

## Child Psychology

## SYMPOSIUM

9070

**Consensus statement on assessment and diagnosis of learning disabilities in children and adults****Chair: Maria Kokai** Ontario Psychological Association, Canada

In many parts of the world, psychologists have been struggling with the lack of consensus in the psychology community concerning which diagnostic criteria to use when diagnosing a Learning Disability (LD), causing considerable confusion in the public and disruption in service. To remediate this, a cross-sectoral group of psychologists (including representatives from school districts, mental health agencies, hospitals, colleges and universities, graduate education and training programs in psychology, and practitioners in the community in private practice) has developed consensus-based diagnostic criteria and guidelines for the assessment of LD. This working group of psychologists, with expertise in LD, developed guidelines to be consistent with current research. The consensus statement with the new criteria have been adopted by the Ontario Psychological Association and the Learning Disabilities Association of Ontario as formal Guidelines, to be applied by psychologists province-wide. The intention of this approach is to bring consistency in the diagnostic protocols of psychology practitioners across age groups, settings and populations, and it is designed to be inclusive of all children, adolescents and adults, including those who are from culturally and linguistically diverse backgrounds. The presentation will familiarize the audience with the content of the document, including the following: a standard, step-wise process for psychological assessment; a set of criteria for the diagnosis of a Learning Disability; the relationship with the diagnosis of Learning Disorder based on DSM 5 and ICD 11 criteria; assessment for culturally and linguistically diverse individuals; and LD and Giftedness.

**Steps for assessment****Carolyn Lennox** Toronto District School Board, Canada

The presentation will review the steps of the psychological assessment recommended in the consensus statement. Key considerations and guiding questions will be included from each of the steps that outline the process of assessment. The ten steps in the assessment process aim to assist the psychologist in collecting evidence from multiple sources of information, such as formal psychometric measures, observational data, history and background, etc. The outcome

of this assessment process is a determination of whether all five criteria are met for a Learning Disability diagnosis, as well as the appropriate communication of the diagnosis and required supports and interventions.

**The consensus guidelines document****Maria Kokai** Ontario Psychological Association, Canada

Following the Chairperson's introduction of the topic, the presentation will provide a historical context in Ontario and Canada, and will describe the criteria that must be met for a diagnosis of a Learning Disability. This consensus statement is a response to a need expressed by psychologists in Ontario for more alignment and consistency in assessing and diagnosing Learning Disabilities. The cross-sectoral working group that was brought together consisted of members representing different sectors in psychology, and different approaches to Learning Disability diagnosis. The objective was to arrive to a consensus for diagnosis that is consistently applicable to all sectors, all populations and all ages. In the course of two years, the group met regularly, and reviewed current professional literature and legislative obligations, drafted the consensus paper, collected feedback from practitioners and made changes based on feedback, before finalizing it. The consensus paper conceptually integrates the diagnosis of the DSM 5 Learning Disorder and the diagnosis of Learning Disabilities in a five-criteria model. The five diagnostic criteria will be described, and compared to the diagnostic criteria of Learning Disorders in DSM 5 and ICD 11, respectively.

**Special considerations****Cheryl Pohlman** Markham Psychologists/Chrysalis Centre, Canada

Following the review of the steps for a "typical" assessment, some specific issues will be addressed, such as assessing individuals from culturally and linguistically diverse backgrounds (i.e., immigrants and refugees); assessing Learning Disability in very bright individuals; and assessment of young children.

6895

**The 21st century child, assessment and the Griffiths III: Does it work or not?****Chair: Louise-Anne Stroud Nelson** Mandela University, South Africa

The impetus for this symposium arose from practice and fits neatly into the theme of open minds, societies and worlds as the presenters and authors are involved in the global application and use of the Griffiths Scales of Child Development – Third Edition (Griffiths III). This symposium explores and addresses the 'what', 'why' and 'how' of child development assessment in the 21st Century. It suggests

complementary ways of combining quantitative and qualitative processes to advance the contemporary and global applicability of the Griffiths III. Four presentations will be made. The first presentation will describe a unique six-phase revision process which was developed and used to revise the Griffiths III. It will elaborate on how this unique process facilitated the alignment of the measure with modern developmental and psychometric theory and how it is successfully meeting the needs of users worldwide. Thereafter the statistical structure underlying the Griffiths III will be discussed. The underlying statistical structure of a developmental test (such as the Griffiths III) is important, but what do the statistics really mean in real life and can these tests and their scores serve as a stable benchmark of a child's developmental trajectory over time. Furthermore, the Griffiths III was normed against a population of typically developing children. However, in children who are the same, same but different, a conundrum is presented in that the comparative statistics are inappropriate and do not identify their strengths. As such alternative ways of interpreting performance on a Griffiths III assessment for these children is provided in this presentation. The rise in innovative technologies has opened a new door to psychological assessment. This presentation provides a cogent rationale for exploring a digital platform for developmental measures and takes a look at the Griffiths III in this regard.

**A six-phase test revision process, a measure, an open mind, a world and a society****Louise-Anne Stroud Nelson** Mandela University, South Africa

The process and steps involved in developing psychological tests have been well documented and are fairly universal. Furthermore, a number of national and international guidelines related to aspects of psychological testing have been published since the 1990s, for example, by the International Test Commission (ICP). We set out to explore and synthesize reflections on revisions of iconic, widely used international tests and recommendations made regarding the test revision process together with reflections on key factors related to designing and implementing a revision of a measure. Limited information was found to exist and hence a six-phase process was developed and used to govern the revision of the Griffiths Scales of Child Development. Complementary ways of combining quantitative and qualitative processes were found and aligned to modern developmental and psychometric theory. This led to the development of a blueprint with guiding principles and the birth of a six-phase process which can be used globally in test revision processes. The sixth phase of this process involves making sure that the revised measure can be used globally. This

presentation describes the global implementation and use of the Griffiths Scales since its revision. This includes a description of the various translations (e.g., Italy), validations (e.g., Portugal), translated scripts (e.g., Tamil), application to clinical populations (e.g., South Africa, France) and background work that is being done in other countries (e.g., Kenya, China, France) indicating that the Griffiths III embraces and supports an open society and open world.

### **A developmental scale, its underlying statistical structure and what it really means in real life**

**Elizabeth Green** *Association for Research in Infant and Child Development, United Kingdom*

The underlying statistical structure of a developmental test is important, particularly when using the measure to assess children performing within the parametric boundaries of the scale. Developmental tests may be repeated and often serve as a stable benchmark of children's developmental trajectory over time. In institutional settings it is also likely that a child will be tested by different test administrators over the years. Yet, we know that children's development is neither stable day to day, nor even across domains, and that clinical judgement is key. So how does the underlying statistical structure of the Griffiths III apply to the real life developmental assessment of children? This presentation serves to answer this question by highlighting statistical aspects of the measure such as its stability reliability, factor analysis, 'user-ability', thick/thin analyses and item gradients, and applies them to the real life of the child. For example, the test-retest reliability and inter-rater reliability of the Griffiths III was investigated using a sample of 53 typically developing children in the United Kingdom. Correlations indicated excellent reliability of the scales over a two to four week period (0.969–0.991), and between raters (0.967–0.996). Confirming the Griffiths III's underlying statistical structure is one thing but the results obtained in an assessment need to apply to the real life of children and bring together an open mind, world and society. This is the focus of this presentation.

### **Finding strengths in same, same but different children using the Griffiths III**

**Jennifer M. Jansen** *Nelson Mandela University, South Africa*

The Griffiths III brings together the most recent research in five different developmental domains in the measurement of infant and child development from birth to six years. Like other psychometric tests of general development, the Griffiths III was normed against a population of children who were screened to identify that

their development was typical. This normative sample provides a standard against which the developmental performance of a particular child may be measured. The shape of the normal development curve (bell curve) means that there is sparse comparison data for children who are developing differently and at the lower end of the curve. For these children, often from a clinical population, their performance falls in the lower tail of the curve and the accurate determination of their strengths and weaknesses using scores alone is very difficult. This presentation describes how the Griffiths III can be used to identify strengths in these children who are performing below the floor of the test in either some or all developmental domains. As the differentiation of strengths in these children is not possible from test scores alone, the use of quartile charts that have been developed from the Griffiths III to aid in interpretation is described. Furthermore, the presentation describes how the Griffiths III can be used to assess development in children who come from different cultures and ethnicities. All in all, this presentation considers these same, same but differently developing children; they all have strengths that can be identified using the Griffiths III.

### **A rationale for the digital adaptation of developmental tests such as the Griffiths III**

**Rivca Marais** *University of Fort Hare, South Africa*

This presentation advances that the rise in innovative technologies has opened a new door to psychological assessment. It presents a cogent rationale for exploring the development and use of a digital platform for assessing young children of the 21st Century. The presentation highlights important features needed in a psychological measure having a digital mode of presentation and in the light of this considers the Griffiths III, a newly constructed developmental measure. Findings indicate that certain features found in the Griffiths III are well positioned to drive innovation in developmental assessment and that, in so doing, will contribute to other assessment efforts at incorporating the latest technology. Furthermore, the presentation will highlight recent research which describes the digital world and its connection to the world of play of the modern day-child. It also considers the needs of practitioners when conducting an assessment on a young child within the fast growing world of technology. Practice guidelines and practical examples when using a digital platform to assess young children are provided. The matter of digital adaptation of assessment measures is a new terrain and surely will begin to develop as new discoveries are made, particularly as there is a lack of in-depth documented strategies for the digital adaptation of tests. The success of the implementation of these discoveries

requires an open mind on the part of the practitioner, the world and the society at large.

### **Finding strengths in same, same but different children using the Griffiths III**

**Hilary Lane** *Association for Research in Infant and Child Development, Ireland*

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### **2612**

#### **Global test development: Adaptations and data analyses for cognitive and developmental tests**

**Chair: Pamela Becker Hogrefe** *Publishing Cooperation, United States of America*

Seldom are the endless possibilities of using the standardization and validation datasets from one test in various language versions explored to their full potential. With the internationally adapted Intelligence and Development Scales – 2 (IDS-2; Grob & Hagemann-von Arx, 2018) a state-of-the-art psychological assessment dataset is available to be internationally researched. With a collaborative mindset, the international group of IDS-2 test authors and publishers now offer researchers across the world an international set of data on every aspect of a child's development and cognitive abilities that is provided by the IDS-2. In this global symposium, we present examples of research based on

this international IDS-2 data set on German, Dutch, Polish, Italian and English norm samples and explore our experiences with testing in the various countries, and how the process was both similar and different. In addition, we will address our validity work across the countries, and how the IDS-2 can contribute to a practitioner's understanding of the whole child. Finally, we will ask the audience to participate through discussion what possibilities the IDS-2 data set can offer professionals wanting to investigate cognitive and general development of children.

### The *d*-factor: A general superordinate factor in the Intelligence and Development Scales – 2

**Alexander Grob** University of Basel, Switzerland

Over recent decades, knowledge in developmental psychology increased sharply. Motor skills, visual and auditory perception, memory, problem solving, social-emotional skills, achievement motivation etc., were studied increasingly as independent developmental domains. Therefore, individuals' competences within these domains were predominantly assessed with specific, domain focusing developmental tests. Unlike this trend of using specific developmental test batteries, the Intelligence and Development Scales – 2 (IDS-2) provide a comprehensive assessment of children and adolescents aged 5 to 20 years. IDS-2 include the measurement of the most relevant cognitive (intelligence, executive functions) and developmental domains (psychomotor skills, social-emotional skills, basic skills, and motivation and attitude) within one test battery. Confirmatory factor analyses of the German IDS-2 standardization and validation sample ( $N = 2,028$ ) revealed good fit of a comprehensive model with intelligence, executive functions, psychomotor skills, socio-emotional skills, and basic skills for the whole sample and across different age groups ( $CFI \geq .89$ ,  $TLI \geq .86$ ,  $RMSEA \leq .07$ ). Furthermore, we found substantial latent correlations between the aforementioned domains, ranging from (a) small to medium positive relationships for psychomotor skills and socio-emotional skills, (b) medium to strong relationships for socio-emotional skills and intelligence, executive functions, and basic skills as well as for psychomotor skills and basic skills, (c) strong relationships for psychomotor skills and intelligence and executive functions, and (d) very strong relationships among intelligence, executive functions, and basic skills. These positive intercorrelations point to the existence of a super-ordinate factor for general development, the *d*-factor, that reflects overall development across the relevant cognitive and developmental domains. At the symposium, we will address advanced latent factor structure information that illustrates the relative

importance of the subordinate factors for the *d*-factor.

### Different profiles on the Intelligence and Development Scales – 2 (IDS-2): A latent profile analysis

**Linda Visser DIPP** | Leibniz Institute for Research and Information in Education, Netherlands

The Intelligence and Development scales – 2 (IDS-2; Grob & Hagemann-von Arx, 2018) is based on the Cattell–Horn–Carroll (CHC)-model (Schneider & McGrew, 2012). A general ability factor (*g*) is assumed, that is formed by 10 broad abilities, like verbal ability and abstract reasoning. These, in turn, are based on narrow abilities that are measured using the subtests. The IDS-2 is available for different language regions. The standardization samples that were collected to compute the norms for the various tests within the IDS-2 for each language region, allow for a rich comparison in performances across children – both within each language region and across regions. In this study, we will take such a person-centred approach and use Latent Profile Analysis (LPA) on normed subtest scores (indicating narrow abilities) of individuals of different language regions. In LPA, profiles are formed on the basis of scores in such a way that the similarity within the profiles and the differences between the profiles are both as high as possible. This results in a number of homogeneous subgroups (Hickendorff et al., 2018). With our LPA, we aim to get insights in prevalent intelligence and development profiles in the complete data set. In a next step, we will relate the prevalence of these profiles to individual characteristics, as age, gender, educational level of the parents and language region. The latter allows for exploring to what extent essential differences exist between regions. The results will add to the scientific knowledge about the structure underlying intelligence and development in children. Also, the results will be valuable for experts who apply the IDS-2 in daily practice in that the exceptionality of the intelligence and development profile of an individual child can be better interpreted.

