?* (pp. 167–198). New York: Plenum Press.
- Hodges, J. S., Luken, K., & Hubbard, A. (2004). Supporting the Transition of One Man with Autism from Work to Retirement. *Therapeutic Recreation Journal*, 38(3), 301-311. Retrieved from EBSCOhost.
- Hoge, G., & Wilhite, B. (1997). Integration and leisure education for older adults with developmental disabilities. *Activities, Adaptation & Aging*, 21(3), 79-90.
- Holland, J.M., Futterman, A., Thompson, L. W., Moran, C., & Gallagher-Thompson, D. Difficulties Accepting the Loss of a Spouse: A Precursor for Intensified Grieving Among Widowed Older Adults. *Death Studies*, 37(2), 126–144.
- Horvath, A. O., Del Re, A., Fluckiger, C., & Symonds, D. (2011). Alliance in individual psychotherapy. *Psychotherapy*, 48, 9 –16.
- James, I., Mukaetova-Ladinska, E., Reichelt, F., Briel, R., & Scully, A. (2006). Diagnosing Aspergers syndrome in the elderly: A series of case presentations. *International Journal of Geriatric Psychiatry*, 21(10), 951-960.
- Jacobsen, P. (2003). *Asperger Syndrome and psychotherapy: Understanding Asperger perspectives*. London: Jessica Kingsley Publishers.
- Karel, M., & Hinrichsen, G. (2000). Treatment of depression in late life: psychotherapeutic

- interventions. *Clinical Psychology Review*, 20(6), 707–729.
- Newson, R. S., Boelen, P. A., Hek, K., Hofman, A., & Tiemeier, H. (2011). The prevalence and characteristics of complicated grief in older adults. *Journal of affective disorders*, 132(1-2), 231–238.
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E., (2005). Lifetime prevalence and age-f-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 593–602.
- Knight, B. G., & Satre, D. D. (2006). Cognitive Behavioral Psychotherapy With Older Adults. *Clinical Psychology: Science and Practice*, 6(2), 188–203.
- Kroenke, K., & Swindle, R. (2000). Cognitive-behavioral therapy for somatization and symptom syndromes: a critical review of controlled clinical trials. *Psychother Psychosom*, 69(4), 205–215.
- Lawrence, D. H., Alleckson, D. A., & Bjorklund, P. (2010). Beyond the roadblocks: transitioning to adulthood with Asperger's disorder. *Archives of psychiatric nursing*, 24(4) 227–238.
- Leather, J., & Leardi, M. (2012). Mental Health and Asperger's Syndrome: What Clinicians Need to Know. *Journal of Human Behavior in the Social Environment*, 22(8), 1014–1020.
- Martire, L. M., Schulz, R., Reynolds, C. F., Karp, J. F., Gildengers, A. G., & Whyte, E. M. (2010). Treatment of late-life depression alleviates caregiver burden. *Journal of the American Geriatrics Society*, 58(1), 23–9.
- Naidu, A., James, I., Mukatoeva-Ladinska, E., & Briel, R. (2006). Diagnosis of Asperger Syndrome in a 66-year-old male presenting with depression. *International Psychogeriatrics*, 18(1), 171–188.

- Nesbitt, S. (2000). Why and why not? Factors influencing employment for individuals with Asperger Syndrome. *Autism* 4(4), 357–369.
- Newson, R., Boelen, P., Hek, K., Hofman, A., & Tiemeier, H. (2011). The prevalence and characteristics of complicated grief in older adults. *Journal of Affective Disorders*, 132(1-2), 231–238.
- Oberman, L. (2007). A disembodied mind: The role of dysfunctional simulation systems in the social and cognitive deficits of autism spectrum disorders. *Dissertation Abstracts International*, 68. Retrieved from Escholarship.org.
- Olatunji, B. O., Davis, M. L., Powers, M. B., & Smits, J. J. (2013). Cognitive-behavioral therapy for obsessive-compulsive disorder: a meta-analysis of treatment outcome and moderators. *Journal of psychiatric research*, 47(1), 33–41.
- Outlaw, F. H., Marquart, J. M., Roy, a., Luellen, J. K., Moran, M., Willis, a., & Doub, T. (2010). Treatment Outcomes for Older Adults Who Abuse Substances. *Journal of Applied Gerontology*, 31(1), 78–100.
- Rhode, M. (2011). Asperger's Syndrome: A Mixed Picture. *Psychoanalytic Inquiry*, 31(3), 288–302.
- Robinson, C. M., Paukert, A., Kraus-Schuman, C. A., Snow, A. L., Kunik, M. E., Wilson, N. L., Teri, L., & Stanley, M. A. (2011). The involvement of multiple caregivers in cognitive-behavioral therapy for anxiety in persons with dementia. *Aging & Mental Health*, 15(3), 291–298.
- Rybarczyk, B., Lund, H., Garroway, A., & Mack, L. (2013). Cognitive Behavioral Therapy for insomnia in older adults: background, evidence, and overview of treatment protocol. *Clinical Gerontologist*, 36(1), 70–93.

