Developmental

SYMPOSIUM

1807

SEL (social and emotional learning) movements in Japan: Principles and practices in Japanese context

Chair: Yu Takizawa University of Queensland, Australia

Recent studies have shown that Japanese school students manifest various mental health problems, including anxiety, depression, and the numbers of school bullying, a school refusal, and suicide have been remain high. The lack of development of socio-emotional competence in adolescents is universally recognized as a major contributing factor to poor mental health (Yamamoto et al., 2017). It is well-known that social and emotional learning (SEL) has many positive influences on children in terms of academic performance, interpersonal relationships, internalizing/externalizing problems. However, research on SEL is still scant in Japan. Therefore, the purpose of this symposium is to present various studies regarding SEL from Japan. The first research by Dr.Yayoi Watanabe examined the children's ability to recognize other people's emotions through the voice and the development of emotional literacy at different developmental stage will be discussed. Second, Dr. Naomi Watanabe focuses on emotion socialization and examined how children learn emotions from storybooks and parent-child interactions. Future direction of the development of a library-based intervention promoting children's emotion learning will be argued. Third, Prof. Miyazaki will present "Theory and practice of somatic exercise for Social-Emotional Learning" and talk about the relationship between mind and body. Finally, Mr. Takizawa will review the socio-cultural barriers for the adaptation of social emotional learning program into Japanese schools, particularly in comparison to Australian schools, and discuss the potential solutions for overcoming these barriers in future. As the level of appropriate emotional expression and positive self-regard are different between Western and Asian culture, out symposium will add new and unique perspectives to the literature on SEL.

Development of emotional literacy: Evidence from emotional understanding through the voice

Yayoi Watanabe Hosei University, Japan

Several meta-analyses have noted the efficacy of programming for social emotional learning which includes the components of emotional competence. These programs showed more improvement compared to control groups in social emotional skills, behavior problems, and academic performance. However, there are few studies which clarified the development concerning the social and emotional skills according to the age. Understanding the development of children's emotional competence should be most important to develop age-appropriate programs and curriculum. Especially the accurate interpretation of nonverbal emotional information is considered to be an important factor for successfully understanding and managing other's emotions, thus facilitating interpersonal communication. Recent studies found that nonverbal emotional cues are more important for social understanding than contextual information. Therefore, this study investigated the ability to recognize other people's emotions through the voice. One hundred and ninety-two elementary school children from the first to sixth grade participated. They were asked to answer which of three emotions (happy, sad, angry) the actor expressed, by choosing one of three facial expressions. Twelve vocal stimuli were recorded by the actor beforehand. The results showed that even the first graders could differentiate the feelings among sad, happy, and angry, but there were some differences between lower grades and higher grades. Moreover, there were some students in the higher grades who could not tell the difference at all. The developmental tends and individual differences concerning the recognition of emotional skills through voice is under discussion.

Theory and practice of somatic exercise for Social-Emotional Learning

Akira Miyazaki Rissho University, Japan

The presenter talk about the relationship between mind and body. The presenter also introduced intervention program for Japanese children at-risk.

Overcoming the socio-cultural barriers for the sustainable adaptation of SEL programs

Yu Takizawa University of Queensland, Australia

Mental health problems among school aged children, such as depression and anxiety disorders, are becoming more recognized as serious social problems in Japan as they can become potential causes of school refusals, suicides and underachievement. Japanese schools recognize the critical importance of early prevention and intervention of mental health problems since early years of primary school. There are a range of overseas developed social emotional learning programs translated and adopted among Japanese schools, such as cognitive behavioral therapy based FRIENDS program developed in Australia. Research studies provide support for the efficacy of these programs for promoting the psychological well-being of Japanese children. However, the sustainable application of these programs among Japanese schools are still limited due to the socio-cultural barriers in Japanese schools, such as time constraint of Japanese school teachers and limited resources for implementing the programs. The presentation will review the socio-cultural barriers for the adaptation of social emotional learning program into Japanese schools, particularly in comparison to Australian schools, and discuss the potential solutions for overcoming these barriers in future.