### Overview of international IDS-2 validity studies and what we can learn from them

**Antonia Hogrefe** Hogrefe Publishing, Switzerland

The Intelligence and Development Scales – 2 (IDS-2; Grob & Hagemann-von Arx, 2018) are currently adapted in various countries around the world leading to an enormous amount of international data on children's cognitive and general development. One aspect of this global data set are the many validity studies conducted in the process of validating each language version of the IDS-2. To date the IDS-2 has been

validated against several well-known tests in the areas of intelligence, executive functions, psychomotor skills, and social-emotional skills in various languages. This provides us with valuable information not only about the construction of the IDS-2, but also of other established tests in these areas. The IDS-2 was administered with highly-intelligent children, children with intellectual disabilities, children with learning diagnoses like ADHD, dyslexia, etc., creating an extensive data set on extreme groups in the area of cognitive and general development. In this presentation we provide a descriptive overview of the current validity studies and compare their results between countries, diagnostic instruments and children with abilities outside normal development. Therefore we do not only want to demonstrate the benefits psychometric and developmental research can have from coordinating international adaptations of such a diagnostic instrument, but also discuss possible future research projects by providing participants information about the IDS-2 data set and offering them the opportunity to do their own research using this global data set on cognitive and general development.

### Cognitive abilities and competences of intellectually disabled children across European countries

**Joanna Niedziela** Psychological Test Laboratory of the Polish Psychological Association, Poland

One of the main advantages of the Polish version of Intelligence and Development Scales – 2 (IDS-2; Grob & Hagemann-von Arx, 2018; adapted by Aleksandra Jaworowska & Anna Matczak, 2019) is the possibility not only to differentiate between the norm and intellectual disability, but also between mild and moderate intellectual disability. The tool also enables the identification of intraindividual strengths and weaknesses of cognitive abilities, executive functions, basic skills and competences of intellectually disabled children. We will present similarities and differences in IDS-2 performances between children with intellectual disability across different European countries.

## INVITED SYMPOSIUM

### 3670IS

#### Children and young people's mental health in the digital age

**Chair: Vilmante Pakalniskiene** Vilnius University, Lithuania

Nowadays, it is almost impossible to imagine young people's lives without the Internet. Young people, children, and the Internet appear to be inseparably related with each



other. According to Livingstone (2003), typical Internet usage of young people and children can be described following three dimensions: entertainment, education, and edutainment. Even though all dimensions could be beneficial for a young person, researchers studying negative outcomes most often. There is growing research about the impact of unsafe Internet behavior. To date there have been various studies examining the impact of, especially, problematic internet use with adolescents and adults, but very few studies to date which have included children, asking the children themselves, as well as their parents, to report on the child's Internet use. Recent literature has also emphasized the need to explore these issues from an ecological systems framework, taking into consideration the individual's characteristics, parenting practices and parental monitoring, attitudes and, finally, the broader sociocultural contextual aspects of how these various factors interact. The goal of this symposium is to present the results from various studies including participants from Norway, Latvia, Lithuania, Portugal, and Taiwan – countries which differ along the individualistic-collectivistic cultural values dimension. The first presentation (Pakalniskiene, Ponte, & Staksrud) presents Data form EU kids online study with adolescents in regard to the adolescent's Internet use in association with civic engagement. The second presentation (Jusiene, Laurinaityte, & Pakalniskiene) focuses on compulsive Internet use in young school-age children. The third contribution (Sebre, Miltuze, Martinsone, & Elšina) examines parenting practices and child behavioral difficulties as both risk factors and sequelae of the child's excessive internet use in Latvia. The fourth presentation (Wu, Chiang, Li, & Wang) examines the patterns of children's Internet use and examine how that may relate to their behavioral and mental health outcomes.

### Do adolescent's Internet use differs in Southern, Nordic and Eastern European countries?

**Vilmante Pakalniskiene** Vilnius University, Lithuania

Given that media influences our life, it is not surprising that researchers have begun to focus on how the Internet use may be related not only to health issues but also may increase social behaviour and civic engagement. Research on the social effects of technology use often focuses on identifying risk factors among younger people. However, young age, adolescence is also a time of rapidly expanding roles, expectations of autonomy, and identity exploration. Researchers suggest that certain forms of Internet use (such as information seeking, social network site use, media production, and participation in online communities) promote civic engagement and that digital tools play an important role in youth empowerment efforts,

which could be tightly related to mental health. Participating in civic life is proposed to play an important role in youth development. In this study, we aimed to investigate how Internet use, various knowledge of Internet use profiles are associated with civic engagement among Lithuanian, Norwegian and Portuguese early and middle adolescents. Participants in this study were 522 (66.3% females) in Lithuania and 500 (56.8% females) in Norway, and 498 in Portugal (64.8% females) adolescents aged between 13 and 17. Latent profile analyses revealed that the five Internet use, knowledge profiles emerged in both countries. Findings revealed that patterns are associated digital citizenship and violent extremist attitudes online. Seems that adolescents that belong to profile with average use and average knowledge are at risk for violent attitudes toward others online, but also are very active in digital citizenship – they are interested in various new, have very high trust in news, interested in political actions and issues. This study revealed also some differences between countries.

### Inconsistent parenting versus parental rules in relation to children's internet use and mental health

**Sandra Sebre** University of Latvia, Latvia

Although bidirectional relations between parenting practices and child problematic behavior have generally found both child-driven and parent-driven effects, these effects have been less-frequently analyzed in relation to school-aged children's internet use. Based on a 2-wave longitudinal study, this study examined parenting practices and child behavioral difficulties as both risk factors and sequelae of the child's excessive internet use in Latvia. Participating in this study were 230 school-aged children (mean age 8.6 years at baseline) and their parents, with both children and parents completing the Compulsive Internet Use Scale, as well as items regarding rules at home and at school regarding internet use. Parents also completed items about their parenting practices (Alabama Parenting Questionnaire) and evaluations of their child's behavior (Strength and Difficulties Questionnaire). Results showed child hyperactivity, inconsistent parenting and less pronounced parental rules to be predictive of child's compulsive internet use, which, in turn, was predictive of mental health difficulties. Both child-driven effects and parent-driven effects were found in relation to various aspects of the relationship between parenting practices and child behavioral difficulties, with differences found according to the child's gender. Discussion of the results includes practical implications as related to parental strategies which might help to mitigate excessive internet use and improve the child's mental health outcome.

### Compulsive internet use in young school-aged children: The exploration of associated factors

**Roma Jusiene** Vilnius University, Lithuania

More children in younger age are using the Internet extensively. Intensified, problematic or compulsive Internet use is associated with numerous indices of mental health (e.g., emotional and social problems, low self-esteem, dysregulation, etc.) in adolescence and young adulthood. However, young school-aged children's compulsive Internet use (CIU) is under researched. It is very important to find out early risks and protective factors for CIU, thus the aim of present study is to analyse the child and parental factors related to children's aged 7 to 10 years compulsive Internet use. The study sample is 239 dyads of second and third graders (mean age 8.46 years, standard deviation 0.54; 49.4% girls) and their parents in Lithuania. Children and parents completed questionnaires including the Compulsive Internet Use Scale (CIUS; Meerkerk et al., 2009), Internet use duration and activities, parental control and monitoring, rules regulating Internet use; additionally, parents provided sociodemographic information and reported child's emotional and behavioural problems on Strengths and Difficulties Questionnaire (SDQ; Goodman, 1996). Results show that agreement between parents and children on CIUS is good, with parents reporting higher mean scores than children do. Both, parents and children, reported significantly higher mean scores of CIUS for boys as compared to girls. Parental education was not related to CIUS. The higher mean score of compulsive Internet use was also related to more behavioural problems and less prosocial behaviour, but not to more emotional problems in young school-aged children. Children's reported less satisfaction in relationships with parents was also related to more CIU. Finally, the highest mean scores of CIUS are observed among children whose parents reported more controlling and regulating Internet use. Results of this study may imply that parental control and/or introduction of rules regulating child's Internet use could be not proactive or preventing, but reactive, e.g., intervening the already apparent child's impulsivity and compulsivity regarding Internet use.

### Patterns of children's internet use in Taiwan: The predictors and the consequences in relation to be

**Jeniffer Wu** National Taipei University of Education, Taiwan

This study aims to depict the patterns of children's Internet use and examine how that may relate to their behavioral and mental health outcomes. Survey data came from 304 dyads of children (mean age = 9.2) and their parents in Taiwan. A latent class analysis (LCA) approach was applied to identify patterns of use based on six Internet activities reported

by children, while child and familial predictors were further examined with multinomial logistic regression. For child outcomes, we adopted a 14-item scale reported by children to measure compulsive Internet use (CIU) and an externalizing score was derived from parents' reporting on the Strengths and Difficulties Questionnaire. LCA identified three distinct patterns of Internet use: low use ( $n = 90$ , 29.6%), medium use ( $n = 106$ , 34.9%) and high leisure use ( $n = 108$ , 35.5%). Being boys, older, with higher internalizing scores, and having no siblings and a less satisfactory child-parent relationship increased the likelihood of engaging in a high leisure use pattern as opposed to low use. Path analysis showed that a high leisure use pattern was associated with higher CIU even after controlling for time of Internet use, and CIU further led to more externalizing problems. Subgroup analysis by child's sex revealed that for girls, 'medium use' and 'high leisure use' patterns were predictive of higher CIU while only 'high leisure use' pattern was a potential risk for boys. In conclusion, young children demonstrate different patterns of Internet use which could lead to differential behavioral and mental health risks.

## 2971IS

### British psychological society symposium on screen use and social media among children

**Chair: Sonia Livingstone** *London School of Economics and Political Science, United Kingdom*

Parents are often given advice to limit their children's screen time. However, dissatisfaction with official advice on this matter has been mounting for some time and is increasing seen as unrealistic in the current, digital, age. Furthermore, there are issues in the extant literature due to scientific problems with evidence, practical issues with policy implementation and conceptual problems given the availability and appeal of screen use. Rather than parents being provided with simplistic rules to follow on this matter, which have the potential to be misrepresented in the popular press, what is needed is constructive guidance and policies that are derived from robust empirical research. This symposium has been organised by the British Psychological Society to bring together experts in this field to discuss current research and policy issues in this area. The convener for the Symposium is Professor Sonia Livingstone (London School of Economics and Political Science) with presentations by Professor Livingstone, Associate Professor Lucy Betts (Nottingham Trent University), Dr Gemma Taylor (University of Salford) and Dr Peter Etchells (Bath Spa University). The symposium is sponsored by Wiley.

### Screen time dilemmas: A parenting perspective

**Sonia Livingstone** *London School of Economics and Political Science United Kingdom*

Parents read the daily headlines about 'internet addiction', along with advice about limiting screen time, in parenting magazines or the popular press. At the same time, they are called upon to avail their child of digital opportunities to learn. In qualitative research with 73 London families, complemented by a national survey of 2000 UK parents, we explored parents' response to the dilemmas they face regarding the influx of screen media in their homes and their children's lives. Screen time rules can be welcomed by exhausted parents as a way to resolve the deluge of contradictory parenting advice and obviate the need for a complex and continual balancing act between resisting and embracing technology. Yet the outcome can be problematic: screen time rules lead to parent-child conflict, and they distract parents from addressing the actual activities their children engage in online and their potentially beneficial or harmful consequences. Also problematic is that the screen time discourse constructs the parent's own identity as 'police', notwithstanding parents' efforts to mediate their children's digital activities constructively – as co-learners, resource providers, 'brokers', teachers and even peers or pupils. As the survey showed, parents are working to enable children's online opportunities and address risks, an effort erased from public recognition by the screen time discourse. To replace the focus on screen time, the paper will conclude by advocating a focus on what (the content), how, where, when (the context), why and with whom (the connections) children are watching, playing and doing things with screen media.

### "It won't happen to me": Experiences and perceptions of cyberbullying and online risk

**Lucy R. Betts** *Nottingham Trent University, United Kingdom*

Despite the many benefits associated with digital technology use, using technology is not without risks. However, young people often downplay these risks suggesting an optimistic bias such that they believe they are less likely to experience cyberbullying and online risks. Therefore, this paper will explore optimistic beliefs when using digital technology and the propensity to disclose experiences of cyberbullying. Data collected from 16- to 19-year-olds (53 male and 84 female) revealed that participants thought that they were less likely to have their personal information stolen over the internet compared to others, especially those younger than them. Females also reported believing that they were more likely to have their personal information stolen over the internet than males. Data collected from 11- to 15-year-olds (319 male, 296 female) revealed that females and those who had experienced

cyberbullying said that they were less likely to disclose cyberbullying. Younger participants thought that their parents and the police would be helpful following disclosure of cyberbullying whereas females and friends thought that friends would be helpful. The reasons why young people said that they would not disclose cyberbullying experiences included that they could self-manage the situation, embarrassment, fear that disclosure would make the situation worse, and a belief that others would not help. Together, the findings highlight that some young people hold potentially optimistic beliefs about the relative risks of using digital technology and the complexity around disclosure of negative online experiences.

### Apps for pre-schoolers: Investigating educational potential

**Gemma Taylor** *University of Salford, United Kingdom*

Preschool age children reportedly spend 6 hours per week using digital games (Ofcom, 2019). The interactive learning afforded by touchscreen apps has the potential to support children's learning if an app promotes active, engaged, meaningful and socially interactive learning (Hirsh-Pasek et al., 2015). In addition, given that the language children are exposed to is related to their language development (Weisleder & Fernald, 2013), the language used in touchscreen apps has the potential to support children's language development. We systematically assessed the educational potential and educational features of apps targeting 2–5 year olds from the top 10 lists in the app stores ( $N = 44$ ). Educational apps ( $N = 15$ ) were labelled as such based on the presence of a clear learning goal. Overall, educational apps had a higher educational potential, more cognitive activities and were more likely to include activities that require feedback than games ( $N = 29$ ). Differences between free and paid apps were limited to aesthetic features only. Thirty apps in our sample contained language, educational apps ( $N = 15$ ) included more utterances, a higher frequency of single word utterances and words with on average earlier age of acquisition than gaming apps ( $N = 15$ ). Compared to child-directed speech and storybooks, educational apps contain simple language but lack the social interaction component important for language development. Like storybooks, educational apps contain lower frequency words thus, potentially exposing children to a wider range of vocabulary. There are a number of avenues by which educational apps could be developed to enrich children's early learning environments.

