Keyword 2: anxiety
Keyword 3: working memory
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2 Perimenopause, Menopause and ADHD

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Objective: We previously reported the impact of hormonal changes during menopause on ADHD and associated symptoms. Here we provide findings from an expanded sample limited to those 46 and older.
Participants and Methods: Information was obtained from a reader survey sponsored by ADDitude Magazine. Responses were received from 3117 women of whom 2653 were 46 or older. Analyses were limited to this older group, since mean age of perimenopause is around 47 in the general population. The final sample ranged in age from 46 to 94 (mean=53) and 85% had been diagnosed with diagnosed with ADHD. Respondents were asked to indicate their age at diagnosis and the impact of 11 different symptoms or associated problems of ADHD at each of 5-time intervals: 0-9 years, 10-19 years, 20-39 years, 40-59 years and 60+years. Co-morbidities were also considered.
Results: Changes in ADHD Symptoms: Sixty-one percent reported that ADHD had the greatest impact on their daily lives between 40 and 59 years of age. The largest group of respondents (43%) were first diagnosed between ages 41 and 50. The reported prevalence of inattention, disorganization, poor time-management, emotional dysregulation, procrastination, impulsivity and poor memory/brain fog increased over the life span. More than half indicated that a sense of overwhelm, brain fog & memory issues, procrastination, poor time-management, inattention/distractibility and disorganization had a 'life altering impact' during the critical menopausal/perimenopausal window. By contrast, complaints about significant hyperactivity, impulsivity, social struggles and perfectionism remained fairly constant over the lifespan, and were not among the most common complaints (i.e., only endorsed by 25% to 35% of the sample). Interestingly, while 61% reported that ADHD had its greatest impact on daily life between 40-59, only 3% reported the same thing for age 60 and above.
Thus, in this expanded sample the first diagnosis of ADHD was most common in adulthood and peaked in the perimenopausal years. ADHD was also again most disruptive during the perimenopausal/menopausal window of time. This shift was most pronounced for symptoms of poor memory/brain fog and 'feeling overwhelmed.' Symptoms either diminished or they adjusted as they moved out of the transition years.
Comorbid Symptoms: Anxiety and depression were most common (73% and 63%, respectively) consistent with the literature. Also elevated, but much less frequent here, were learning, eating and sensory processing disorders (i.e., 10%-13% each). Thus, depression and anxiety may be the most frequent correlates of an ADHD diagnosis, irrespective of age of onset.
Conclusions: Hormonal change during the climacteric often is associated with worsening of cognitive complaints. Such increased complaints can lead to a first diagnosis of ADHD during this period, as well as a worsening of symptoms in those previously diagnosed. Moreover, this hormonal shift may underlie this diagnosis in a subset of the individuals currently characterized as having adult-onset ADHD. Lessoning of complaints in those ages 60 and above raises questions regarding the underlying mechanisms for this change (e.g., physiologic adaptation, compensation or decreased life demands).

Categories: ADHD/Attentional Functions
Keyword 1: aging (normal)
Keyword 2: attention deficit hyperactivity disorder
Keyword 3: attention
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3 Quick-Reference Criteria for Identifying Clinically Significant Multivariate Change in Older Adult Cognition: A NACC Study

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Objective: Accurately interpreting cognitive change is an essential aspect of clinical care for older adults. Several approaches to identifying 'true' cognitive change in a single cognitive measure are available (e.g., reliable change methods, regression-based norms); however, neuropsychologists in clinical settings often rely on simple score differences rather than advanced statistics, especially since multiple scores compose a typical battery. This study sought to establish quick-reference normative criteria to help neuropsychologists identify how frequently significant change occurs across multiple measures in cognitively normal older adults.
Participants and Methods: Data were obtained from the National Alzheimer's Coordinating Center (NACC). Participants were 845 older adults who were classified as cognitively normal at baseline and at 24-month follow-up. In NACC, these clinical classifications are made separately from the assessment of cognitive performance, including cognitive change. The sample was 34.9% female, 83.5% White, 13.1% Black 2.3% Asian, and 1.1% other race with a mean age of 70.7 years (SD=10.2). Of the sample, 95.5% identified as non-Hispanic. Mean education was 16.1 years (SD=2.8). The cognitive battery entailed: Craft Story Immediate and Delayed Recall, Benson Copy and Delayed Recall, Number Span (Forward & Backward), Category Fluency (Animals & Vegetables), Trails A&B, Multilingual Naming Test, and Verbal Fluency (F&L). Change scores between baseline performance and follow-up were calculated for each measure. The natural distribution of change scores was examined for each measure and cut points representing the 5th and 10th percentile were applied to each distribution to classify participants who exhibited substantial declines in performance on each measure. We then examined the multivariate frequency of statistically rare change scores for each individual.
Results: As expected in a normal sample, overall cognitive performance was generally stable between baseline and 24-month follow-up. Across cognitive measures, 81.9% of participants had at least one change score fall below the 10th percentile in the distribution of change scores, and 55.7% had at least one score below the 5th percentile, 49.3% of participants had two or more change scores that fell below the 10th percentile and 21.1% with two or more below the 5th percentile. There were 26.7% participants that had three or more change scores below the 10th percentile, and 6.4% of participants had three change scores below the 5th percentile.
Conclusions: Among cognitively normal older adults assessed twice at a 24-month interval with a battery of 13 measures, it was not uncommon for an individual to have at least one score fall below the 10th percentile (82% of the sample) or even the 5th percentile (56%) in the natural distribution of change scores. There were 27% participants that had three or more declines in test performance below the 10th percentile; in comparison, only 6% of the sample had three or more change scores at the 5th percentile. This suggests that individuals who exhibit more multivariate changes in performance than these standards are likely experiencing an abnormal rate of cognitive decline. Our findings provide a preliminary quick-reference approach to identifying clinically significant cognitive change. Future studies will explore additional batteries and examine multivariate frequencies of change in clinical populations.

Categories: Aging
Keyword 1: aging (normal)
Keyword 2: neuropsychological assessment
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4 Impact of APOE-ε Alleles on Brain Structure and Function in Healthy Older Adults: A VBM and DTI Replication Study

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