30

Studies of youth of color in Brazil and US: Examination of development in diverse context

Chair: Velma M. Murry Vanderbilt University, United States of America

Social spaces of youth, including schools, have been and continue to be an apt location for and system of influence on development of children, including to promote positive development and prevent ensuing behavioral, academic, and social problems. Yet, a large number of children are homeless or live in public spaces where social relations can impact development. For this symposium presenters discuss findings on the influence of street life, peer social interactions, teachers and families influence and affect healthy development among youth. For example, Koller examines the implications of street life for development of youth in Brazil, asking the question: What facilitates healthy development among youth residing in the street? She offers methodological approaches to more accurately identify how risk and protection forecast vulnerability to street life and its association with developmental risk among youth. Murry will discuss ways to facilitate academic promotive parenting through a universal family-based program to address academic disparities among rural African-Americans, including how family school relations are enhanced to increase benefits for youth. Graham will examine the influence of peer relationships among students in diverse schools for impact on student felt belonging and academic engagement, with an emphasis on youth of color. Barbarin will provide data supporting an approach for boys of color that is more sensitive to developmental needs at school entry for this group and incorporates ecologically based assessment for school readiness. Across presentations presenters will comment on implications of findings for improving environmental settings, including schools and more dignified dwellings that foster healthy positive development of youth of color. Each presenter will also comment on methodological aspects of improving the utility of developmental research for understanding youth of color and other marginal populations and implications for research and utility of findings for practice will be discussed.

Enhancing school performance among African American youth through academic promotive parenting

Velma M. Murry Vanderbilt, United States of America

This study examines whether and how a universal, family-based youth risk prevention program has cascading effects on the promotion of academic success among rural African American youth as they transitioned middle school to high school. The potential moderation effects of gender also was examined. Results revealed that SAAF intervention-induced changes in academically promotive parenting indirectly fostered increases in their youths' academic self-efficacy and motivated them to do well in school, enhanced school bonding and student-teacher relationship quality, through SAAF's effect on processes that dissuaded youth from masking their academic potential. Further, elevated self-esteem, self-control, racial pride and future orientation, youth intrapersonal protective processes, demonstrated sustaining positive effects or grade performance among youth, throughout the first two years of high school (10th grade). Academic promotive parenting manifested greater positive academic outcomes for males compared to females. While efforts to reduce the academic gap, few studies have considered ways to harness the protective capacities, strength and resilience of the African American parents to eliminate education, as well as other disparities confronting the African American community. Our findings demonstrate that universal, family-based programs designed to prevent risk engaging behaviors, also influenced processes to promote academic success.

Restorative justice practices: Promoting school adjustment and prosocial development of Black boys

Oscar A. Barbarin University of Maryland, College Park, United States of America

Children's exposure to chronic stress or multiple adverse experiences has been linked to poor emotional, social, behavioral and academic outcomes (Shonkoff et al., 2012). Exposure to adversity such as poverty, child maltreatment, parental mental illness, and community violence can have particularly grave consequences for children's adjustment in the school environment (Blodgett & Lanigan, 2018; Guinosso, Johnson, & Riley, 2016). African-American boys seem to be especially vulnerable to these adverse processes. They are often targeted as having problems of poor school adjustment. Schools that respond to boys difficulties by imposing punitive disciplinary practices that exacerbate rather than ameliorate the problem. Reliance on exclusionary discipline suggests a failure to address the distress at the root of difficulties with self-regulation and leaves children vulnerable to long-term behavioral and emotional impairment. This presentation describes alternative, relationship-based strategies that improve student behavior, promote healing and healthy emotional development. These interventions are based on restorative justice practices. This paper describes the development and implementation of such a program with young boys of color. It is based on the idea that stable and supportive relationships with teachers and nurturing school environments serve a protective function. Teachers are well-positioned to promote healthy relationships that have a positive impact on youth beyond the classroom. The intervention provides a group-based professional development program to train teachers to apply restorative practices in their classrooms.