## ORAL PRESENTATION

8234

**Social cognition of mother-child**

## of multicultural families in South Korea

**Joohee Lee (1), Kee-Hong Choi (1), Silvia C. Lopez (2)** 1. *Korea University, South Korea*; 2. *Central Connecticut State University (CCSU), United States of America*

Backgrounds: International marriage in South Korea has been steadily increased, and the ratio of international marriages between Korean male citizens and female immigrants accounts for the majority. However, little has been studied about multicultural mothers' social cognition and its associations with their children's social cognition. Thus, the present study examines how maternal social cognitive capacity would associate with children's social cognition (e.g., mental state attribution and emotion processing) among multicultural families in Korea. The current study hypothesized that (1) greater bias in social cognition in mothers would be positively associated with greater bias in their children, and (2) greater bias in social cognition in children would be associated with greater functioning difficulties. Methods: Thirty-nine multicultural mother-child dyads were recruited. The following comprehensive social cognition measures were administered: the Social Attribution Task-Multiple Choice, the Facial Emotion Identification Task, and the children version of the Bell Lysaker Emotion Recognition Task. Social functioning was measured using Social Aptitudes Scale. Children's functioning was measured with Leahy Emotional Schema Scale II, Difficulties in Emotion Regulation Scale, and Youth Self-Report. Results: The data were analyzed using hierarchical regressions. Regression analyses indicate that mother's social cognition accounts for 21% of the variance in child's emotion recognition, 20% of the variance in child's theory of mind, and 22% of the variance in child's social functioning. Furthermore, children's social cognition accounts for 50% and 23% of the variance in their emotion regulation and emotional schema, respectively. Conclusions: This is the first study examining social cognition of multicultural mothers and its role in their children's social cognition and social functioning. The findings suggest the importance of the maternal factors predictive of children's social cognition ability among multicultural families in Korea and inform us for further development of a supportive mother-child social cognition training program for multicultural families.

7734

## Symbolic play and children's development: Time and social playing

**Laura Léniz** *Portugal*

Symbolic play promotes the child's emergent cognitive and language abilities. It should be noted that the most common form of symbolic play is social, that is, with other

children or caregivers. The study aimed to analyze the association between weekly symbolic playtime children spent and children's development. The second objective was to examine the differences in child development between children who engaged in symbolic play with other children with those who did not. The sample consisted of 54 children (34–66 months). The parents completed: (a) Ages and Stages Questionnaire Third edition to measure communication, motor and solving-problem development and Ages and Stages Questionnaire Socioemotional to measure the socio-emotional development of children and their areas (self-regulation, compliance, autonomy, adaptive functioning, affection, social communication, and interaction); (b) an ad-hoc questionnaire to register the time that children dedicate weekly to symbolic play, and if their children engaged in symbolic play with other children or not. Pearson coefficient analysis showed a significant correlation between children who spent more time in symbolic play with better social-communication and adaptive-functioning development. Student *T* for independent samples indicated that interaction, adaptive-functioning, and problem-solving development were better for children when they played with friends. The effect of children engaged in symbolic play with other children on the problem-solving development mediated of interaction, social-communication, adaptive-functioning, and socioemotional development total scores was significant. These results provide evidence of the importance of symbolic play for cognitive and social development and contribute to the growing literature of social and emotional's skills in problem-solving.

6877

## The impact of vision loss on tactile remapping

**Giulia Cappagli (1), Matej Hoffmann (2), Lisa Chinn (3), Giorgia Aprile (1), Elena Saligari (1), Antonella Luparia (1), Jeffrey Lockman (3), Monica Gori (4), Sabrina Signorini (1)** 1. *IRCSS Mondino, Italy*; 2. *Czech Technical University in Prague, Czech Republic*; 3. *Tulane University, United States*; 4. *Istituto Italiano di Tecnologia, Italy*

Several studies suggest that congenitally blind individuals develop body perception differently compared to sighted individuals and rely more on skin-based rather than external reference frames. Recent studies revealed that sighted infants show evidence of tactile remapping during the first year of life, being able at 18 months to reliably reach to vibrotactile stimuli on the face and body locations. On the contrary, little is known about the development of body reaching and tactile remapping in blind children. In the present study, we investigated the developmental trends of the

body reaching and tactile remapping in children with complete or partial lack of vision. We assessed whether the visual impairment impacts on the ability to reach a vibrotactile stimulus on the body. We compared the performance of visually impaired and sighted participants from six to twenty-four months of age in a task requiring them to find and remove a vibrotactile stimulus on the body spontaneously. Results show that sighted and visually impaired infants reach differently for vibrotactile targets on the body depending on whether the targets are potentially visible (e.g., top of hand) or non visible (e.g., forehead), indicating that vision might be fundamental to develop appropriate body reaching capabilities. These results suggest a potential risk for visually impaired children to acquire body awareness later compared to sighted children due to the lack of visual feedback of body movements during early development. With this study, we highlighted the developmental features of reaching tactile targets on the body in the visually impaired child and stressed the importance of introducing multisensory stimulation in early therapeutic intervention to foster body awareness from an early age.

6485

## The effect of picture book reading on children's language development in rural China

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There are a large number of children in rural areas in China, which makes us pay more and more attention to their education and psychological development. To understand the language development of them and explore a convenient and effective method to improve it, the present study selected two kindergartens in 2 different rural counties to carry out the intervention for six months. A total of 170 children aged 4–6 years old participated in the study. According to their kindergartens, children were divided into intervention group ( $N = 71$ ) and control group ( $N = 99$ ), the first one was trained to read picture books monthly while the second was exposed to the same books without guidance. Peabody Picture Vocabulary Test (PPVT) was used to examine all children's receptive vocabulary before and after the intervention. The pre-test results show that before the intervention children in the control group had higher scores than the intervention group significantly because it was better with much government support and good facility; After half a year of picture book training, the post-test results show that the significant differences between the two groups before the program disappeared which means children in the intervention group improved their vocabulary more



quickly. There are no sex differences. In conclusion, picture book reading is a helpful and feasible way to promote the language development of preschool children in rural areas, and children with basic reading and comprehension abilities are more likely to benefit from it.

6203

### The relation between physical competence and spatial working memory among pre-schoolers

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The aim of the current study was to investigate relationships between aspects of physical competency and the domain of executive functions (EF) such as working memory. Research sample consisted of 260 5–6 years old preschool children (boys 49%). For assessing motor competency three physical fitness tests (broad jump, sit and reach, shuttle running 4 × 5 meters) and motor skill test (throwing my left and right upper limb) were used. Memory for designs was used to assess visual and spatial working memory. All values were converted to Z-scores. Based on results from motor competency tests children were divided into three groups: (1) under average (<25th centile ( $n=78$ )), (2) average 25th–75th centile ( $n=113$ ), and 3) above average ( $n=69$ ). One-way ANOVA on ranks was applied to analyze differences between groups. Analyses revealed that children with average and above average motor competences achieved significantly better scores compared to under average peers. In addition, children who achieved above average performances in test which demanded higher coordination such as shuttle run and throwing by either right and left hand scored significantly positive better in the spatial working memory task compared to counterparts with under average results. These findings provide support for design balanced educational programs for pre-school children. Funding: This research was funded by RFBR grant number 19-29-14111.

5898

### Perception of war and peace among children in Northern Uganda

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Children's awareness of the concepts of war and peace has been widely researched in Western countries such as United Kingdom, United States, and Israel. Perceptions of war and peace are, however, less well documented amongst children in Northern Uganda. This article explores the post-conflict perceptions of life amongst 11–16 year-old Ugandan children, and investigates the possibility that this

information may be a result of narratives from family members. One hundred and ninety three children in primary seven from two worst and two least affected villages in Gulu and Nwoya districts in northern Uganda completed four assessments: an essay writing exercise, the Ladder scale, the African Youth Psychosocial Assessment (AYPA) and an information check. The essays were analysed using content analysis which generated eight categories of awareness of the past and future. These were: (1) old lifestyle; (2) war activities; (3) military groups; (4) impact of war; (5) education; (6) development; (7) peace-related words; and (8) war-related words. Chi square tests revealed that children's awareness of war and peace did not associate with sex or age. MANOVA showed that living with both parents appeared to be a buffer to poor mental health functioning. Discussion and interpretation of results centres on the socio-ecological framework.

5449

### Study on the relationship between paternal rearing style and children's creative personality

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The preschool stage is crucial in the development of children's creative personality. In 2012 the ministry of education issued the 3–6 years old children's learning and development guide, pointing out: we should not only cultivate children's curiosity in the fields of science, language and art, imagination and creativity, but also consider these qualities as one of the important indices for children's all-round development. The role of parents in creative personality development may be different. Father usually provides much more game time, space and way when in communication with children. All of those are very important for the development of children's creative personality. With the questionnaire method and case analysis, the study selected 120 children and their fathers in a kindergarten of Dalian as the research objects, exploring the relationship between the father parenting and children's creative personality, educational suggestions are put forward based on the conclusion of the research. Conclusions: 1. 3–6 years old children's creative personality presents a trend—first rising and after downward, the turning point of middle shift for children's creative personality development. 2. Father parenting does not change along with the growth of the children's age and shows some stability. 3. The development of children's creative personality has a close relationship with father's parenting. Father's inconsistent parenting is conducive to the further development of children's creative personality. Education advice: Father can carry out flexible and open parent-child activities to promote the

development of children's creative personality; Other family members should change the traditional educational ideas, supporting and helping improve the level of participation in assisting the father; kindergarten should do a good job in promoting the co-parenting to help fathers improve their family education.

5302

### Understanding caregiver's perspective in enhancing resilience of children in Pakistani orphanages

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The focus of this research is on exploring the concerns of caregivers of children residing in orphanages in Lahore, Pakistan. Pakistan is home to 4.2 million orphaned children. As per previous researches more than 50% of orphanages provide inadequate social and emotional environments where as orphanage care is usually characterised by caregiving practices which comprise insufficient parental training along with personal and professional dissatisfaction, and internal conflict among themselves. The limited present studies on caregiving in orphanages indicate that these caregivers seldom have specialised qualifications and experience excessive workload and stress levels. As establishing higher quality child-caregiver relationships leads to encouraging outcomes in children's psychological health so close and dependable emotional connections between caregivers and orphan children can be an effective psychological buffer against future adverse events and situations. Moreover, training orphanage caregivers to provide warm, responsive and consistent caregiving can improve children's psychological and physical development. Therefore this research aims to understand the main parenting related challenges faced by caregivers and what are their needs regarding these concerns along with exploring main emotional, behavioural and psychological issues reported by orphan children. A semi-structured open-ended interview guide and Data synthesis sheet was developed by the researcher to record information for thematic analysis. Preliminary findings from the recent data collection will be discussed around main findings and challenges which the researcher experienced by being in the field. Results of this research will become foundation for the upcoming research which focuses on helping caregivers of those orphanages via participating in an evidence based parenting program, Triple P, which has never been used in Orphanage settings and most importantly in Pakistan before.

4902

### Relationship between narrative and emotion understanding in 5-6-year-old children

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The study examined the relationship between emotions comprehension and pragmatic aspects of the narrative in preschool age. The idea of interrelation of emotions understanding and narrative goes back to L.S. Vygotsky's fundamental idea about connection of affect and intellect (Vygotsky, 1960). However, works that reveal on empirical material the mechanisms behind the development of emotions and oral language remain the prerogative of neuropsychology and patopsychology (Hadwin, Baron-Cohen, Howlin, 1997; Harris, Rosnay, Pons, 2005). The study involved 269 children aged 5–6 years (133 boys and 136 girls) attending the senior group in Moscow kindergartens. The Test of Emotional Comprehension (Pons, Harris, 2000) and two NEPSY-II subtest the «Theory of Mind» and «Affected Recognition» (Korkman, Kirk, Kemp, 2007) were used to assess children's emotion understanding skills. Children also performed a story retelling and a story generation (compiling a story from a series of pictures) tasks (Akhutina et al., 2018). The study was agreed with the Ethical Committee of the Russian Psychological Society. The study reveals the connections between the results of the Test of emotional comprehension and the pragmatic aspects of the narratives on a series of pictures or retelling by preschoolers: semantic completeness of the text, its adequacy, narrative completeness, understanding the actions of the characters in stories. In addition, the study shows that children with a higher level of emotion comprehension cope better with the semantic aspects in the narratives construction, answers to questions and a pragmatic understanding of both images and text. Thus, the study showed the importance of child's emotional understanding improvement for more successful communication with others (able to convey their thoughts in speech) that is very meaningful for future school adaptation. This research was funded by RFBR grant №17-29-09112.

4877

**Doing gender through play: Children's construction of norms**

**Martina Cabra** University of Neuchâtel, Switzerland

In this paper I present the results of a study on children's construction of gender norms in play. Sociocultural psychology, while interested in the making of the social and the subjective, has scarcely addressed the way in which gender norms frame the field of possibilities in children's lives. From the standpoint of a socio-cultural psychology, I conducted a longitudinal in-depth ethnographic case study of children in Switzerland to explore the intertwining of institutional guidelines, explicit directives,

implicit norms and children's rules in play. The data was analysed through plot and dialogical analysis. I identified four strategies children deploy to deal with gender norms and two processes that allow the construction of such strategies. Either through quiet resistance, open conflict, compromise or alternative propositions, in all cases, children adopted an active role in their engagement with norms. The combination of a first and third person perspective in analysing gender norms in school and families and the way children engage with these allows for a theoretical discussion between a performative approach to gender and a socio-cultural psychological standpoint.

4370

**Children's safety online and parental involvement: Differences in Norway and Lithuania**

**Neringa Grigutyte (1), Saule Raiziene (1), Vilmaite Pakalniskiene (1)** 1. Vilnius University, Lithuania

Internet has become an integral part of our daily lives. Digital space may serve as a rich source of information and opportunities, but at the same time, may create increased set of risks. Internet use includes the provisioning of children, but it becomes more private and inaccessible to parental oversight. Previous study show, that children who use Internet daily and whose relationship with parents are disturbed, experience more cyberbullying and do not feel safe online. This study aims to reveal how parental involvement in children's Internet use helps them to cope with issues that are online and are related to safety. Cultural background is taken into account comparing the data from Norway and Lithuania. Representative populations of children from 9 to 17 years old and one of parents took part in the study: 1012 Lithuanian children (52% boys and 48% girls; 38% dads and 62% moms) and 1001 Norwegian children (52.5% boys and 47.5% girls; 47% dads and 53% moms). This survey is part of an international study "EU Kids Online". All the data were collected in national language using the same methodology. The results show that 20 percent of children in both countries experience something on Internet that bothered or upset them, but children in Norway feel more safe online. It may be due to children in Norway tell parent about things that bother or upset on Internet and feel that parents help in such situations more than in Lithuania. Children's and parents' reports differ, e.g., more children think that parents use parental control on Internet than parents themselves say, though parental control on Internet is used less in Lithuania according to both children and parents. The differences in Internet use between countries and in reporting by children and parents as well as effects of cultural background are discussed.

