

($n = 314$; adolescents only) and SPD503-316 ($n = 338$) were 10–13 week studies of dose-optimized GXR (1–7 mg/day).

Results In fixed-dose studies, pooled incidences of sedative TEAEs with GXR were highest at week 1 (GXR, 13.9–18.7%; placebo, 8.7%) and decreased to placebo levels at week 8 (0–1.4%; placebo, 0%). In contrast, proportions of responders ($\geq 30\%$ reduction from baseline in ADHD Rating Scale IV [ADHD-RS-IV] total score) increased from week 1 (GXR, 29.6–34.8%; placebo, 25.0%) through endpoint (GXR, 66.7–72.2%; placebo, 42.6%). Incidences of sedative TEAEs, but not proportions of responders, increased with GXR dosing. GXR was associated with a statistically significant reduction in ADHD-RS-IV total score from baseline to endpoint in patients without sedative TEAEs in both fixed-dose and dose-optimized studies (GXR versus placebo, effect size = 0.49 and 0.67, respectively; $P < 0.001$). GXR was associated with statistically significant improvements compared with placebo in both ADHD-RS-IV Hyperactivity/Impulsivity and Inattentiveness subscale scores ($P < 0.001$).

Conclusion These data from pooled GXR clinical trials indicate that incident sedative TEAEs do not contribute to increased treatment response over time, and that sedation and symptomatic improvement are distinct effects of GXR.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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FC15

Suicidality and psychiatric comorbidities among adults with childhood identified ADHD: Gender differences – a population-based longitudinal study

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Objective To evaluate the effect of comorbid psychiatric disorders (PD) on the association between childhood ADHD and suicidality and the effect of gender on the association between PDs and suicidality among adults with childhood ADHD.

Method Subjects were recruited from a birth cohort of all children born 1976–1982 remaining in Rochester, MN after five years of age. Participating subjects with research-identified childhood ADHD ($n = 232$; mean age 27.0 years; 72% men) and non-ADHD controls ($n = 335$; mean age 28.6 years; 63% men) were administered a structured psychiatric interview (MINI International Neuropsychiatric Interview) to assess suicidality and psychiatric comorbidities.

Results Compared to controls, ADHD cases were significantly more likely to meet criteria for suicidality [odds ratio (OR) = 2.7, 95% CI 1.7–4.5]. Although this association was not moderated by the presence of PDs ($P = 0.63$ for interaction effect), the association between ADHD and suicidality was partially mediated by the presence of PDs [OR decreased from 2.7 to 2.1 (95% CI 1.2–3.5)]. Among adults with childhood ADHD, there was no significant moderating effect of gender on the association between suicidality and PD ($P = 0.26$ for interaction effect). However, the odds of suicidality was 6.1 (95% CI, 2.3–15.9) times higher among males with both externalizing and internalizing PDs compared to males with no disorders; among females the corresponding odds ratio was 3.4 (95% CI, 0.7–16.6).

Conclusion Childhood ADHD is significantly associated with adult suicidal risk. Among those with ADHD, associations between suicidality and comorbid psychiatric disorders are more apparent

in men among those with comorbid externalizing and internalizing disorders.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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Cognitive neuroscience

FC16

A novel protocol to assess dual task cost as a potential measure of cognitive reserve

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Introduction Methods for measuring cognitive reserve (CR) are limited and controversial. Dual task cost (DTC) paradigms, assessing links between gait and cognition, are increasingly regarded as robust measures of CR.

Objectives Here, we aimed to validate a simplified methodology for a DTC paradigm in healthy volunteers for application in clinical settings as a measurement of CR.

Methods We tested if subtracting by 7's (cognitive task) while walking (motor task) induced a DTC in a sample of 39 healthy young adults. For the cognitive task, we recorded the number of correct and incorrect subtractions, as well as the latency between subtractions. Gait parameters were recorded on a tri-axial accelerometer fixed to the left ankle. Both tasks were performed separately (single task) and simultaneously (double task) to assess the DTC. A battery for neuropsychological assessment and questionnaires to assess quality of life and affective symptoms were also applied, to measure possible correlations with the DTC.

Results Subtracting 7's while walking caused significant changes in gait parameters and in cognitive task performance. A significant decrease in the autocorrelation of the accelerometer signal during the dual task was also found (DTC = $37.92 \pm 7.56\%$; $P < 0.0001$). This measure has not been previously used and may be a more sensitive measure of the dual task induced disturbance of the gait periodic signal pattern. Correlations between DTC and quality of life, affective or cognitive measures were not significant.

Conclusion Our study provides an effective, portable and non-intrusive DTC experimental protocol that can be easily applied in clinical settings.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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FC17

Cortisol, life events and cognition in non-demented subjects: A population-based study

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Background Older people are particularly exposed to stressful events, known to activate the hypothalamus-pituitary-adrenal axis. Many studies highlighted the possible deleterious effects of