School racial diversity promotes adaptive coping among middle school youth of color

Sandra Graham UCLA, United States of America

We propose that school racial/ethnic diversity is a protective factor that buffers some of the challenges faced by early adolescents of color. It is hypothesized that diverse schools promote more positive psychosocial outcomes via three mediating mechanisms: (1) opportunities for cross-ethnic friendships that lead to more positive intergroup attitudes; (2) the development of complex social identities because there are more opportunities to find one's niche and fit in; and (3) feeling less socially vulnerable because there is a greater balance of power among different ethnic groups. These hypotheses are tested longitudinally in a large ($n = 6000$) multiethnic sample of middle school youth recruited from 26 schools that systematically varied in racial/ethnic composition. This presentation will focus on the third mediating mechanism: how school diversity helps youth of color feel less vulnerable, with vulnerability defined as feeling harassed and unsafe at school. We document that youth feel less vulnerable as school diversity increases and this effect is partly explained by the attributions they make for their negative experiences. Diversity promotes more attributional ambiguity, or a greater repertoire of perceived causes for harassment that do not implicate one's perceived self-worth ("it's not because of something about me"). The buffering effect of attributional ambiguity was most evident for African American males who deviated from the perceived norm (stereotype) for their group to be powerful and aggressive. Thus, ethnic diversity can promote more adaptive attributions and better mental health for youth who experience peer harassment, which we know peaks during the middle school years.

Street life and social rights

Silvia Koller Universidade Federal do Rio Grande do Sul, Brazil

"The street" represents a public space where both social and economic interactions take place. Studying the development of youth in the context of street life presents researchers and educators with many ethical and methodological concerns. There is often failure to recognize that youth who reside in the streets are a distinct population. That there is no clear operational definitions of "street life" cause impediment to estimating their numbers, which has led to great discrepancies. Research interest in the implication of street life has as studies of street life ways in which this form of dwelling affects the emotional, cognitive, and social development of street populations. Some analysis argue that living on the street is harmful or, at least, that it retards psychological development, especially for children, because of exposure to addictions, violence, and exploitation. However, other analyses have shown that streets allow for experiences that promote healthy development. The mixed findings may be due to methodological and empirical gaps in the study of street life and youth development. The presenter will discuss approaches to address this void, identifying stratification processes based on social grouping and risk as well as causal pathways through which protective factors determine how vulnerability affects street life and its association with developmental risk among youth (e.g., attending school, supportive social networks, access to caring adults or family ties). Finally, the need to identify dwellings that foster healthy development and the protection of human rights throughout the world will be discussed.

INVITED ADDRESS

9012KA

Universals and language-specifics in the early identification of literacy difficulties

Markéta Caravolas Bangor University, United Kingdom

Many European languages use alphabetic orthographies, and these can vary extensively in their transparency or letter-sound consistency. An important question in cross-linguistic research on literacy development concerns the impact that orthographic consistency may have on the longer-term neuropsychological predictors, as well as on the patterns of alphabetic reading development. In this presentation, I summarize a body of research that directly compared literacy development in English, with its inconsistent orthography, with that of various relatively consistent orthographies, including Czech, Slovak, Spanish, and Welsh. Children's reading and spelling development was investigated in early primary years, and focused on the cognitive precursors and correlates of word-level skills, on the growth patterns of silent and aloud reading skills, and on the pathways to reading comprehension. Together, the studies demonstrate

that while orthographic consistency affects the rate of alphabetic reading and spelling acquisition, these skills are underpinned by a language-general set of cognitive skills. The implications of these findings for the identification of children at risk of literacy difficulties, as well as for their remediation will be discussed, and, a multilanguage literacy assessment tool, MABEL, will be presented.

8177KA

Typical and atypical development: Investigating the interplay of language and cognitive processes

George C. Spanoudis *University of Cyprus, Cyprus*

The assumption that understanding atypical cognitive and linguistic development is informed by understanding of typical cognitive and linguistic development, is widely accepted by many researchers. Based on this assumption, two theoretical approaches, comparative and dimensional, investigate the interplay of language and cognition in developmental disorders. The debate on categorical versus dimensional models for understanding developmental language disorders will be addressed in the talk. In addition, a series of empirical studies focused on developmental language disorder will be presented in order to reveal how studying this topic can inform both theory and clinical practice; on one hand, research in developmental language disorders can contribute in the debate between categorical and dimensional approaches and, on the other hand, can generate stimulating ideas and novel insights for the clinical practice. Together, these studies will underscore the need to approach the study of atypical language development with a mindset that, unlike most disease conditions, psychological phenomena are empirically most consistent with a dimensional perspective.