4363

**Preliminary study of emotional regulation strategies in elementary school children with ASD**

**Ishin Okano (1), Yuko Takei (2), Masaharu Terasaki (2), Masako Kadota (2)** 1. Japan; 2. Kawasaki University of Medical Welfare, Japan

Objective: This study investigated when and which type of emotional regulation strategies should be used in the for negative emotions displayed by middle-grade elementary school children with autism spectrum disorder (ASD) by using experimental observational methods. This study also investigates when emotional regulation strategies were used. Methods: In the experimental condition, four children with ASD (All boys, Mean Age, 9.3 years), worked on two tasks consisting of unsolvable puzzles that made them develop negative emotions (experimental condition), and in the control condition, they worked on two tasks consisting of solvable puzzles. Results: Children expressed more negative emotions in the experimental than in the control condition. Also, more negative emotions were aroused in the experimental condition for the first task than for the second task. Moreover, many goal-directed behaviors were observed in the experimental and control conditions. Furthermore, children used different types of strategies more often in the experimental than in the control condition. Additionally, children in the experimental condition more often used different types of strategies in the first task than in the second task. Finally, most children in the first task of the experimental conditions, more often used different types of strategies from the middle to the end of the task. Conclusions: These results suggest that children are able to regulate emotions by using more strategies when negative emotions are aroused. It is planned to increase the sample size in future studies and compare the emotional regulation strategies of children with and without ASD.

4249

**Paediatric negative dental experiences in South Africa: Preliminary findings from the Eastern Cape**

**Ashwin Navsaria** Nelson Mandela University, South Africa

The prevalence of clinically significant dental anxiety ranges between 3 and 10 per cent globally. Although the aetiology of dental anxiety is multifactorial, childhood negative dental experiences have been shown to be important in the genesis of this phenomenon. Given the limited understanding of the phenomenon within the South African context, this research project focused attention on the perceptions of negative dental experiences as they are understood by all stakeholders in the public healthcare sector, namely paediatric patients, their parents or



caregivers, and the clinical staff. Bronfenbrenner's bioecological model of human development which was utilised as a lens, provided a framework for the development of a more comprehensive perspective of negative dental experiences, as encountered in the South African public dental context. A convenience sample of paediatric dental patients was assessed via behavioural observation, in order to gauge the prevalence of negative dental experiences in the designated dental setting. Semi-structured interviews were also conducted with patients that experienced a high level of distress during their procedures, as well as their parents/caregivers and the dental staff of the identified dental facility. This presentation presents preliminary findings derived through the analysis that was conducted.

### 3984

#### Links among mother-child interactions, home environment, and children's strengths and difficulties

**Yuko Yato (1), Yi Sun (1), Peg Barratt (2), Shaylynn Quinn (2)** 1. *Ritsumeikan University, Japan*; 2. *The George Washington University, United States of America*

This study investigates the relationships among mother-child interactions, home environment, and children's social abilities, applying the Interaction Rating Scale (IRS; Anme, Yato, Shinohara, & Sugisawa, 2007) to children and their mothers in the U.S. The IRS is a widely used assessment tool developed in Japan, in which third-party observers evaluate caregiver and child behaviors. In this study, the teaching interactions of 44 American children (3-6 years old) and their mothers were recorded on videotape and evaluated using the IRS. The mothers were asked to teach the child a task that is slightly difficult for the child to accomplish alone. During the process, the mother introduces the task and helps the child as she would in daily life. To assess the home environment and the child's internalizing and externalizing, mothers completed the Index of the Child Care Environment (ICCE) and Strengths and Difficulties Questionnaire (SDQ). Multiple regression analyses were performed to assess the relationships among IRS, ICCE, and SDQ. The results revealed that the mother's "respect for autonomy development" in the IRS was related to the total score ( $\beta = -.437, p < .01$ ), and an internalizing on the SDQ ( $\beta = -.335, p < .05$ ). In addition, mother's "avoidance of restriction" in the ICCE was related to the total score ( $\beta = -.402, p < .01$ ) and internalizing ( $\beta = -.329, p < .05$ ) on the SDQ. The child's "emotional self-regulation" in the IRS was related to the total score ( $\beta = -.54, p < .01$ ) and an internalizing on the SDQ ( $\beta = -.815, p < .01$ ). The results showed that mothers' respect for children's autonomy and their avoidance of restricting the child were linked to children's strengths and

difficulties, and that the children's emotional self-regulation observed during teaching interaction reflected the daily problems assessed by the mother. These results support the validity of IRS and shows the applicability of IRS to American mothers and children.

### 3582

#### Physical fitness predicts precision of approximate number system in pre-schoolers

**Mingming Zhao (1), Xiaoxu Meng (1), Zhaohui Zhang (1), Binn Zhang (1)** 1. *Shanghai University of Sport, China*

Object: Physical exercise intervention has demonstrated its beneficial effect in improving children's academic performance in mathematics (Fedewa, 2015). The relationship between children's mathematical abilities and approximate number system (ANS) has been confirmed by several studies (Schneider, 2016). The purpose of this study is to examine the relationship between preschoolers' physical fitness and the acuity of ANS. Method: 143 children (70 girls) aged 5-6 ( $5.5 \pm 0.27$ ) were recruited from a kindergarten in Shanghai. To measure the acuity of preschool children's ANS, we used Panamath, a non-symbolic numerical comparison task (Halberda & Feigenson, 2008). Go-nogo task was used to assess preschoolers' inhibition control. PREFIT fitness test battery was employed to assess children's fitness. The battery includes weight, height, waist circumference, 20 m shuttle run tests, handgrip strength, standing long jump and 4x10 m shuttle run. Result: Analyses revealed significant correlation between weber fraction of ANS and cardiorespiratory fitness ( $r = -0.192, p = 0.024$ ), speed-agility ( $r = -0.206, p = 0.015$ ), no significant correlation with other variables. Then we conducted hierarchical linear regression analyses. First step, we entered age and gender as variables. Next step, we entered response inhibition, which significantly predict ANS development in preschool (Purpura, 2018). Finally, we added cardiorespiratory fitness or speed-agility. We found that cardiorespiratory fitness ( $\beta = -0.167, t = -0.1997, p = .048$ ) and speed-agility ( $\beta = -0.189, t = -2.218, p = .028$ ) were significant predictors of ANS precision even when controlling for age, gender and response inhibition. Conclusion: The study provides evidence supporting that cardiorespiratory fitness and speed-agility predict acuity of ANS in preschoolers.

### 2762

**Are active kids smarter? Relationship between physical fitness and executive function in pre-schooler**  
**Xiaoxu Meng (1), Mingming Zhao (1), Zhaohui Zhang (1), Binn Zhang (1)** 1. *Shanghai University of Sport, China*

Objectives: Physical fitness has been found to play a positive role in brain development

and cognitive performance of children. The present study aims to investigate the relationship between physical fitness and executive function (EF) in preschoolers. Methods: 144 children (Mage = 5.5, SD = 0.27) participated in the experiment. EF were assessed using EF Touch, a computerized battery of EF tasks for use in early childhood. EF tasks include Go/No-Go, Working Memory Span, and Something's the Same, three core components of executive function (i.e., inhibitory control, working memory, and shifting). Physical fitness (i.e., cardiorespiratory fitness, muscular strength, speed-agility) was assessed using the PREFIT battery. Results: A series of two-step hierarchical regression analyses were conducted. There was a significant effect for the PREFIT 20m shuttle run ( $t(140) = 3.145, p = .002, \beta = 0.262$ ), indicating that higher levels of cardiorespiratory fitness associated with better task performance of shifting. Higher levels of lower-limb muscular strength were associated with better task performance of shifting ( $t(140) = 2.603, p = .01, \beta = 0.219$ ). The PREFIT handgrip strength ( $t(140) = 2.443, p = 0.016, \beta = 0.215$ ) were associated with better task performance of inhibitory control after controlling gender, age and BMI. There was a significant effect for the PREFIT 4x10m shuttle run ( $t(140) = -3.325, p = .001, \beta = -0.269$ ) on inhibitory control. Conclusions: These findings suggest that physical fitness may be beneficial to executive function of preschoolers.

### 2603

#### The mechanism of teacher-student attachment and life satisfaction among Chinese left-behind children

**Angyang Li (1), Shuo Wang (1), Xiangping Liu (1)** 1. *Beijing Normal University, China*

Left-behind children (LBC) are vulnerable because they are separated from their migrant parents. Attachment theorists and studies have indicated that teacher-student attachment (TSA) might be a protective factor and compensatory secure base for LBC's life satisfaction. However, the mechanism of the link between TSA and life satisfaction is unclear. Besides, few studies focus on the differences in the underlying processes among LBC and un-left-behind children (ULBC). The current study explored the serial mediating effects of hope and resilience in the relationship between TSA and life satisfaction among LBC and ULBC. A total of 317 LBC (Mage = 10.78, SD = 1.09) and 378 ULBC (Mage = 10.54, SD = 1.07) from rural China were recruited to complete scales. Results revealed that TSA positively related to life satisfaction through the serial mediation effect of hope and resilience. Specifically, compared with ULBC, the correlation powers of "TSA → hope" and "TSA → resilience" for LBC were significantly stronger. Some implications are that hope and

resilience could be the underlying mechanism of the connections between TSA and life satisfaction, and teacher as the secure base for LBC might be more important than that of ULBC.

## 2066

### Impact of the birth of a new sibling in older siblings' physical and mental health

**Gabriela Fajardo (1), Mauricio Apablaza (1)** 1. *Universidad del Desarrollo, Chile*

This study estimates the impact of a newborn on the older sibling's health using Difference in Difference models in a unique longitudinal survey data from Chile. Modern families in developing countries have experienced an adjustment in the number of its members, in comparison to a few decades ago. So, it has become relevant to show evidence of the impact of these adjustments on children's development and health. For health indicators, we used children's growth measured as the WHO *z*-score for weight and height by age, as well as the prevalence of respiratory diseases. For a mental health proxy, we used a socio-emotional development index (CBCL). The survey considered children that were from 0–4 years old on the first measurement, and it currently has 3 waves: 2010 ( $N = 15.175$ ), 2012 ( $N = 18.310$ ) and 2017 ( $N = 22.810$ ). Our analysis shows that the birth of a sibling from wave to wave increases the prevalence of respiratory diseases in the older sibling in some cases, but did not have an impact on the growth indicator. On the other hand, children with new siblings present an improvement on the mental health index proxy, as seen on most of the models for the 3 different waves. The results point to an improvement in older sibling's mental health possibly due to the impact of early socialization, but a deterioration of respiratory health. This is aligned with parental investment theory, as well as with previous evidence that suggests that children with siblings develop more and better socio-emotional skills. Further research should explore the effect of sibling's gender (same or different), and what happens when the birth of the sibling occurs before the older one is 2 years old.

## 2059

### Skin color perception and self-consciousness in young children: A study in two French preschools

**Jennifer Kerzil** *UCO, France*

Researchers generally agree that from 0.3, babies perceive color much before being able to name it. Gérard, et al. (1989) have found that children are able to recognize and categorize colors from 3.5 years old. In the USA, social psychologists have long been interested in the perception of skin-color in children (black vs. white), while in Europe, most experiments (mostly in cognitive science) have focused on objects' color perception. Yet, in France, there is a majority group (whites) and

minority groups (ranking from light to dark brown). In America, authors have shown the effects of skin-colors in terms of racial attitudes (Kowalski, 2003; Williams, et al., 1975) and concluded that children with darker skin-color have lower self-esteem (Rosenberg and Simmons, 1970). According to Piaget (1932), a child comes to discover himself through a progressive comparison of his own body with other people's bodies, starting from his parents and peers. Thus, our study aims to assess young children's skin-color perception and its consequences. The methodology was based on directive interviews and a material composed of different photographs. The children, aged from 3 to 6, went to two different schools: a white majority school located in the country side ( $N = 51$ ) and a diverse school located in a suburban neighborhood ( $N = 35$ ). Children were asked "which color are you?", "which color is he or her?", had to categorize pictures (4 women, 4 men, 4 children from 4 ethnical groups – Arabic, Asian, European and African) and answer to questions about skin-color and babies. The results show that children in the predominantly white school acquire knowledge of their own and other children's skin-color later than children who live and attend school in a more diverse environment. In light of these findings, we discuss the impact of skin-color differences among adopted children.

## 1974

### The scaling development of theory-of-mind and reciprocal sharing in preschool children

**Wen Liu (1), Weiwei Wang (1)** 1. *Liaoning Normal University, China*

Even young children could engage in reciprocal sharing behavior, but during the development, the psychological capacities underlying such reciprocity remain unclear. Therefore, we first test when children aged 3 to 5 began to adjust their sharing behaviors between reciprocal and nonreciprocal interactions. In the experimental condition, child shared with the other child and their roles (giver & receiver) were alternated in the next round. In the control condition, child's partner had no chance to reciprocate. Results showed that child age, but not child gender predicted their sharing behaviors. With the age increased, child shared more resources in the experimental condition, but not control condition. Moreover, children aged 4 to 5 were sensitive to the possibility of reciprocation by sharing more resources with a partner who subsequently reciprocated than with a partner who was unable to reciprocate. In addition, we found that children's theory-of-mind ability was positively related to their tendency to reciprocal sharing. Our findings suggested that children's reciprocal sharing emerges in the age of 4–5 and highlight the important role of theory-of-mind ability in children's reciprocity.

## 1702

### Quality of life and social support in children from impoverished households in Japan

**Takahiro Yoshizumi** *Chubu University, Japan*

With the widening economic divide in Japanese society, emphasis on the issue of children in poverty has also been increasing. Economic factors not only affect the necessities of life for these children but also their quality of life (QOL) and social relations. The purpose of the study was to examine the characteristics of lifestyle and learning habits, social support, and QOL in children from impoverished households. Junior high school students from households that receive welfare ( $n = 132$ ) and students from ordinary households ( $n = 256$ ) completed a questionnaire that focused on lifestyle and study achievements and a scale that measured QOL and social support. The results showed that students from impoverished households had not formed study and breakfast habits, and slept fewer hours compared to students from ordinary households. Although there were no differences in the QOL between the two groups, the students from impoverished households perceived less support from their teachers than the students from ordinary households. In addition, the QOL of the students from ordinary households was associated with support from parents, teachers, and friends, while the QOL of students from impoverished households was mainly associated with support from friends. These results suggest that children from impoverished households need improvements in their lifestyle habits, such as breakfast and sleeping habits, and require more support in their schools.

