

International Neuropsychiatric Interview) to assess current ADHD status and comorbid psychiatric disorders.

Results Among the 232 with research-identified childhood ADHD, 68 (49 men and 19 women) had persistent adult ADHD. Compared to subjects without childhood ADHD, adults with persistent ADHD were significantly more likely to have any (81% vs. 35%, $P < 0.001$) as well as each of the specific psychiatric comorbidities. The associations retained significance when stratified by gender and there were no significant gender by ADHD interactions on psychiatric disorders except for dysthymia with which ADHD was more strongly associated in women than men. Among subjects with persistent ADHD, externalizing psychiatric disorders were more common in men (73%) and internalizing disorders were more common in women (53%).

Conclusion Persistent ADHD is associated with an increased risk of comorbid psychiatric disorders in both adult men and women. Clinicians treating adults with persistent ADHD need to be aware of comorbid psychiatric disorders, especially externalizing disorders for men and internalizing disorders for women.

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EW102

Clinical correlates of comorbid chronic tics and Tourette syndrome in a National Inpatient Children's Unit

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Introduction Chronic tics and Tourette syndrome (TS) can be comorbid with several neuropsychiatric conditions and may add to the complexity of children's clinical presentation and need for inpatient input.

Objectives To review the clinical notes of all children admitted to a National Children's Inpatient Unit (aged up to 12 years) over a 5-year period and analyse their demographic and clinical characteristics including the presence of chronic tics/TS.

Aims To assess the clinical correlates of comorbid chronic tics/TS in an inpatient preadolescent population.

Methods A retrospective naturalistic study of all patients admitted to our unit from 2009 to 2014 was conducted. Children with and without chronic tics/TS were compared in terms of age, gender, family history of mental illness, history of neurodevelopmental problems in siblings, medication on admission and at discharge, length of admission and functional outcomes using Chi² and *t*-tests for categorical and continuous data respectively.

Results A total of 133 children (mean age = 11.2 years) were included. Twenty-five (18.8%) were diagnosed with chronic tics/TS. Autism spectrum disorder was the most commonly comorbid diagnosis (84%), with the second most common being an anxiety disorder/OCD (52%). Statistically significant higher percentages of learning disability, neurodevelopmental problems in siblings, medication at discharge and longer inpatient admissions were identified in children with tics compared with the rest of the sample. No other differences were found.

Conclusions The prevalence of chronic tics/TS in children needing inpatient treatment is significant. In our sample, chronic tics/TS seem to represent a marker of increased neurodevelopmental deviance and overall symptom severity.

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Classification

EW103

Diagnostic stability of acute and transient psychotic disorder: A systematic review and meta-analysis

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Introduction The validity and diagnostic stability of acute and transient psychotic disorder (ATPD) has been questioned by several authors, since its introduction in the International Statistical Classification of Diseases (ICD-10).

Objective To determine the overall diagnostic stability of ATPD in scientific literature.

Method A systematic review and meta-analysis of prospective studies and retrospective chart reviews. Computerized search was performed in MEDLINE/PubMed, EMBASE, and Google Scholar, using the terms: "acute and transient psychotic disorder", or "acute psychosis", and "stability", or "outcome", or "long-term", or "follow-up", or "course". Search was restricted to works in English published between 1993 and 2015, according to ICD-10 criteria. Opinion articles, individual case reports, researches with less than ten subjects, and overlapping studies were excluded. Data analysis was conducted using MedCalc software, version 15.8. Statistical procedure was calculated for meta-analysis of proportions.

Results Twenty-six studies met the inclusion criteria ($n = 10852$). For methodological purposes, a distinction was made between short-term (less than 2 years), medium-term (between 2–7 years), and long-term stability (more than 7 years). For short-term group ($k = 5$), the overall stability was 60.69% (fixed effects model); Cochran's heterogeneity statistic $Q = 14.9$, $I^2 = 73.15\%$, $P = 0.0049$. For medium-term group ($k = 15$), it was 49.99%; $Q = 181.6$, $I^2 = 92.29\%$, $P < 0.0001$. For long-term group ($k = 6$), it was 61.86%; $Q = 35.12$, $I^2 = 92.29\%$, $P < 0.0001$.

Conclusion The global stability of ATPD indicates at the validity of the construct, but should be redefined in future revisions of ICD, to clarify better diagnostic criteria, and more predictive power.