7624KA

The epidemiology of cognitive development

Franck Ramus *France*

The epidemiology of cognitive development is an approach essentially based on large observational studies, which examines individual differences in cognitive abilities throughout childhood and their determinants. Although different in terms of methodology and main interests from developmental psychology, cognitive epidemiology offers complementary viewpoints on cognitive development and addresses fundamental research questions of interest to developmental psychologists. This talk will depict the contributions of the epidemiological approach to the field of cognitive development and highlight the methodological advances that have made such contributions possible. We will discuss the stability and developmental trajectories of cognitive functions, their main predictors, the complex interplay between environmental and genetic predictors, and the relationships between the different domains of cognition from birth to adulthood.

5335KA

Revisiting bilingual education (be): Can multilingual education stand on the two feet of be?

Ajit K. Mohanty *NMRC, Jawaharlal Nehru University, India*

The distinction between conversational fluency and cognitive/academic language proficiency (CALP) and the principle of linguistic interdependence involving additive transfer across languages (Cummins, 1981; 2009) constitute the two fundamental psycholinguistic principles of bilingual education (BE), appropriated and extended to multilingual education (MLE) in linguistically diverse societies. However, analysis of MLE programs in multilingual societies (Mohanty, 2011; 2019) shows some major issues in uncritical extension of BE to MLE. Studies on multilingual socialisation and development of cross-linguistic and metalinguistic skills in multilingual societies show an early emergence of CALP even before formal schooling and this can possibly lead to positive transfer across languages much earlier than assumed in BE. It is argued that the assumptions (in BE) of discrete languages and linguistic proficiencies are problematic due to the "squishiness of linguistic boundaries" (Mohanty, 2019: 179) in multilingual contexts. This necessitates a more holistic view of development of language proficiency as a total linguistic repertoire or development of "multilingualism as a first language" (Mohanty, 2019; Mohanty & Skutnabb-Kangas, forthcoming) in MLE contrary to the assumptions of development of discrete language-specific proficiencies (L1 and L2) in BE. Further, linguistic heterogeneity and presence of children from diverse mother tongue (MT) communities in the classrooms in multilingual societies are major limitations in extending single-MT based model of BE to MLE. It is argued that, while the principles of BE can be seen as fundamental to teaching of languages, new insights in respect of development of multilingual children call for a rethinking of the practices of MLE. Based on our recent applications, some pedagogic strategies for effective MLE in multiple-language classrooms (Mohanty, 2013; 2019) will be discussed.

5314KA

Cognitive developmental psychology 40 years after Jean Piaget (1980−2020)

Olivier Houdé *France*

Jean Piaget's theory underestimated the cognitive capabilities of infants, preschoolers, and elementary schoolchildren, and he overestimated the capabilities of adolescents and adults, which are often biased by illogical intuitions or heuristics (Daniel Kahneman's theory) they fail to inhibit. During the last four decades, detailed behavioral studies of children's problem solving led to a reconceptualization of cognitive development, from discrete Piagetian stages to one that is analogous to overlapping waves (Robert Siegler's theory). The latter is consistent with a neo-Piagetian approach of cognitive development, in which more and less sophisticated solutions compete for expression in the human brain. In my own theory, inhibition of less sophisticated solutions by the prefrontal cortex is the key component of children's conceptual insights associated with more advanced Piagetian stages. Following this cognitive-inhibition theory of thinking, in each child's or adult's brain, fast and intuitive heuristics or cognitive biases (System 1, D. Kahneman) and logical rules or exact algorithms (System 2, J. Piaget) may compete at any time. Such competitions are called "cognitive conflicts". There are examples in all academic learning skills: reading, writing, counting, thinking (or reasoning) and respecting others. To overcome these conflicts, the whole-brain adaptation (i.e., intelligence or flexibility) depends on the executive control ability of the prefrontal cortex (System 3), in connection with emotions and feelings, to inhibit System 1 and to activate System 2, wherever they are in the brain, on a case-by-case basis. Metacognitive training in the laboratory or at school may be designed to help the brain to do so. It is useful for both children and adults, as the latter remain poor reasoners in many situations where their System 1 dominates, often unconsciously. Reference: Houdé, O. (2019). 3-System Theory of the Cognitive Brain: A Post-Piagetian Approach. New York and London: Routledge.