## 1383

### Allergic diseases and children's behavioral problems: The mediating effect of parental anxiety

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Objective: The present study aimed to examine the association between allergic diseases and children's behavioral problems and further examine the mediating effect of parental anxiety as the psychosocial mechanism of the association. Methods: Two hundreds and fifty-seven parents of children aged 3–6 years old participated in the study. Behavioral problems and parental anxiety were reported. Results: (1) children with allergic diseases were scored higher in emotional problems and conduct problems than children in the control group; (2) Parents of children with allergic conditions had higher anxiety level compared with

those parents of children without allergic diseases; (3) Parental anxiety fully mediated the association between allergic diseases and children's emotional problems and had a partial mediating effect on the association between allergic diseases and conduct problems. Discussion: The study highlighted the importance of reducing parental anxiety in promoting mental health of children with allergic diseases.

401

### Patient's needs for counselling at paediatric department in Japan

**Kimiko Takeda** *Shiseikai Daini Hospital, Japan*

Objective: According to research in 2015 by the Japanese Society of Certified Clinical Counselor, 3586 (35.9%) out of 10,321 respondents from all over Japan worked in clinics and hospitals, which was the largest of the whole respondents. This study analyzes counseling cases of pediatric patients to identify patient's needs and gives suggestions to certified clinical counselors in pediatrics field. Methods: In order to analyze patient's needs, data from two groups (A and B) of counseling cases at pediatric department in a general hospital were compared; group A of 60 cases during 2 years from 2016 to 2018, group B of 100 cases during 6 years from 1997 to 2003. Results: The results showed an increasing demand for counseling in group A. Forty two percent of the cases were diagnosed as pervasive developmental disorder, which was the largest in group A (significantly larger than in group B). Out of these cases, 36% came to hospital by parent's decision or by recommendation from school teachers. Conclusions: After research by the Japanese Ministry of Education in 2012 to find possible rate of children with developmental problems at school, developmental disorders have come to be noted. This background is assumed to increase counseling cases in group A. To provide effective psychological support in counseling to children with developmental disorder, it is important to fully understand their difficulties in their daily lives and think how to best support them.

220

### Play and use of the body in latency aged girls; an aid to psychotherapy

**Shireen Dossa** *Ambedkar University, India*

The psyche and the body are deeply connected and tend to influence each other in many ways. Unpleasant and unprocessed feelings manifest through the body with symptoms like aches, rigidity, lack of coordination, etc. This paper talks about an early intervention initiative for latency aged girls in the Indian society through group therapeutic activities and sports. The format of this initiative is to build confidence through expression and experience of the body,

through learning skills of a sport and building on strength and endurance. In India, individual competition is prevalent in society, both in academia and extra curriculars. There is very less emphasis on team and collaborative work, especially for girls who are not encouraged to take on team sports, or sports in general. This paper also uses an individual case of a 10-year-old girl, for whom these group sessions are an aid to expression and addresses underlying aggression that she harbors due to a fragile relationship with her mother. The work of the psyche and soma, together, i.e., play, exercise and sport, talks of unblocking expression of feelings and allowing a way of processing events that cannot take place through mere usage of words in a child's life. Play and sport therefore being looked at as lifting inhibitions that are manifesting in the body through psych-ic blocks and anxiety.

## POSTER PRESENTATION

8383

### Children's expression of life in the post-conflict Northern Uganda

**Grace Lapwoch** *United Kingdom*

There is a plethora of information about children's perception of war and peace in other parts of the world that have experienced protracted conflict like Northern Ireland, Palestine, Jordan and Iraq. Drawing tasks have been used to explore these concepts. However, little is documented about the use of drawings with children in northern Uganda who experienced war for almost over 20 years. This study therefore explored children's expression of life amongst 8–14-year-olds children in northern Uganda. In 2012, a total of six hundred and thirty eight children in Primary four from four villages in Gulu and Nwoya districts participated in drawing tasks. "Gulu/Nwoya in the Past" and "Gulu/Nwoya in the Future" guided the tasks. Categories were derived from words or images children used in their drawings. Five major categories emerged from children's expressions of the past. These were; "military groups", "war activities", "reminders of war", "impact of war" and "old lifestyle". Three major categories emerged under their expressions of the future. These were "education", "development" and "war-related" images. Children expressed their views of life in terms of war and peace. Interactions within the social-ecological system may provide insight into children's understanding of these concepts.

8046

### Features of personal development among gifted preschoolers in the socialization context

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Research problem: Social life of gifted children attracts pedagogues' and psychologists' attention for many years. Working on the problem of socialization difficulties that a gifted child may face, we suppose that the category of children has specific features of personal development which are connected with some obstacles that prevent timely solution of socialization tasks. Objectives: To define peculiarities of personal development among gifted preschoolers in the socialization context. Methods: To identify features of personal development we applied methods of questioning, testing, interviewing pedagogues and preschoolers ( $n = 540$ ). Results: We analyzed the following developmental indications: etiquette, gender and age development, comprehension of the moral norm, interests, relationships with peers, I-image and self-assessment. The obtained data: most potentially gifted children demonstrate a high or rather high level of decent behavior (in comparison to peers); the majority of potentially gifted children and their peers achieve proper gender perception by 5–7 years old. Potentially gifted children demonstrate a high rate of autonomy. Sixteen tested children have negative behavioral features, which may be explained by the fact that success in some area does not mean subservience. At that age children show greater achievements in sports, Arts, leadership and intellectual spheres. There is a high percentage of leaders (13%) among potentially gifted children. Along with this, there are a lot of outsiders (17%). Majority of potentially gifted children have great self-assessment. We shall admit that 13 percent of potentially gifted children are not aware of their abilities. Conclusions: The results obtained in the research prove the necessity to conduct social-pedagogical work with potentially gifted children. This shall include specific interaction to help children realize their personal "I" and their identity.

7895

### The role of restrained and uncontrolled eating in children's concerns about body and quality of life

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Objective: The aim of our study was to assess whether the relationship between perceived weight problems/distorted cognitions about weight or shape and quality of life was moderated by restrained and uncontrolled eating among children. Methods: Two hundred and seventy-seven children (52.48% women) participated in the study (Mage = 12.23, SD age = 2.80; M BMI = 23.29, SD BMI = 6.27). Measurement tools included the Three-Factor Eating Questionnaire (maladaptive eating



styles: restrained and uncontrolled eating), the Eating Disorders in Youth-Questionnaire (perceived weight problems and distorted cognitions about weight or shape) and the Satisfaction With Life Scale-Child (quality of life). Results: Our results indicate that among children the effects of perceived weight problems on quality of life is moderated by restrained eating and this relationship is significant only on medium and high level of restrained eating,  $R = .25$ ;  $F(3, 274) = 6.03$ ;  $p < .01$ ;  $MSE = 21.40$ . Moreover, distorted cognitions about weight or shape have a negative impact on quality of life when participants have medium and high levels of uncontrolled eating,  $R = .28$ ;  $F(3, 274) = 7.94$ ;  $p < .001$ ;  $MSE = 20.73$ . Conclusions: These results therefore confirm that low level of described above maladaptive eating styles can be protective factors for the effects of children's concerns of weight and shape on quality of life. This information can be considered in the future when designing interventions on body image concerns and eating behaviors in children.

### 7185 Ideas about difficult situations among 11–12-year-old preteens of different generations

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It is known that different generations have different ideas about life, as well as difficult situations. The study is a comparative analysis of ideas about difficult situations among 11–12-year-olds today and 15 years ago. It included 11–12-year-old ( $N = 142$ ) Moscow school students in 2003 and 2018. Today's generation's group included 70 preteens; previous generation – 72 "Difficult situation" was defined by the "incomplete sentences" projective method. The results were processed using content analysis. Student's  $t$ -test between percents was used to identify significant differences ( $p = .01$ ). The following ideas were shared by both groups: "difficult situation as a need to overcome problems" – 12% in the first group, 60% in the second, and "difficult situations are related to negative emotions" – 7% in the first group, 21.3% in the second. The groups differ significantly regarding these ideas. Among today's preteens, 32% defined difficulties as a "problem to solve" or "challenge"; for 20.0% difficulties concerned school; 11.0% said other people were involved; 9% denied that any difficulties existed. In the past generation, 6.7% stated that "you need to ask for help"; 4.0% said that "there may be different ways to solve the problem". It appears that today's preteens are more apt to analyse the situation and to detach from it; while the past generation had ideas on the required behaviour in difficult situations, and possibly more experience in overcoming

them. Therefore, the study demonstrated significant differences between different generations of 11–12-year-olds: today's generation was more rational and detached about difficulties; they outlined them nominally and included other people and school in them; while the prior generation explained difficulties more by their own actions, did not deny their existence, and was more inclined to overcome them.

### 6691 Predicting new words for young Japanese children using large-scaled Japanese child vocabulary data

**Yasuhiro Minami (1), Yan Cao (1), Yuko Okumura (2), Tessei Kobayashi (2), Yuka Sakamoto (1)** 1. *The University of Electro-Communications, Japan*; 2. *NTT, Japan*

Our previous study found that the words actually acquired by Japanese-speaking children tend to enter word lists ranked by the Age of Acquisition estimation order at a high rate. These rates strongly depend on their total vocabulary sizes instead of their ages (Cao, Minami, Okumura & Kobayashi, 2018). In addition, the variances of the rates of the children that have the same vocabulary sizes are very small. This means that the children having the same vocabulary sizes tend to have similar vocabularies. This research aimed to identify a simple but strong statistical method to predict what kind of words young children are likely to produce using our previous results. To evaluate our method, we used large-scaled, vocabulary-checklist data from Japanese-speaking children ( $N = 1451$ ) aged 8–48 months. Our method calculated a difference set of two sets when a child's vocabulary increases from  $j$  to  $k$  words: a set of  $k$  words from a word list ranked by Age of Acquisition estimation order and a set of  $j$  words that a child can produce. This difference set could predict the new words acquired by young children based on each child's vocabulary set. We confirmed the effectiveness of our word estimation method by the experiments calculating its accuracy and recall using longitudinal data. For example, when a child's vocabulary increases from 212 to 308, the difference words size is  $308 - 212 = 96$ . In the experiment we were able to estimate 38% of the words in the 96 words. By emphasizing the predicted words to child caregivers, this method may play a critical role in increasing the word learning rate for children with language delay.

### 6332 Nature of dyssynchrony in the development of children with the signs of giftedness: The system approach

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The aim of the current research is studying the reasons of emergence of dyssynchrony in gifted children. It is stated, that the syndrome of dyssynchrony is characteristic for the children with pronounced signs of giftedness. J.C. Terrasser defines the external (the difficulties of adaptation to the environment) and the inner (sharp discrepancy in the development of certain mental functions) dyssynchrony. Modern research proves that many communicative and learning difficulties of gifted children are caused by dyssynchrony; the phenomenon of dyssynchrony is referred as a sign of giftedness. The authors consider giftedness as the result of "meeting of affect and intellect" (according to Vygotsky) when learning motivation dominates. The research of the children of 3–12 years old has a longitudinal character. At the first stage the child's problems, that could affect negatively his/her social and/or learning successfulness, are being identified. At the second stage the goals of designing the correctional program are being set. The third stage is forming the individual educational trajectory. It is shown that the dyssynchrony emerges in the connection of inadequate passing by a person the age of preschool childhood and absence of timely correctional help in case of dysontogenetic problems. Defining the reasons leading to the problems in the child's development and understanding the fact that giftedness is the problem of personality formation in the first place allows keeping the giftedness potential and gives to the pedagogues the system providing the foundation for the following progressive motion of development of a child as a gifted person.

### 6197 Characteristic sex differences in colors used by children for free drawings

**Yukiko Shimada** Kokugakuin University, Japan

When children create free drawings with their choice of colors, their concentration increases, and the burden of the activity is low. The goal of this study is to analyze the characteristic sex differences in free drawing color selection. Free drawings by 302 pre-school students in Japan (4-year-old class: 63 boys, 57 girls, 5-year-old class: 91 boys, 91 girls) using 16 different crayon colors were analyzed. The colors used in these drawings were extracted using Photoshop image editing software. A two-way analysis of variance was performed for the number of colors used in comparison with grade and sex. The results identified sex as the main factor of difference. These findings confirmed that in both age groups girls

used a larger number of colors. The analysis also confirmed that in the 4-year-old class, boys used more of red than girls, while girls in both grades used more of pink than the boys. Skin color, brown, and black were also used significantly more frequently by girls than boys. In the 5-year-old class, the change in use of red may have had to do with the boys becoming aware of sex differences related to color. Girls may have used a lot of pink because they felt it was cute. Sex-related color use and instruction at the pre-school level may also have had an impact on the children's color usage. Nursery school staff need to provide drawing instructions to children that cover differences in color expression.

6139

### Effect of story familiarity on narrative productions in early school-age children

**Yu-ching Kuo (1), Chen-yu Chou (1) 1.** University of Taipei, Taiwan

Object: Previous studies have showed that children often have better performance on their oral narratives with familiar stories. However, little has been known about the extent to which children's narrative skills might vary with the amount of exposure to the stimuli. The purpose of the present study was to investigate how levels of familiarity relate to narrative productions in early school-age children. Methods: Forty second graders were recruited and randomly assigned to an exposure condition (single or multiple). The child in the single-exposure group listened to the story and looked at the wordless picture book and then was asked to retell the story. The child in the multiple-exposure group was first asked to act out the story using paper puppets while listened to the story, then watched the pre-recorded video from a laptop, and then listened to and looked at the book prior to story retelling. Results and conclusions: Preliminary results revealed that significant differences between two groups were found on both narrative microstructure and macrostructure. The multiple-exposure group differed significantly from the single-exposure group in the quantity of production, lexical diversity, and episode organization, but not in syntactic complexity and story setting.

