have a physical nature of infectious diseases, to burn regularly or develop a mental disorder in adultery more than those not exposed to bullying, 11 times more likely to develop anxiety disorder but especially obsessive-compulsive disorder.

Some experts think that bullying results in a kind of "toxic stress" that affects children's physiological responses, possibly explaining why some victims of bullying go on to develop health problems. *Disclosure of interest* The authors have not supplied their declaration of competing interest.

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#### EW0074

# Growth and sexual maturation in a 2-year, open-label clinical study of lisdexamfetamine dimesylate in children and adolescents with ADHD

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Introduction Individuals with attention-deficit/hyperactivity disorder (ADHD) may require long-term medication.

Objectives To measure growth and sexual maturation of children and adolescents with ADHD receiving lisdexamfetamine dimesylate (LDX) in a 2-year trial (SPD489-404).

Aims To investigate the impact of long-term LDX treatment on growth and maturation.

Methods Participants (6–17 years) received dose-optimized, open-label LDX (30–70 mg/day) for 104 weeks. Weight, height and BMI z-scores were derived using the Centers for Disease Control and Prevention norms [1]. Sexual maturation was assessed using the Tanner scale (participant-rated as closest to their stage of development based on standardized drawings).

Results Of 314 enrolled participants, 191 (60.8%) completed the study. Mean z-scores at baseline and last on-treatment assessment (LOTA) were 0.53 (standard deviation, 0.963) and 0.02 (1.032) for weight, 0.61 (1.124) and 0.37 (1.131) for height, and 0.32 (0.935) and-0.27 (1.052) for BMI. In general, z-scores shifted lower over the first 36 weeks and then stabilized. At LOTA, most participants remained at their baseline Tanner stage or shifted higher, based on development of hair (males, 95.5%; females, 92.1%) or genitalia/breasts (males, 94.7%; females, 98.4%).

Conclusions Consistent with previous studies of stimulants used to treat ADHD [2], z-scores for weight, height and BMI decreased, mostly in the first year, then stabilized. No clinically concerning trends of LDX treatment on sexual maturation or the onset of puberty were observed.

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#### EW0075

### The effect of cognition enhancement program using toy-robot for children

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Objectives The purpose of this study was to verify the effect of Cognition Enhancement Program (CEP) using toy-robot for children aged 5–10 years. We thought that CEP using toy-robot might be a more kids-friendly method for improving cognitive ability than traditional programs. The enhancement of cognitive functions such as attention, response inhibition, memory, and working memory after the cognition training were the focus of the study.

Methods One hundred and twenty children aged 5 to 10 were ramdomly assigned to 3 groups: (1) experimental group receiving CEP training using toy-robot, (2) control group receiving previously developed internet-based cognitive training, (3) waiting list. The children of experiment and control groups received individual 8 training sessions. The effect of the program was measured with Smart Toyweb's cognitive assessment tools we had developed (smart device based assessment) as well as traditional neuropsychological tests throughout 3 times (pre-training, post-training, and 1-month follow-up).

*Results* The training is in progress since it started in October 2016. We observed some of children on the CEP training tend to show improvement of cognitive function. The final assessment is planned for February 2017.

Conclusions The CEP using toy-robot could be very promising and useful in that it is a non-invasive and non-pharmacological treatment for children with attention or memory problem in home and clinical settings.

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#### EW0076

#### Treated versus untreated mental health problems in adolescents: A six-year comparison of emotional and behavioral problem trajectories

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Introduction Multidisciplinary guidelines in adolescent mental health care are based on RCTs, while treatment efficacy can be different from effectiveness seen in 'the real world'. Studies in the real world conducted so far suggest that treatment has a negligible effect on follow-up symptomatology. However, these studies did not incorporate the pre-treatment trajectory of symptoms nor investigated a dose-response relationship.

Objectives To test whether future treatment users and non-users differed in emotional and behavioural problem scores, whether specialist mental health treatment (SMHT) was effective in reduc-

ing problem levels while controlling for pre-treatment trajectory, and to seek evidence of a dose-response relationship.