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

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Cognitive neuroscience

EW104

Human factors in driving accidents: A cognitive investigation in the Gulf context

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Introduction Human factors have been reported as the reason behind the majority of car accidents. However, to date, no studies at least in the Arab world generally and Gulf area specifically, conducted a comprehensive examination of cognitive functioning as potential predictors of car accidents and driving violations.

Objectives Examining the role of cognitive functions e.g., verbal working memory, attentional control as predictors of traffic accidents and driving violations.

Aims Examining the predictability of individual's cognition of occurrence of driving violations and accidents.

Methods The study was carried on a sample of hundred and thirty two participants whose age ranged between 24 and 31 years. They were classified into groups of violators and non-violators, accident free and accident involved as well. Cognitive functioning were measured using self-reports and task performance, and a series of ANOVAS as well as stepwise multiple regressions were conducted to test the research hypothesis.

Results Findings showed significant differences between violators and non-violators and between the accident free and accident involved groups in almost all of the considered factors, except for the decision making factor. Moreover, Pearson product-moment correlations showed that there were significant negative correlations between age, driving violations, and cognitive performance and the accidents.

Conclusions Human cognition such as executive functioning and mental planning are key factors for predicting driving behavior and traffic accidents. The study results have many implications in diagnosing and preventing or at least reducing driving violations and road accidents.

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EW105

Effects of negative autobiographical memories retrieval on corticospinal excitability and sensorimotor integration

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Introduction Previous transcranial magnetic stimulation (TMS) studies indicate that exposing the subjects to an emotionally valent stimulus results in larger motor evoked potentials (MEP). Up to date, no TMS studies have been conducted in order to investigate the effect of personal memories with emotional value on corticospinal excitability.

Objects To investigate changes in corticospinal excitability and sensorimotor integration induced by retrieval of negative or neutral autobiographical memories (AM).

Aims To contribute to a further characterization of neural circuits involved during the evocation of negative AM.

Methods In 12 healthy volunteers, we recorded motor evoked potentials (MEPs) elicited by TMS pulses during the retrieval of negative AM or neutral AM. Furthermore, we also tested Short-interval Intracortical Inhibition (SICI), Intracortical facilitation (ICF), Short and Long afferent Inhibition (SAI and LAI) in the two different experimental conditions.

Results Retrieval of negative AM induced a larger increase in MEP amplitude (35.01%) compared to neutral AM ($F_{(1,22)} = 7.04$,

$P = 0.013$). Furthermore we showed that retrieval of Negative AM increased ICF ($F_{(1,22)} = 5$, $P = 0.03$) and decrease SAI ($F_{(1,22)} = 7.04$, $P = 0.039$). The other TMS parameters were different between conditions.

Conclusions Our results indicate that evocation of negative AM induce a complex modulation of excitatory and inhibitory sensorimotor networks. Further studies are needed to explore the link of these electrophysiological biomarkers with the strength, valence and specificity of negative AM.

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EW107

Computational modeling of reinforcement learning using probabilistic selection task and instructional probabilistic selection task

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Introduction Humans learn how to behave both through rules and instructions as well as through environmental experiences. It has been shown that instructions can powerfully control people's choices, often leading to a confirmation bias.

Aim To compare learning parameters in reinforcement learning task with and without instructions.

Methods We recruited 52 healthy adult control subjects (21 males, 31 females, age 30 ± 6.5 years). Participants completed Repeatable Battery of Neuropsychological Status (RBANSS). Twenty-seven participants completed additionally Probabilistic Selection Task (PST) while twenty-five participants completed Instructional Probabilistic Selection Task (IPST). To analyze learning parameters, we used Q-learning model with 3 parameters: learning rate due to positive and negative reinforcements as well as exploration-exploitation parameter.

Results Both groups did not differ with respect to cognitive functioning measured with RBANSS (immediate and delayed memory, visuospatial abilities, language and attention); however, participants who completed PST had trend-level statistically faster learning rates due to positive ($P = 0.099$) and negative reinforcements (0.057) in comparison to participants who completed IPST. Both groups did not differ with respect to exploration-exploitation parameter (0.409).

Conclusion In healthy adults, interference of confirmation bias can influence learning speed independent of cognitive functioning (immediate and delayed memory, visuospatial abilities, language and attention).

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EW108

Risk associated to subtypes of seizure disorders in dementia patients

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