6111

### The influence of pubertal timing on Chinese female adolescence's behavioral problems

**Hui Ling (1), Jia-yi Liu (1), Jian-ren Zhang (1) 1.** Hunan Normal University, China

Objective: To study the influence of pubertal timing on female adolescence' depression, anxiety, and behavioral problems. Methods: 498 girls aged from 11 to 16 completed the Pubertal Development Scale (PDS), Depression Self Rating Scale for Children

(DSRS), State-Trait Anxiety Inventory (STAI) and Middle School Students' Problem Behaviors Questionnaire. Results: ① Over half of the participants were developed "on-time", and around one thirds were "early maturers" or "late maturers"; ② Age was correlated with their scores on depression, anxiety, and behavioral problems. 16-years-olds scored the highest on depression and anxiety. Participants aged 15-16 scored the highest on behavioral problems; ③ participants in "early maturers" group scored higher in depression, anxiety trait, aggressive behavior, delinquency, withdrawal and neurotic than those in "late maturers" group. Conclusion: Pubertal timing is related to depression, anxiety, and behavioral problems in female adolescence. Early puberty is likely to have negative effects on girl's development.

6032

### How social assessment affects children lying behavior and achievement motivation?

**Di Guo (1), Hai Peng Tang (2) 1.** Shaanxi Normal University, China; 2. Shanxi Xueqian Normal University, China

Although children are committed to maintaining their own social assessments and even lying to maintain their good reputation. The question that how social assessment affects children lying behavior and achievement motivation remains open. In two studies, we assessed gambling tasks for children aged 4–5 ( $n = 251$ ) who lie under different social feedback conditions, while using the difficult task to test achievement motivation. In Study 1, participants were assigned to one of four conditions: (a) social comparative criticism, (b) social comparative praise, (c) objective positive feedback, and (d) objective negative feedback. The results showed that children in the social recognition group have a lower probability of cheating and a stronger motivation for achievement than their counterparts in either control condition. Objective negative feedback resulted in a lower probability of lying and the weakest achievement motivation. A second study ( $n = 61$ ) interest in whether clever reputation would affect their willingness to resist the temptation to cheat for personal gain. It turns out that children being praised by others is smart are more likely to lie than their peers and have a stronger motivation for achievement. These studies show that children over the age of four are sensitive to different social assessment, telling children that they have a good reputation may have negative consequences.

5849

### Relationship between tendencies to avoid hurting each other and trust in friends in adolescence

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Object: Research shows that adolescents fear hurt from interactions with friends (Matsushita and Yoshida, 2007), and it has been noted that adolescent friendships are superficial. Research also shows that trust is an influential factor in adolescent friendships (Matsunaga and Tanimoto 2008). In this study, we examined the relationship between the tendency to avoid harm and trust in friends among adolescents. Method: A total of 251 university students (85 males, 166 females, average age  $20.04 \pm 1.45$  years), were administered a questionnaire on friendly relations and trust in friends. A modified version of the injury avoidance scale (Okada, 2012) and Students' Trust for Schoolmate scale (Nakai, 2016) was used for each measurement. Prior to participation, survey content was explained to participants and informed consent was obtained. Result: Cluster analysis revealed 3 subtypes of trust in friends: high distrust in friends and low trust in friends (Cluster 1), low distrust in friends and high trust in friends (Cluster 2), and high distrust and high trust in friends (Cluster 3). As a primary outcome, we performed a one-way analysis of variance with each cluster as the independent variable, and friendly relations as the dependent variable. Results showed that Cluster 3 was more likely to maintain distance and avoid harm from friends, while also being careful not to hurt friends. Conclusions: The superficial friendship that characterizes modern youth may reflect a psychological struggle, such as the "porcupine dilemma" of youth who seek psychological distance.

5736

### The effects of foster caregiver behavior in Japanese foster care institutions on their mental health

**Ayako Takii (1), Daisuke Ito (1) 1.** Hyogo University of Teacher Education, Japan

In Japan, over 80% of foster care services are institutional. Reportedly, more than half of the children in foster care institutions experience some type of abuse. Because abused children exhibit highly complicated symptoms, care is extremely difficult. Research shows that the mental health of caregivers influences children's behavior and emotions (Kahn, et al., 2004). Research further shows a high caregiver turnover rate at foster care institutions (Masuzawa, et al., 2016). Also, the frequent change of caregivers adversely affects attachment formation in children (Tizard, et al., 1978), which inhibits their improvement. Therefore, we examined the effects of foster caregiver behavior at foster care institutions on their mental health, which may influence improvement in children. The Fostering Behavior Scale at Foster Care Institutions (Takii & Ito, 2018), Job Stress Scale – Revised version (Kosugi, et al., 2004), Japanese version of the Maslach Burnout Inventory (MBI; Kubo & Tao, 1992), and Positive Emotion to Job (Muya, et al., 2014) were administered

to 456 workers of foster care institutions (173 men, 280 women, 3 others, with a mean age  $\pm$  SD of 35.39  $\pm$  11.19 years). The survey was conducted under the ethical code outlined by The Japanese Psychological Association. Hierarchical multiple regression analysis showed that the  $R^2$  was significantly higher in step 2 with foster behavior than in step 1 with job stressor, in terms of burnout and positive emotions related to job. This suggests that foster caregivers' behavior, in addition to job stress, may affect their mental health. Future empirical research is needed to enable foster caregivers at institutions to perform their duties smoothly, and achieve job satisfaction.

### 5392

#### Miss

**Lorena Dumitrache** *Edge Hill University, Romania*

Childhood trauma caused by different types of abuse, impacts multiple domains of functioning including behaviour. Traumatized children commonly have behavioural problems that therapists must effectively evaluate and manage in the context of care homes, by providing a nurturing and caring environment and frequent consultation with staff looking after these children. The purpose of this poster is to review the work done in private residential homes, with children who have been abused and removed from their homes, environment and parents. At the same time, it will be considered the available literature on the co-occurrence of neglect, abuse, trauma and to gain more understanding about the impact of these on children. Each young person in one of our services is a unique individual with their own life experiences, which will be reflected in their patterns of relating to others. Often their experience of being parented will have been less than satisfactory. It is our view that residential care system should facilitate the young person's attachment to consistent and reliable people in their life. Therefore, a young person's key worker should be at the centre of their treatment package. By means of observation and clinical cases review as well as focus groups between clinicians, the most effective and constructive technique and interventions will be presented. There is clear evidence indicating children living in care have managed to socialise for the first time within very dysfunctional environments and with family members who have displayed high risk behaviours (promiscuity, delinquency, substance misuse and violence). Therefore, when they come into care they are faced with complex emotional and behavioural needs, which are agonised by the trauma of being de-rooted from the family. In this context the work with the staff and their training in therapeutic skills becomes crucial.

### 4932

**Risk factors for children development: Correlations among nutrition, sleep, emotion and behavior**  
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The prevalence of children with malnutrition or poor diet is high worldwide, especially in developing countries. It can be a risk for their biopsychosocial development. However, the studies in that area are scarce. Thus, the goal of current study was to investigate the correlation between nutrition, sleep, emotional and behavioral aspects. For that purpose, twenty-six Brazilian children, aged 6–13 years, were assessed into two parts. Firstly, it was collected nutritional information (iron supplementation, vitamin A supplementation and breastfeeding) of participants during gestation and the first three months of life. In the second part, it was investigated sleep, behavioral and emotional aspects. Sleep was assessed using the Sleep Disturbance Scale for Children (SDSC). The behavioral and emotional aspects were screened using the Strengths and Difficulties Questionnaire. Children who did not have vitamin A supplementation showed higher breathing problems during sleep than those who had it. In addition to it, 76.9% of the sample took iron supplements. None of them showed sleep disturbances. On the other hand, 23.1% of participants did not use iron supplements and 2 of them presented disturbance on sleep wake cycle. Participants who were exclusively breastfed up to six months or older showed lower awakening rate during sleep ( $r = -0.59$ ;  $p = .32$ ) compared to those who were breastfed less than 3 months. It was also observed a positive correlation between sleep disturbances and emotional/behavioral problems. Our findings illustrate the importance of having an interdisciplinary view of child development, including nutrition, sleep and emotion/behavior aspects.

### 4922

**Neuropsychological assistance for children with mild perinatal pathology of the nervous system**

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In our studies, we showed that even mild hypoxic perinatal pathology of the nervous system (PPNS) leads to a violation of the child's mental ontogenesis. In the present research, we studied 40 children 5–7 years old with a mild PPNS in their anamnesis. Neuropsychological assessment was performed for all children. Then the children were divided into two groups of 20 children. The first group participated in the neuropsychological correction program; with children of the second group, neuropsychological correction was not performed. Sensorimotor correction (the method of Goryacheva

and Sultanova) was the basis of the neuropsychological program for children. The program also included specially designed exercises for the development of "weak" functions, which were determined at the diagnostic stage. Correctional classes were held with children of the first group 2 times a week for 7 months (from October to April). Then a repeated neuropsychological diagnostics was carried out with children of both groups to assess the dynamics of children's mental development. A comparative analysis of the results showed that there are statistical differences between the indicators of the first and second groups of children. In children who attended correctional classes, neurodynamic dysfunctions significantly decreased. Whereas in children of the second group, neurodynamic disturbances often intensified. Statistically significant positive results were also obtained in assessing the dynamics of voluntary control, attention, kinetic praxis, kineshetic praxis, spatial praxis and gnosis, speech, and auditory-speech memory in children of the 1st group. Due to the improvement of memory, motor skills, and executive functions, children of the first group began to better absorb learning material. In addition, they performed the tasks of teachers better, performed better at children's parties in kindergarten, which was very important for parents. Thus, neuropsychological correction is an effective method for optimization of course of mental development in children with PPNS.

### 4896

**Free play and executive functions in 6–7-year-old children**

**Daria Bukhalenkova (1), Aleksander Veraksa (1), Vera Yakupova (1), Kristina Tarasova (1)** 1. *Lomonosov Moscow State University, Russia*

Play activity affects the development of preschool children and especially their executive functions (Vygotsky, 2004; Ivrendi, 2016; Pierucci et al., 2014; Slot et al., 2017), which are an important predictor of children's readiness for school and their future academic achievements (Willoughby, 2012). The study examined the relationships between free peer play and different executive functions components (working memory, inhibition, cognitive flexibility) in 435 children aged 6–7 years attending the last kindergarten groups in Moscow. The study used the DCCS method (Zelazo, 1996) and NEPSY-II subtests (Korkman, Kirk, Kemp, 2007) – «Inhibition», «Memory for Designs», «Sentences Repetition», «Statue» – for executive functions assessment (Miyake, 2000). A survey of kindergarten teachers was conducted to study various aspects of children's play. The study was agreed with the Ethical Committee of the Russian Psychological Society. The results revealed a relationship between all executive functions components (cognitive and behavioral inhibition, verbal and visual working



memory, cognitive flexibility) and different aspects of peer play: leadership, conflicts with peers, compliance with the games rules, preferred types of play in a free time. The cluster analysis results shows that children with the higher level of executive functions are more successful in communication with peers: they show leadership qualities, other children are glad to include them in the game and they rarely have conflicts than children with low executive functions level. Also, children with high executive functions level are able to follow the game rules, require their compliance from other participants. They are more tend to organize a role-play with peers. This research was funded by RFBR grant №18-013-01057.

4707

### Relationship between meaning of childcare and child-care-anxiety from a viewpoint of life course

*Junko Miyamoto Japan*

This study examines the relationship between meaning of child care and child-care-anxiety from a viewpoint of life course. Thousand four hundred and ninty nine mothers of small children participated in a questionnaire survey. We classified life course into four groups. Group I is continuously working mothers. Group II is mothers who stopped working but are currently working. Group III is mothers who choose to work as stay-at-home mothers. Group IV is mothers who stay at home until the children grow up, at which point the mother returns to work. The survey listed four meaning of child care: pleasure, sacrifice, Self-improvement, and growth. Child care anxiety was classified into four factors: sense of stagnation and sacrifice, fatigue, diffidence, wish of disaffection. The results revealed the following: both pleasure and sacrifice were associated with child care anxiety for all groups. Self-improvement training was associated with it for all but Group III. Growth was associated with fatigue for Group I and wish of disaffection for Group II. Mothers make decisions regarding child care and everyday life based on their feelings regarding child care, but the feelings associated with childcare for one group were different from another group. Further, each group can be categorized into two categories: subgroup A comprising mothers who could choose their ideal life course, and subgroup B comprising those who could not do so. It was found that subgroup B mothers of Group IV who focused on self-improvement and growth had lower child care anxiety, and subgroup B mothers of Group II saw childcare as a chance for growth, they could avoid fatigue. The results showed that offering different supports to mothers of small children in different circumstances, there would be a reduction in negative emotions regarding childcare and an improvement in living situations for many mothers.

4700

### Risk of Suicide and Self-Harm in Kids (RiSSk): A decision-support algorithm

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Suicide is the second leading cause of death in adolescents. While several risk factors have been found to be associated with increased risk, appropriate decision-support tools are needed to identify children who are at highest risk for suicide and self-harm. The aim of the present study was to develop and validate a methodology for identifying children at heightened risk for self-harm and suicide. Data based on the interRAI Child and Youth Mental Health Screener (ChYMH-S) collected from the Province of Ontario, Canada, were analyzed to develop a decision-support algorithm to identify young persons at risk for suicide or self-harm. The algorithm was validated with additional data from 59 agencies and found to be a strong predictor of suicidal ideation and self-harm. The RiSSk algorithm provides a psychometrically sound decision-support tool that may be used to identify children and youth who exhibit signs and symptoms noted to increase the likelihood of suicide and self-harm.

4379

### Polish adaptation of The Emlen Scale

*Agata M. Ruźniak-Lubocka (1), Artur Sawicki (1), Maria Kaźmierczak (1), Paulina Pawlicka (1) 1. University of Gdansk, Poland*

The aim of the study was to adapt “The Emlen Scales: a Packet of Scales for Measuring the Quality of Child Care From a Parent’s Point of View” to Polish conditions. These activities were aimed at introducing into Poland, the tool that would allow assessing the quality of such facilities as nurseries, children’s clubs and kindergartens. Study was conducted in two stages, in which the total 420 parents (PLEĆ I WIEK) of children aged between 11 months to 6 years took part. The following variables which are included in the scale were analysed: diversified environment, risk factors for health and safety, skills of caregivers, child-caregiver relations and the child’s feelings towards the caregiver. The structure of original, full-length tool was not replicated. Shortened version with hierarchical structure with six factors was well-fitted to the data in both samples. Relationship with life satisfaction, general trust, locus of control, and parental styles was measured in order to establish criterion validity. Correlations between the dimensions have been shown that overall satisfaction with the care is positively associated with: trust, well-being and the internal placement of parental controls. General satisfaction

with the care also correlates positively with the accepting and autonomous parental styles. The adaptation of the scale allowed the introduction of a tool for Polish research, which can be used to assess the quality of childcare. As a result, it will be possible to collect more reliable information about the developmental environment.