Methods Six-year follow up data were used from the Tracking Adolescents' Individual Lives Survey (TRAILS). We identified adolescents with a clinical level of problem behaviour on the Child Behaviour Checklist or Youth Self Report and first SMHT between the ages 13 and 16. Adolescents with a clinical level of problem behaviour but without SMHT use served as control group. A psychiatric case register provided data on number of treatment contacts. Using regression analysis, we predicted the effect of treatment on post-treatment problem scores.

Results Treated adolescents more often had a (severe) diagnosis than untreated adolescents. Pre-treatment trajectories barely differed between treated and untreated adolescents. Treatment predicted an increase in follow-up problem scores, regardless of the number of sessions.

Conclusion The quasi-experimental design calls for modest conclusions. We might however need to take a closer look at real-world service delivery, and invest in developing treatments that can achieve sustainable benefits.

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#### EW0077

## Perceived competence in adolescents having prosocial behaviour: A Tunisian study

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Introduction Perceived competence (PC) is a self-perception of an individual in its capabilities and ability to control his environment. It is posited to orient individuals to the possibility of success and to facilitate the adoption of approach goals.

Objectives We aimed to assess the PC of adolescents engaged in prosocial activities and to determine factors that influence it.

Methods We led a transversal study, over four months, from June until September 2016. It included 90 adolescents aged 14–20 years and members of voluntary association in Sfax (Tunisia). PC was assessed using the "perceived competence in life domains" (PCLD) for the life spheres of leisure, interpersonal relationships, school, and general domains.

Results The average age of participants was 16 (14 to 20 years). The sample was female-dominated (53%). All participants were secondary school pupils. Almost 70% were from a high socio-economic level and over 60% had parents' high level of education.

The mean scores of PC ranged from 19 (SD = 5.4) in leisure domain to 16 (SD = 4) in interpersonal relationships domain. PC was significantly correlated with socio-economic level (P = 0.00), participating in sports and extra- curricular activities (P = 0.00), academic proficiency (P = 0.01) and smoking (P = 0.00).

Conclusion Overall, our results evidenced the positive selfperception of competence among adolescents having prosocial activities. It indicated that high socio-economic level, participating in sports and extra-curricular activities and smoking were enhancing factors of adolescents PC.

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#### EW0078

## Evaluation of anxiety in children with acute leukemia: A prospective study of 20 cases

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Introduction The occurrence of acute leukemia (AL) in childhood causes a profound upheaval in the child itself and also within his family. Exposure to this test could contribute to the emergence of anxiety.

*Objective* Our work aims to describe the characteristics of anxiety in this population during the management of the AL.

Patients and methods Our study, still in progress, is prospective and conducted among 20 children hospitalised in hematology department of UMC Hedi Chaker Sfax (Tunisia) during the year 2015–2016. It is performed in two times. The anxiety was assessed using the STAI scale.

*Preliminary results* The average age of our population is 7 years (minimum age = 4 years, maximum age = 11 years). The majority of our patients come from urban areas (76.9% of cases). About their sibling rank, they are mostly the youngest in 53.8% of cases, the oldest in 30.8% of cases and juniors in 7.7% of cases. The most common diagnosis is the lymphoblastic B AL (46.2% of cases).

Referring to the STAI scale, 30% of our patients were anxious and had high scores during the first evaluation. Then, the anxiety level attenuates gradually during management period and only 15% were anxious at the 2nd evaluation time.

Conclusion Several factors such as hospitalisation, diagnosis announcement and cancer treatment contribute to the triggering and maintaining of anxiety. Early detection of anxiety and the good listening between the care team and the parents could appease the high level of anxiety and ensure better management.

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#### EW0079

### Early screening for autism spectrum disorder

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Introduction Most parents to children with Autism Spectrum Disorder (ASD) can report concerns about their child's development within the first year of life. In spite of this, children with ASD are rarely diagnosed before the age of 3–4 years. Early identification allows early intervention, which seems to be substantial for improvement of core behavioural symptoms in children with ASD. The Child Behaviour Checklist for ages 1½ to 5 (CBCL/1½–5) have shown promising utility for early detection of children with ASD. Objectives This study will estimate the positive predictive value of CBCL/1½–5 Pervasive Developmental Problems (PDP) scale in a 2 phase screening study. Furthermore, it will analyse the stability of the CBCL/1½–5 PDP-score in pre-school children from 2½ to 5 years.

Aims The present study aims to validate CBCL/1½–5 for early screening of ASD in a general population sample.