- Santrock, J. W. (2009). *Life-Span Development*. New York, NY: McGraw-Hill.
- Seignourel, P. J., Kunik, M. E., Snow, L., Wilson, N., & Stanley, M. Anxiety in dementia: A critical review. *Clinical Psychology Review*, 28(7), 1071–1082.
- Smith, C. P. (2007). Support services for students with Asperger's Syndrome in higher education. *College Student Journal*, 41(3), 515–531.
- Stanley, M. A., Wilson, N. L., Novy, D. M., Rhoades, H. M., Wagener, P. D., Greisinger, A. J., Kunik, M. E. (2013). Generalized Anxiety Disorder Among Older Adults in Primary Care. *Journal of the American Medical Association*, 301(14).
- Shtayermman, O. (2009). An exploratory study of the stigma associated with the diagnosis of Asperger's syndrome: The mental health impact on the adolescents and young adults diagnosed with a disability with a social nature. *Journal of Human Behavior in the Social Environment*, 19(3), 298–313.
- Stoddart, K. P., Burke, L., King, R. (2012). *Asperger Syndrome in Adulthood: A Comprehensive Guide for Clinicians*. New York, NY: W. W. Norton & Company Ltd.
- Thompson, L., Thompson, M., & Reid, A. (2010). Functional neuroanatomy and the rationale for using EEG biofeedback for clients with Asperger's Syndrome. *Applied Psychophysiology And Biofeedback*, 35(1), 39–61.
- Totsika, V., Felce, D., Kerr, M., & Hastings, R. P. (2010). Behavior problems, psychiatric symptoms, and quality of life for older adults with intellectual disability with and without autism. *Journal of Autism and Developmental Disorders*, 40(10), 1171–1178.
- Toth, K., & King, B. H. (2008). Asperger's syndrome: Diagnosis and treatment. *The American Journal Of Psychiatry*, 165(8), 958–963.
- U. S. Census Bureau. (November, 2011). *The Older Population: 2010: Allegany County, N.Y.*

Retrieved July 19, 2013, from <http://www.census.gov/prod/cen2010/briefs/c2010br-09.pdf>

Volkmar, F. R. (2011). Asperger's disorder: Implications for psychoanalysis. *Psychoanalytic Inquiry, 31*(3), 334–344.

Warren, Z., & Stone, W. L. (2011). Why is early intervention important in ASC?. In S. Bölte, J. Hallmayer (Eds.), *Autism spectrum conditions: FAQs on autism, Asperger syndrome, and atypical autism answered by international experts* (pp. 167-169). Cambridge, MA US: Hogrefe Publishing.

Wing, L., Gould, J., & Gillberg, C. (2011). Autism spectrum disorders in the DSM-V: Better or worse than the DSM-IV?. *Research in Developmental Disabilities, 32*(2), 768-773.

Wong, D., & Laidlaw, K. (2012). Case Presentation of Cognitive Behavioral Therapy With an Older Adult With Major Depressive Disorder Comorbid With Multiple Sclerosis. *Clinical Gerontologist, 35*(3), 270–285.

Woodbury-Smith, M. R., & Volkmar, F. R. (2009). Asperger syndrome. *European Child & Adolescent Psychiatry, 18*(1), 2-11

Zou, J. B., Dear, B. F., Titov, N., Lorain, C. N., Johnston, L., Spence, J., Knight, R. G., Anderson, T., & Sachdev, P. (2012). Brief internet-delivered cognitive behavioral therapy for anxiety in older adults: a feasibility trial. *Journal of anxiety disorders, 26*(6), 650–655.