4366

### Music representation in the inferior frontal region of school-age children

*Masumi Wakita Kyoto University, Japan*

The left inferior prefrontal cortex (IF), including the Broca’s area, is involved in domain-general structural processing. During school-age, linguistic syntax and semantic processing gradually become segregated. However, development of music syntax representation has not been clarified. Here, the influence of age and learning experience on the activity of the left IF of school-age children was studied to clarify the development of the structural representation in the music domain. Elementary school children of various age and piano learning history participated in the current study. During experiment, participants were asked to compare the sample and choice melodies. If the choice melodies were not congruent to the sample melodies, they had to push the response switch. Stimuli were either familiar or unfamiliar melodies, adopted from simple melodies, such as “It’s A Small World”. Unfamiliar melodies were reversed pattern of the familiar melodies. Choice melodies in the incongruent condition were the melodies in which the order of the two adjacent tones in the sample melodies were switched. The matching task period was 20 seconds, which was followed by the blank period of 30 seconds. The participants underwent 8 trials in total. The activity of the bilateral IF (the F7 and F8 position the 10–20 system) was recorded by near infrared spectroscopy. Brain activation during the task period was contrasted by that during the pre-stimulus baseline period. Results from the congruent and incongruent conditions were pooled. To examine the IF response for online music processing, results under familiar and unfamiliar melodies were compared. Results showed small experience-dependent and age-dependent effects on the left hemisphere activation and structural processing, respectively. Thus, similar developmental of representation of language and music structures in the left IF were possibly implied. This study was approved by the institutional ethics committee. This study is supported by JSPS Grants-in-Aid JP18K12011.

4127

### Longitudinal study of relationship between social skills and stability of self-regulatory behavior

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 Objective: Namba, et al. (2018) found the existence of two types of child responses in self-regulation related to development: stable group (S; stable through 2.5 to 6 years of age); and unstable group (US; changing from year to year). The unstable group was further divided into two sub-groups derived from the results recorded at six years of age (pass (US1) or fail (US2)). The aim of this study is to reveal the relationship of social skills at school age and types of stability. Methods: The subjects were derived from the JCS Cohort Study that commenced in 2004 in Japan (cf. Yamagata et al. (2010)). Data used in this study were collected during 2007 to 2018 at the Mie Chuo Medical Center in Japan. Seventy two subjects (38 boys and 34 girls) participated the self-regulatory situation task at 2.5, 3.5, 5 and 6 years of age. Two scales were used to measure their social skills. Skills for adapting behavior in a group (G-skill) and skills in communication with friends (Co-skill) were measured at 5th (11 years old) and 6th grade (12 years old). Results: G-skill and Co-skill scores at each grade were compared by three groups (S, US1 and US2), but there were no significant differences between S, US1 and US2. For more analysis, correlation coefficients between G-skill and Co-skill of three groups and grades were calculated. No significant coefficients were showed at 5th grade. The unstable groups, however, were showed significant negative coefficients at 6th grade (US1;  $r = -.46$ , US2;  $r = -.76$ ). Conclusions: Although there were no differences in skill scores, coefficient size varies by groups that were defined by stability of self-regulatory behavior in infancy. (Supported by JSPS KAKENHI no.19H01759)

#### 4002 Integrative play therapy model in child immersed in high-conflict divorce: A case study

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 Objective: This case of study explores the effects of integrative play therapy model in the constitution of true-self in a case of child immersed in high-conflict divorce. Method: The participant was a 10 years old girl who is attended in Psychological Services Center coordinated by Universidad Nacional Autónoma de México (UNAM). The attention provided by the psychologist is part of the clinical requirements stipulated on the Master of Child Psychotherapy Program (UNAM). The main complaint is a high-conflict divorce that affect the child in their emotions, and interaction with parents and peers. The intervention was based in integrative play therapy model (Drewes, Bratton & Schaefer, 2011). The therapeutic process was conducted under ethical norms for psychologist in Mexico. The process was

compound of 1° psychological diagnosis and 2° intervention phases. During the first phase were used psychometric instruments, projective test and play diagnosis. Derived from these results was observed dis-regulation, difficulties to express their needs, thoughts and emotions, these symptoms are denominated from Winnicott (1965) like false-self. The second phase, the intervention promoted the constitution of true self and self-regulation and the promotions of self-care behaviors in relation to parental conflict. Results: The child is capable to identify their own feelings and needs and express them. She can set limits in relation to the conflict in parents to provide by own self-care. Conclusion: Integrative play therapy model had a favorable result for the treatment of a 10 years old who present a false-self organization and was immersed in high-conflict divorce.

#### 3990 Impact of integrative play therapy on externalizing behavior problems in a preschool child

**Ana M. López-Alonso (1), María T. Monjarás-Rodríguez (1), Rocío Nuricumbo-Ramírez (1)**  
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 Developmental psychopathology provide a multidisciplinary integration of the interplay among the biological, psychological, and social contextual aspects of normal and abnormal development across the life span (Cicchetti, 2016). Likewise, the integrative play therapy explores and integrates methods for blending the best theories and treatment techniques to resolve the most common psychological disorders of childhood (Drewes, Bratton, & Schaefer, 2011). Internalizing and externalizing behavior problems in early childhood are of serious concern; in Mexico, externalizing problems are highly frequent and they represent one of the most common reasons for consultations in child psychotherapy office. It was used a single-case design to research the impact of integrative play therapy on a preschool female child, who presented externalizing symptoms: disruptive behavior, oppositionism, authority defiance, impulsiveness and aggressiveness in at least three scenarios: school, home and recreational zones. The evaluation process included evolutionary, medical, social, unconscious, cognitive and family aspects in order to determine the spots of intervention and the design of an intervention model adequate to the needs of the patient. This work was done from the integrative play therapy focused on personality (Balarezo, 2010) in six-stage: (1) emotional discharge; (2) healing of the self (regression), (3) search of self, (4) family incorporation, (5) behavior control, and (6) closure, post evaluation and follow-up; where individual, family, filial and fraternal sessions were incorporated along with psychoeducational sessions with school staff. It took 41 sessions of 60 min

each, one day at a week. Results of post evaluation show extinction of externalizing behavior and overall improvement.

#### 3797 Contributions of background factors to Japanese children's English words reading skills

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Objective: To examine the relationship of Japanese elementary school children's cognitive functions, English learning attitudes/motivation to their English words reading skills. Methods: The participants were 68 children aged 10–12 (33 boys and 35 girls). The following four tasks were given; (1) English words reading, (2) English words recognition, (3) phonological discrimination, and (4) phonological blending. In the English words reading task, both English words that can be read with the Roman alphabet knowledge and those words that cannot be read with the knowledge were employed. In addition, a questionnaire was also given to ask about students' attitudes toward and motivation for learning English. Results: The number of correct answers in reading aloud English words that cannot be read with the Roman alphabet knowledge was significantly lower than that of English words that can be read with the Roman alphabet knowledge. A multiple regression analysis shows that the student attitude scores on learning English significantly explained the variance in their reading skills of English word that can be read with the Roman alphabet knowledge. Furthermore, the attitude scores on learning English and the scores on the phonological blending task significantly explained the variance in students' reading skills of English words that cannot be read with the Roman alphabet knowledge. Conclusion: Japanese elementary school children's attitudes toward learning English and their phonological blending skills play an important role in their acquisition of English words reading skills.

#### 3786 How do children try to solve the unknown task with assistance from others?

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Objective: This study focused on factors related to the tendency to seek or not to seek help and aimed to examine their relations to the behaviors of preschoolers who seek help when assistance from others is necessary. Method: The participants were Japanese preschoolers ( $N = 72$ ; 34 boys and 36 girls; aged 4 to 6 years; mean age = 5.24;  $SD = 0.69$ ). They carried out a task, in which they constructed towers using

pasta and marshmallows. Then, the investigators were asked to check attitudes to seek or not to seek help among the children. Specifically, the investigator asked how the children felt towards the task. Children answered investigators' questions by pointing to signs or pictures on sketchbooks. Result: The results showed that assistance requests were observed in all ages, but 5 to 6-year-old children were significantly more likely to tackle the task by themselves, compared to 4-year-old children ( $F(2,440) = 6.158, p < .001$ ). These findings imply that 5–6-year-old children might try to do the task by themselves without assistance from others. Conclusion: It is assumed that the task was easy enough for the 5 to 6-year-old children to achieve. The results may be explained by the fact that the quality of assistance is different, according to the perceived difficulty of the task. For instance, 4-year-olds tend to give up solving problems because the task is too difficult. Meanwhile, 5-year-olds tend to ask for help to solve the problem. Finally, 6-year-olds tend to request help to accomplish the task by themselves. Future research should shed light on the quality of assistance. Specifically, it remains unclear whether the difficulty of the task or problem-solving ability influences the quality of assistance requested.

3686

### The effect of praise with photographs on self-esteem on preschool children

**Kyoko Iwatate** Tokyo Gakugei University, Japan

To sustain and promote of preschool children's feeling of self-acceptance is very important for enhancement of self-confidence and later motivation to the achievement. The study on "Project Praise with Photograph" which parents take and display photographs of children's smiles and achievement on the wall, and praise them based on those photographs showed the effect to promote children's feeling of self-acceptance (Fuji Film Co., Ltd. 2018). But the sample size of that study was small. So, we need to clarify and demonstrate that results with more data. The purpose of this study to clarify the effect of praise and displaying photographs on self-esteem of preschool children. 150 parents having 3, 4, 5 years old children answered a questionnaire. The results showed that self-acceptance of the children whose parents display photographs and praise were significantly higher than before. In addition, the self-acceptance of parents was also higher after the praise their child based on photographs.

3499

### The empathy on bullying: The impact of parental coping with child's negative emotion and gender

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The purpose of this study is to explore the origin of emotional empathy, which has emerged as a major variable to influence participant roles of peer bullying. Also, this research is focused on bullying-supporting behaviors to enhance bullying. So this present study is designed to investigate the mediating effect of child's emotional empathy on parental reactions to children's negative emotional expression and the bullying-supporting behaviors. In addition, this study sought to investigate the detailed mechanism of bullying according to the children's gender. To this end, 334 fifth and sixth graders in elementary school were asked to complete questionnaires including Coping with Children's Negative Emotion Scale (CCNES), Children's Versions of the Empathy Quotient (EQ-C) and Participant Role Questionnaire (PRQ). The data collected were analyzed with SPSS 18.0 and AMOS 21.0 and the results are as follows. First, it was found that cognitive empathy did not have a significant effect on the bullying-supporting responses both in male and female students, whereas emotional empathy had a significantly negative impact on bullying attitudes. Second, affective empathy scores were higher for female than for male. And bullying-supporting reactions were higher for male than for female. Third, the effect of supportive responses for children's negative emotional expressions on emotional empathy was more for female than for male, whereas the effect of emotional empathy on bullying-supporting behavior was more for male than for female. Finally, supportive responses for children's negative emotional expressions were found to influence the bullying-supporting behaviors through emotional empathy in children. In this study, the impact of emotional socialization by parents through emotional empathy upon the bullying was identified. Consequently, this study is meaningful in proposing a fundamental solutions to peer bullying.

3395

### Potential predictors of BMI among children and adolescents: A preliminary comparative study

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Objective: The aim of the study was comparison the potential predictors of body mass index (BMI) among women and men in the group of children and adolescents. Methods: The study involved 203 children and adolescents who were divided into four group: (a) 59 young girls (8–11 years of age), (b) 45 young boys (8–11), (c) 44 adolescents girls (12–16), (d) 55 adolescents boys (12–16). The Children's Body Image Scale, the Figure Rating Scale, the Dutch Eating Behavior Questionnaire for Children and Satisfaction

With Life Scale-Child were used. Results: Focusing on significant BMI predictors, the following results are obtained: (a) young girls – body dissatisfaction ( $\beta = 0.32$ ), restrictive eating style ( $\beta = 0.32$ ); (b) young boys – restrictive eating style ( $\beta = 0.50$ ); (c) adolescents girls – body dissatisfaction ( $\beta = 0.45$ ), restrictive eating style ( $\beta = 0.61$ ); (d) adolescents boys – body dissatisfaction ( $\beta = 0.50$ ), external eating style ( $\beta = 0.55$ ), emotional eating style ( $\beta = 0.34$ ). Conclusions: Our analysis show that body dissatisfaction is a universal risk factor for higher BMI, regardless of age and gender. This information should be included in obesity and eating disorder prevention programs. Interestingly, based on the intensity of restrictive eating, BMI could be predicted in all groups except adolescents boys (external and emotional eating are important). This may mean that the aforementioned prevention programs will be effective, if in addition to body dissatisfaction, maladaptive eating styles will be taken into account whose significance and intensity may vary depending on age and gender.

3224

### Parent-child interaction therapy in a case of sensory integrative dysfunction

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Objective: This case study explored the effects of psychotherapeutic intervention based on Parent-Child Interaction Therapy and sessions of play therapy in a case of sensory integrative dysfunction (SID). Method: The participant was an 8-year old boy attended in a Psychological Center coordinated by Universidad Nacional Autónoma de México (UNAM), the attention provided is a requirement of the Master of Child Psychotherapy Program. Chief complaint consisted on noncompliance and defiant behaviors. Parent-Child Interaction Therapy (Eyberg, 1988) was combined with integrative play therapy (Esquivel, 2010) sessions. The process was compound of: (a) a psychological diagnosis phase and (b) an intervention phase. During Phase a psychometric instruments, projective tests and play diagnosis sessions were used. From these results the child was directed to a neurological evaluation, being diagnosed with SID. In phase b, Child Directed Interaction Stage (CDI) and Parent Directed Interaction Stage (PCI) were implemented combined with individual play sessions. Results: Phase a: Alterations in neuropsychological functioning were found. In the emotional area, the child showed emotional dysregulation, behavioral control problems a poor self-concept. Was identified an authoritative parenting style and lack of parental abilities. Phase b: There was a decrease in disruptive child's behaviors, an increase in emotional



regulation abilities and the presence of more self-reliant behaviors. During CDI Stage the negative interactions decreased. After the PDI Stage, it was possible for the family to establish settle limits. Conclusions: Parent-Child Interaction Therapy combined with integrative play therapy had a favorable result for the treatment of an 8-year old child with SID.

