

Second edition (CVLT2) for verbal learning, and the visual reproduction subtest from the Wechsler Memory Scale-Revised (WMS-R) for nonverbal learning and memory. For both time points, the average scores of the participants were compared with age scaled scores for each neuropsychological test.

**Results:** The mean age of our current participants was 58 years. 72% were men. Relative to standardized test norms at the first time point, the scores for total learning from trials 1 through 5 from the CVLT2 were in the above average range relative to age and gender-based norms. During the second time point, the participants average scores on the same scale had dropped to the average range, one full standard deviation below their prior performances. In addition, at the first time point, total learning from visual reproductions was in the average range and dropped to the low average range for the second time point. This value dropped by one-half a standard deviation.

**Conclusions:** Results showed significant diminishment in verbal and visual memory relative to prior test performances. Whenever possible, documenting the trajectory of symptoms relative to where each participant started on neuropsychological functional outcomes is key to understanding the longitudinal impact of neurotoxicant and other war-related exposures in military veterans. Given this decline, further assessment of GW veterans' cognitive trajectories is warranted.

**Categories:** Drug/Toxin-Related Disorders (including Alcohol)

**Keyword 1:** memory complaints

**Keyword 2:** neuropsychological assessment

**Keyword 3:** cognitive functioning

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## 26 Apathy in Korsakoff Patients with and without Neurovascular Comorbidity

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**Objective:** People with Korsakoff syndrome (KS) experience severe neuropsychological and neuropsychiatric complications following vitamin B1 deficiency predominantly due to alcoholism. KS often presents itself with neuropsychological symptoms such as problems in episodic memory, executive functioning, and social cognition. Common neuropsychiatric symptoms in KS are disorders of affect, confabulations, anosognosia, and apathy. Apathy can be defined by a pathological lack of goal-directed behaviors, goal-directed cognitions, and goal-directed emotions. Patients with KS have an increased risk of cerebrovascular comorbidity. Cerebrovascular accidents are known to increase the risk for developing apathy. Apathy in KS patients can negatively influence the ability to live an autonomous life, often making 24-hour care a necessity. Limited research on apathy in KS patients has been published to this day. Our aim was to assess apathy in Korsakoff patients with and without neurovascular comorbidity.

**Participants and Methods:** General apathy and related subconstructs, such as judgment and decision-making skills, emotional blunting, and the intentions to perform pleasurable activities, were studied in fifteen KS patients, fifteen KS patients with additional cerebrovascular comorbidity, and fifteen healthy controls. The first responsible caregiver of each patient filled in the Apathy Evaluation Scale and Scale for Emotional Blunting. An examiner administered the interview-based Judgement scale of the Neuropsychology Assessment Battery with the KS patients and each KS patient filled in the self-report section of the Pleasurable Activities List. Both KS patient groups receive 24-hour care in a specialized facility for Korsakoff Syndrome.

**Results:** Our study found higher levels of general apathy in both KS patient groups, when rated by their caregiver compared to healthy controls. No difference was found between the KS patient groups and the healthy control group on the self-reported section of the Pleasurable Activities List, which might suggest the presence of intrinsic motivation in KS patients. However, a discrepancy was found between the self-reported activity levels and proxy reported levels of apathy. KS patients with cerebrovascular comorbidity showed increased levels of emotional blunting compared to KS patients without cerebrovascular comorbidity and healthy controls. Decreased judgment and decision-making skills were found in both patient groups

compared to healthy controls, with no difference found between KS patients with cerebrovascular comorbidity and KS patients without.

**Conclusions:** Our findings suggest that people with Korsakoff syndrome experience more general apathy compared to healthy controls. Both patient groups showed decreased judgement and decision-making skills and increased emotional blunting. Intrinsic motivation was found to be intact in KS patients. Experiencing cerebrovascular comorbidity in KS carries a risk for developing emotional blunting. Our findings show that apathy greatly affects people with KS. Future scientific research is warranted to further benefit the care for this complex patient population.

**Categories:** Drug/Toxin-Related Disorders (including Alcohol)

**Keyword 1:** apathy

**Keyword 2:** Korsakoff's syndrome/Wernicke's encephalopathy

**Keyword 3:** cerebrovascular injury

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## 27 Risky Decision-Making Moderates the Association Between Motives for Cannabis Use and Cannabis Use Trajectories Among Adolescents

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**Objective:** Prior literature has documented how motives for cannabis use predict frequency of use and cannabis use problems among adolescents. However, few studies have examined possible moderating variables that may influence the association between cannabis use motives and frequency of use. The current study examines how risky decision-making moderates this association to help better understand which individuals are at greater risk for cannabis use escalation. The current study will be the first to examine the interactive effects of motives for cannabis use (i.e., health or recreational reasons) and risky decision-making on cannabis use trajectories among a sample of adolescent cannabis users.

**Participants and Methods:** Data from 194 adolescent cannabis users aged 14-17 at baseline were analyzed as part of a larger longitudinal study. Participants included those who self-reported use of cannabis within six months prior to the baseline assessment. The Marijuana Reasons for Use Questionnaire (MJRUQ) was used to assess motives for cannabis use from a list of 13 items. A confirmatory factor analysis identified "health" and "recreational" factors for motives for cannabis use. Lifetime frequency of cannabis use (number of days used) was assessed through the Drug Use History Questionnaire, while risky decision-making was assessed using the Game of Dice Task. We used latent growth curve modeling and linear regression analyses to examine the interactive effects of motives for cannabis use and risky decision-making on initial levels of lifetime cannabis use at baseline, and rate of cannabis use escalation over time.

**Results:** No significant interactive effects were found for health motives for cannabis use; however, we found significant main effects of health motives on initial levels of lifetime cannabis use at baseline ( $b = 100.82$ ,  $p < .01$ ) and rate of cannabis use escalation ( $b = 24.79$ ,  $p < .01$ ). Those with a greater proclivity to use cannabis for health purposes showed higher initial levels of lifetime use at baseline and steeper increases in the rate of cannabis use escalation relative to those less likely to use for health purposes. Furthermore, we found a significant interactive effect of recreational motives for use and risky decision-making on the rate of cannabis use escalation ( $b = -2.53$ ,  $p < .01$ ). Follow-up analyses revealed that among those less likely to use cannabis for recreational purposes, higher risky decision-making was associated with a steeper increase in the rate of cannabis use escalation relative to those who exhibited lower risky decision-making.

**Conclusions:** The current study replicated findings suggesting that cannabis use motives influence cannabis use trajectories. We found that using cannabis primarily for health reasons was associated with higher initial levels and steeper increases in use regardless of decision-making. Furthermore, we found that both motives for use and risky decision-making interacted to influence associations with cannabis use trajectories. Specifically, among individuals reporting less cannabis use for recreational reasons, those with relatively riskier decision-making showed steeper increases in the rate of cannabis use escalation. These