593KA

The relation between socio-emotional development and cognitive development in children

María C. Richaud *National Council of Scientific and Technical Research (CONICET), Argentina*

Emotional development is built on the cerebral architecture of young children in response to their individual experiences and according to the influences of the environments in which they live. Recent scientific advances have shown how the interrelated development of emotion and cognition depends on the emergence, maturation and interconnection of complex neural circuits in multiple areas of the brain (Davidson et al., 2002; Barrett et al., 2007). The circuits that are involved in emotion regulation are highly interactive with those associated with executive functions (Posner & Rothbart, 2000; Campos, Frankel, & Camras, 2004). In terms of the basic functioning of the brain, emotions support executive functions when they are well regulated, but interfere with attention and decision making when poorly controlled (Shonkoff & Phillips, 2000;

Shonkoff & Levitt, 2010). In this address will be presented studies with different samples of Argentine children, in which there will be discussed how an accepting parental style, the development of a secure attachment, appropriate empathic abilities, and adequate emotional regulation favors the development of executive functions: inhibitory control, attention, working memory, planning and cognitive flexibility, while an authoritarian or permissive/negligent parental style, an insecure or disorganized attachment, and reduced empathic abilities, are related to an inadequate development of cognitive functions, whether due to mothers with depression, serious family conflicts, abandonment, drug addiction of parents, with the addition or not of social vulnerability.

INVITED SYMPOSIUM

1340IS
Value preferences and their development across the lifespan
Chair: Klaus Boehnke Jacobs University Bremen, Germany

Value preferences are assessed in different conceptual paradigms (Ron Inglehart, Geert Hofstede. Harry Triandis, Bob House). Social psychology relies most prominently on the value circumplex proposed by Shalom H. Schwartz in a multitude of influential publications since 1987. Schwartz offered convincing empirical evidence that value preferences are universally structured in a circular manner. Little knowledge is, however, available as to whether and in what way value preferences change across the lifespan. Based on two German longitudinal studies, the symposium offers unique evidence on modalities of value change among individuals from their late twenties to their mid to late forties. Klaus Boehnke (Jacobs University Bremen) will offer an introduction into available empirical data on value preferences among Germans in that life phase. He will compare assessment based on the 'Kluckhohn-Strodtbeck Value Inventory,' a precursor of the Schwartz Value Survey (SVS), an abbreviated form of the SVS, and the Portrait Value Questionnaire, as implemented in the European Social Survey (ESS). Adrian Stanciu (University of Vechta) will present data on 'Kluckhohn Values' from the German Socioeconomic Panel (GSOEP) and will show that they map very well onto Schwartz's four higher-order values. Oscar Smallenbroek (European University Institute, Florence) will present latent growth models on value change in mid-adulthood, relying on data from the GSOEP and from Boehnke's ongoing longitudinal study 'Life under Nuclear Threat' (LuNT). Maor Shani (The Hebrew University) and Daniel Horn (University of Strathclyde) round off the symposium by presenting more applied work from the LuNT study on the development of political engagement from adolescence to mid adulthood. Shalom

Schwartz will act as discussant of the papers presented in the symposium.

Assessment of value preferences in comparison: Life under nuclear threat (LuNT), GSOEP, and ESS
Klaus Boehnke Jacobs University Bremen, Germany

The introductory contribution by the Chair serves two purposes. It introduces the audience to the two studies that are used to offer insights into value change across the lifespan, namely the Chair's own study, Life under Nuclear Threat (LuNT), and the German Socioeconomic Panel (GSOEP). After introducing the 'history' of the two studies, the contribution focusses on the modalities of assessing participants' value preferences, namely—in the LuNT study—a one-item-each assessment of the ten basic values of the Schwartz Value Circumplex, using the response format of the original Schwartz Value Survey, and—in the GSOEP—nine items from the Kluckhohn-Strodtbeck Value Inventory. In order to show that the two instruments can be used for purposes of cross-validation in longitudinal studies of change in values across the lifespan, a brief new online study ($N = 1030$) was undertaken with mid adulthood Germans (aged 30–50) that encompassed the two instruments, plus the European Social Survey (ESS) version of Schwartz's Portrait Value Questionnaire. Multidimensional scaling analyses (PROXSCAL) were used to first establish a 'correct' circumplex structure of value preferences being assessed with the three instruments offered to respondents. Results showed that for all three instruments the circumplex structure could—by and large—be corroborated. Subsequently, responses to all three assessments of value preferences formed the basis of one comprehensive MDS. That analysis showed that all items taken together allow a partitioning of the value space into the four higher-order value types 'self-transcendence,' 'conservation of the status quo,' 'self-enhancement,' and 'openness to change' regardless of the operationalization approach to measurement.