### 3206

#### How to “Live Well” in rural Taiwan? Incorporating Topophilia into rural Education

**Yu-Chun Ku** *National Dong-Hwa University, Taiwan*

There is a big gap between the primary school education in rural areas in Taiwan and its surrounding the agriculture-based lifestyle and culture. As the education is occupied with city life value, the life in rural community is devalued and the children are fed with the view that those who are capable makes their living in big cities and only failures stay at rural hometown. The “Wu Wei Wu”, a charity thrifty shop established in 2008 by the author’s research team with assistance from local communities, has been providing local children/teenagers with the opportunity to learn by hand-on practice. They are in charge of sorting and selling the goods donated from all over the country. The children also participated in harvesting and processing agricultural production accompanied by our crew. Examples happened in Wu Wei Wu and the village show the ways of “living well” alternatively and react to the pressure radiated from city-centered life value. In these examples, our research team demonstrated the transformation from lacking to having by weaving social relations so as to redefine the meaning of learning. We then came to witness how the critical thinking and placed-based action merge together in this small shop and start to pervade in the village. In the end, we seek to raise the sense of “Topophilia” in the children’s mind in order for them to feel proud of their hometown and open up new possibilities in the future.

### 3160

#### Tablet-based intervention helping autistic children improve understanding of facial emotions

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There are few studies that examine technology as an early intervention targeting social communication skills in children with Autism Spectrum Disorder (ASD). The current study aims to evaluate a game-like tablet-computer application teaching children with ASD to improve their facial feature scanning and thereby improve their facial emotion interpretation. In this ongoing study, 6 to 12-year-old children with mild to moderate ASD (according to DSM5 diagnostic criteria) and age and

gender matched typically developing children were given access to an iPad with the intervention loaded on. The game shows children’s faces covered with tiles. Children remove one tile at a time to reveal areas of the face. Once the participant decides enough tiles have been removed, they make a judgement of what emotion they see by selecting from seven possible emotion/word options (happy, sad, surprise, anger, disgust, fear, or neutral). The less tiles that are removed, the more points are credited for correctly identifying the expressed emotion. If incorrect, points are deducted. The application records progress and performance and increases the degree of difficulty depending on performance. A daily time limit applies. First results indicate, that children engage well with the application and enjoy interacting with it. Children with ASD often avoid focusing on the salient features of a face (i.e., eye and mouth region) which makes it more difficult for them to correctly “read” facially expressed emotions. The application helps children to direct their visual scan preference to the salient facial features.

### 3153

#### Child-centered therapy for the treatment of child grief: A case study

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The objective of this study was to promote the elaboration of grief using child-centered therapy to promote emotional well-being. A case study was carried with a 6-year-old girl who was referred by her mother because she presented constant crying and separation difficulties after her grandfather’s death. The girl was evaluated through projective tests, a Preschooler Stress Instrument and a Preschooler Coping Instrument, diagnostic play session, two family play sessions, and standardized tests were applied to measure IQ and visuomotor maturity. The evaluation lasted 14 sessions, subsequently the intervention consisted of 14 sessions with a duration of 50 min each which were held on a weekly basis. Eleven orientation sessions were done in which I worked with two of the child’s significant attachment figures to evaluate the results of the therapeutic process, a post-treatment evaluation and two follow-up sessions were carried out. The results showed changes in the expression of emotions associated with grief in the girl and also in the two attachment figures, this situation promoted the elaboration of the girl’s grief. It is concluded that child-centered therapy is an effective therapeutic model to promote the expression of emotions related to child grief and its elaboration.

### 2904

#### Associations between children’s

#### dialectical thinking skills and emotion recognition

**Nikolay Veraksa (1), Margarita Gavrilova (1), Daria Bukhalkova (1), Aleksander Veraksa (1)** *1. Lomonosov Moscow State University, Russia*

In this study the relationship between dialectical thinking skills and emotion recognition among preschoolers was analyzed. A random sample of participants was recruited from kindergartens located in Moscow. Participants of the study were 152 typically developing children (53.9% boys). The age of children was 6–7 years ( $M = 79.99$  months,  $SD = 4.43$ ). All parents provided informed consent for their children participation in the current study. The study was agreed with the Ethical Committee of the Russian Psychological Society. Dialectical thinking was assessed using three techniques aimed at analyzing children’s understanding of (a) the principle of cyclicity, (b) ability to identify contradictions and (c) ability to find opposites to phenomena. The Affect Recognition was used to determine children’s emotion recognition. A number of parents was interviewed using the questionnaire, which allowed for additional analysis of associations between dialectical thinking and demographic variables such as the number of children in families, the level of mother’s education and family income level. Spearman correlation analysis revealed statistically significant links between emotion recognition and the ability of children to find opposites to phenomena. A possible explanation for these results may be that successful understanding of emotions requires the presence in the worldview of well-established ideas about the variability and repeatability of emotional experiences, as well as the reasons for the emergence of certain emotional reactions. Funding: This research was funded by Russian Science Foundation grant number №19-18-00521.

### 2713

#### Assessing weight bias in mock juries when child victims testify against sexual abuse in court

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Many individuals living with obesity face discrimination in court hearings (Beety, 2013). Although such biases would have life-long effects on abused youth, to date, the presence of weight bias towards child victims remains unstudied. Consequently, it is necessary to understand whether weight bias is occurring when children are testifying against their abusers in court. This study is an experimental research design where participants will be randomly assigned to one of 12 conditions (gender: female vs. male, body size: thin vs. average vs. obese, and verdicts: guilty vs. non-guilty). Quantitative premeasures to assess weight bias and beliefs regarding the etiology

of obesity will be utilized. They will be presented with details of hypothetical testimony of a child who was sexually abused and the child's photograph, along with a text description of biographical information, the child's body size (e.g., height/weight) and gender. Participants will complete a questionnaire where they are asked to rate the degree of perceived fairness/appropriateness of the verdict that was chosen in their vignette. It is hypothesized that participants will provide a higher number of agreeableness to guilty verdicts in the scenarios which contain thin children compared to overweight children, regardless of victim gender and that participants will perceive a non-guilty verdict for an overweight child as less fair and aligned with world beliefs compared to a guilty verdict. This research will be relevant not only to mental health professionals who may be working with children undergoing court proceedings, but also to court officials in understanding potential bias that may occur in hearings that involve children who are overweight testifying in the courtroom. Mitigation or prevention of secondary trauma from weight bias could have a significant impact on the psychological outcomes of these child victims.

### 1987

#### Interpretation of teachers' utterance intention influences students' responses

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There are various kinds of admonishing utterances from teachers to primary school students in Japan. Some of which are obediently accepted while others are not by students. We can assume that students' interpretation of teachers' utterance intention may influence students' responses. Students may consent to the admonishing and regret what they did if they positively interpret teachers' utterance intention, but they may not do so if they negatively interpret it. The present study aimed to examine this assumption. Fifty-four fifth and sixth graders of primary school participated in this questionnaire experiment. Students were asked to imagine a scene where a student was looking at a comic book during classroom cleaning time and was admonished by a teacher as classroom cleaning by students themselves was considered important in Japan as a part of education. Five kinds of admonishing utterances were categorized into: (a) ordering a certain behavior directly, (b) demanding consideration for others, (c) authoritative threatening, (d) criticizing personality, and (e) deserting a student. Students were asked, "if you were this student, would you think the teacher intended to make you a good boy (girl)?", and were asked to answer with 5-point rating. They also rated about "Would you dislike this

utterance?", "Would you approve this utterance?", "Would you regret your behavior?", and "Would you think you won't repeat such a thing again?" Main results were as follows: (1) (a) and (b) led to positive interpretation of intention and desirable responses, while other three kinds led to negative interpretation and undesirable responses of students. (2) When students negatively interpreted the utterance, it led to negative responses even if it was generally acceptable one. Teachers need to bear in mind that their utterance intention is not necessarily interpreted as they intended to, and consider multiple possibilities of interpretation by students.

### 1820

#### Psychological features of value system and ethnic consciousness

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The aims of research is to investigate value system and ethnic consciousness of orphan children in modern Kazakhstan. So we found that of ethnic consciousness still develop and it's in low level in Kazakh orphanage children and there is significant difference in value system between orphanage children and children who have a family. In a main study 240 participants completed such questionnaires as folklore, author's questionnaire defining the concepts about national traditions, the scale of defining the level of anxiety by Ch. Spilberger, D. Hanin, scale of self-evaluation by Dembo-Rubinstein, emotional sense test by V.P. Morozov, "who am I" test by M. Coon, Mackpartland, scale of value orientation by M. Rokich, "Thinking about life meaning" by H. Niemi and "We and they" (scales of Bogardus), biographical method. There were made 3 diagnostic researches. The established system of distinctive and ethnic conscious, orientation to assets regulates the mental development of adolescents who live in the condition of "psychic subdeprivation" and with other social statuses. The system of orientation to the assets of orphanage children closely connected with meaningful relations to the adults, good knowledge about national folklore establishes orientation to assets and ethnic consciousness and creates positive psychological conditions. The influence of ethnic factors is the basis of establishing orientation to the assets among teenagers. Knowing the national culture and folklore improves the process of socialization among orphanage children, improves personal qualities, national consciousness, generates the system of orientation to the national culture assets.

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### 1638

#### Effect of childcare quality on social and emotional skills of 1- to 2-year-olds children

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The development of social and emotional skills influences adaptation in the school and society (OECD, 2018). However, many Japanese studies focus on children over 3-year-olds. This study examined the relationship between the 1- to 2-year-olds infant and toddler's social and emotional skills development and the childcare environment. Methods: Participants were 1- to 2-year olds infants ( $N = 880$ ), and nursery school teachers ( $N = 422$ ) of 1- to 2-year-olds infants in Japan. Parents completed their children's social-emotional competence (e.g., "shows pleasure when he or she succeeds"; 11 items) and behavior problem (e.g., "cries or has tantrums until he or she is exhausted"; 31 items) subscales of the Brief Infant-Toddler Social Emotional Assessment (Briggs-Gowan et al., 2004). Nursery school teachers were asked about the quality of childcare (quality of process and structure) in their class by a questionnaire. Results: The 57 nursery schools were divided into three groups: high group ( $n = 11$ ), medium group ( $n = 34$ ), and low group ( $n = 12$ ), based on the average of the quality of childcare process. We performed one-way ANCOVAs (covariance variable = SES) to examine the impact of childcare process quality on the infant's social-emotional skills. The results showed that infants had less problem behaviors in the high-quality group ( $M = 8.79$ ) than in the low-quality group ( $M = 10.52$ ). Also, there was no significant difference in the development of infants' social-emotional competences (high group's  $M = 15.54$ , medium group's  $M = 15.69$ , and low group's  $M = 15.62$ ). Discussion: This study provided the first evidence that showed the importance of childcare quality in 1- to 2-year-olds in non-western cultures.

### 1578

#### Pre-schooler's cool/hot executive functions predict their school academic achievement in Japan

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Executive function (EF) is part of school readiness and plays a vital role in school adjustment (Blair & Raver, 2015). However, little is known about this relationship in a non-western culture. This study examined the four-year longitudinal relationship between the cool/hot EF at preschool-age and the academic achievements

during elementary school years. **Methods:** The sample consisted of 47 children drawn from a four-year longitudinal study of 67 children. Each child was tested five different times: at the end of preschool-age and the 1st–4th grades of elementary school. Children's mean age was 6.5 years at preschool-age. In preschool, each child completed batteries of cool and hot EF. Cool EF measures included Stroop-like tasks (black-white task and shine-rain task), Simon says, and backwards digit span (BDS). Hot EF measures included Children's gambling (CG) and forbidden toy tasks. In Grade 1 to 4, each child completed Koyokenshiki CRT, which is the standardized achievement test for Japanese children. **Results:** Descriptive statistics for each EF task were as follows: black-white task ( $M = 16.33$ ), shine-rain task ( $M = 15.85$ ), Simon says task ( $M = 7.23$ ), BDS task ( $M = 2.65$ ), CG task ( $M = -0.04$ ), forbidden toy ( $M = 239.44$ ). There were no gender differences. Using standardized ( $z$ ) scores for each EF task, cool and hot EF composite scores were calculated for each participant. Multiple regression analyses were conducted to examine the relationship between cool/hot EF (independent variables) and academic achievement

outcomes. Cool EF during preschool-age predicted academic achievement at each grade ( $\beta$ s: 1st = .56, 2nd = .42, 3rd = .38, 4th = .43). On the other hand, hot EF predicted academic achievement at 3rd grade ( $\beta = .27$ ) and 4th grade ( $\beta = .43$ ). **Discussion:** This study found that EF during preschool plays an important role in Japanese academic achievement.

#### 1412

#### One-year longitudinal study of the impact of media multitasking on adolescents' executive function

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There has been a growing number of studies on the impact of media multitasking (i.e., concurrently engaging in multiple media activities, or frequent change from media activities to other activities) on executive function. In general, the findings were mixed across studies. This study aimed to address the paucity of longitudinal study examining the developmental relationships between media multitasking and executive function by comparing the differences between heavy/high media

multitaskers (HMMs) and light/low media multitaskers (LMMs) in executive function (as assessed by questionnaires and cognitive tasks) in a one-year longitudinal study. Altogether, ninety-nine Chinese adolescents (Mean age = 14.41,  $SD = 1.10$ ; 42 boys; 48 HMMs and 51 LMMs) completed the survey and cognitive tasks at three time points, i.e., baseline, 6 months after, and 12 months after. They were recruited based on their media multitasking score in a project with more than a thousand adolescents. At each time point, the participants' executive function was assessed by a self-reported questionnaire and three cognitive tasks (i.e., 2-back, Color Stroop and Number-letter Determination tasks). The results showed that: (1) the accuracy on all cognitive tasks improved across times among both groups of participants; (2) the HMMs performed consistently less well than LMMs in the questionnaire measures and 2-back accuracy. This finding suggests that the impact of media multitasking on daily life executive function skills is more apparent than that on performance in standardized executive function tasks. The implications of this study would be discussed.