Can we study value development in adulthood in the right theory but with the "wrong" instrument?
Adrian Stanciu GESIS-Leibniz Institute for the Social Sciences, Germany

The existent evidence regarding value development in adults relies on longitudinal data that covers only short periods in their lifespan. The longest is an 8 years-study which, strictly speaking, surveyed young adults (20 through 28). Milfont and colleagues (2016) conducted the only research that covered all of adulthood (age range, 25–75, was split into cohorts), however, their data included three yearly assessments only. Value development may continue in adulthood but, as I here argue, it becomes increasingly difficult to tease it

out because of instrument shortcomings and not necessarily due to the unique biological or psychological nature of the aging individual. One way forward is to examine existent long running longitudinal datasets despite them applying out of fashion instruments. In the presentation, I first trace the roots of the Schwartz value theory back to Clyde Kluckhohn (1951) and argue how his work spawned varying measurements that may nonetheless be unified conceptually under the Schwartz theory. I substantiate the claim empirically by means of a case study on adults (33 and older at T0) surveyed eight times in the German Socio-Economic Panel (SOEP) (1990–2016). SOEP records values based on a modified version of Kluckhohn and Strodbecks' (1961) instrument. Multi-Dimensional Scaling (MDS) at each measurement instance revealed a near perfect replication of the four higher order value priorities theorized by Schwartz. I discuss how the findings contribute to a research agenda wherein the study of value development can and should be using all available resources of the current and past decades without ever excluding the state of art value theory.

Value change over the lifespan: Evidence from 25 years of longitudinal data
Oscar Smallenbroek Sciences Po, Netherlands

Personal values are defined as relatively stable aspects of personality. How stable is unclear. Existing have either longitudinally followed respondents for a short time frame or examined cross-sectional data. Most longitudinal evidence focuses on adolescence and early adulthood. These studies provide only a partial answer to the question, while most are unable to separate cohort and age-related change over the lifespan. In this paper, I present evidence of value change by fitting latent growth models on two longitudinal datasets. These data follow 242 and 204 respondents who were born in West Germany between 1966 and 1973, for more than 25 years. Findings indicate there is a large increase in the importance of conservation, a smaller increase in self-transcendence while openness to change and self-enhancement do not change over the life span.

Political orientation and engagement from adolescence to adulthood: Data from a longitudinal study
Maor Shani Osnabrück University, Israel

Lifespan developmental psychology and peace psychology have rarely put their lots together. The main reason seems less to do with ideological barriers, but rather significant design hurdles: research allowing the combination of the two needs to be longitudinal. A sufficiently large sample must be studied multiple times across a sufficiently long time-span.

Studies that satisfy these criteria are scarce; most longitudinal studies either lack peace psychology topics or cover too short a time span to claim relevance for lifespan development. The current paper offers an exception. It explores the potential for intergenerational transmission of political worldviews and patterns of engagement, and examines trajectories of political orientations from adolescence to mid-adulthood, using survey data from an ongoing panel study of German peace movement activists and sympathizers, first studied in 1985 and re-approached every 3 ¹/₂ years. Analysis of data from three waves (when participants were on average 17.5, 38.5, and 45.5 years old) demonstrates the longitudinal effect of activism in adolescence on political engagement in mid-adulthood, and sheds light on patterns of continuity and discontinuity in political orientations and engagement. Furthermore, we show how these patterns are moderated by gender. These findings suggest that investments into the capacities and opportunities for constructive youth activism, while likely manifesting themselves at a later period, may pay real dividends for community empowerment and sustainability.

ORAL PRESENTATION

9123

Mothers, fathers, preschool institutions, their influence on psychic development of two-year-old child

Lenka Šulová Charles University, Czechia

Thinking about changes brought by actual society to traditional roles of parenting. Are the children lacking models for observational learning? Discussion of optimal development of children up to 3 years old. Do they need more individual family care at this age or is institutional care equally valuable for the healthy psychic development of 2-year-old children? Presentation is mainly based on international research of interactions between children up to 3 years old and their mother, father, and educators, which took place in several phases. The first research phase was executed through questionnaire forms (59 mothers and educators in France and 50 in the CR), focusing on the notion of educational work from the mothers' and educators' sides in the child's socializing process. The second phase dealt with a detailed analysis of the child's behaviour towards the mother and nursery educator. The 44 children CR was observed in a play situation in the nursery whilst using standard stages of Strange Situation. The child's behaviour towards the mother and educator was captured on 20-minute video recordings and subjected to microanalysis. The last phase focused on the interaction of 12/24/36-month-old children with their family members (mother, father, older sibling) was captured through a standard play situation in the domestic environment

280× 2-minute recordings were analysed, 226 Czech families, 54 French families. We will cite some results, specifically, those related to the interaction between child and their mother and educator, then to their gender-specific behaviour with the mother and father, and lastly, the developmental changes and progress of the 12/24/36-month-old children in relation to their gender identity. The chosen results will be discussed namely with emphasis on the current whole social debate in the CZ on the topic of what is better for the 2-year-old child: institutionalised or individual care?

8411

Evaluation of the proprioceptive management of dyslexia developmental. Randomised study

Luc Virlet (1), Laurent Sparrow (1), Cédrick Bonnet (1) 1. Université de Lille SCALab – UMR CNRS 9193, France

Background: The evaluation by INSERM of the proprioceptive treatment of dyslexia confirmed its safety but could not conclude on its actual efficacy. Proprioceptive care aims to correct a multisensory integration disorder (MID). Proprioceptive management of dyslexia needs to be confirmed, as it has never been assessed by objective measurement of eye movements in silent reading, thus avoiding the bias of using oral language to assess reading. Methods: Randomised, comparative, monocentre, over 9 months, in urban care, in Haut de France. In dyslexic children, 9 to 13 years old, with a delay of at least -2 standard deviation (SD), and two years of speech therapy. Proprioceptive treatment determined by randomisation. The proprioceptive treatment uses sensory lures. The experimental group: Speech therapy ($n = 9$) versus Proprioceptive and Speech therapy ($n = 13$). Evaluations by the analysis of eye movements in silent reading by oculometer (EYELINK 1000), and by a reading test (Alouette-R). Findings: The eye movement evaluation shows that: Phonological skills were standardised, for lexical access, word frequency effect and phonological assembly processes for the experimental group: Saccades were longer and fixations shorter for the experimental group. The evolution of the C index of the Alouette-R test by proprioceptive support with allows a gain in the number of correctly read words of $+1.84$ SD, t (20) = 2.29, p-value = .0326, CI 95% (0.167; 3.51), Cohens'd = 0.93. There were no adverse events. All have an MID. Proprioceptive treatment improves MID, correlating with improved reading, thus eliminating a placebo effect. Limitations: Small sample size, lack of complementary intervention in the control group. Interpretation: The evaluation of proprioceptive management by measuring eye movement confirms its effectiveness. Dyslexic children present a multisensory integration disorder, its correction allows the improvement of their phonological and reading skills.

8370

Molecular developmental psychology: Challenges and promises of an interdisciplinary research approach

Hana Minařik Witten/Herdecke University, Germany

As individual development must be considered as the result of a multidimensional and reciprocal interaction between genetics, environment, and behavior (e.g., Overton, 2012), conducting state-of-the-art research in this domain requires a multilevel methodology. It is not surprising then that molecular developmental psychology and the evolving field of gene × environment-interactions (G×E) comprises different disciplines, so that not only conceptual approaches of the various disciplines but also methodological issues and their interdisciplinary application become more and more necessary. In this talk, we will demonstrate the challenges of building a bridge between various disciplines, with a special focus on the molecular genetic perspective that has its roots in biology but is increasingly often applied to developmental research questions. We will address two issues. First and from a methodological perspective, we will demonstrate common restrictions (e.g., publication bias, loss of power) of different study designs in the field of molecular psychology based on the current literature. Second and against the backdrop of an ongoing research study on the genetic correlates of differential susceptibility to contextual influences, we want to argue from a conceptual perspective that molecular genetic approaches need to explicitly take into account psychological models in order to yield meaningful results. More specifically, we will employ the Model of Social Change and Individual Development by Silbereisen and Tomasik (2015) as a basis for the examination of differential susceptibility vis-à-vis demands that result from global challenges related to, for instance, the globalization of trade, international migration or the current COVID-19 pandemic. Finally, we want to focus on practical solutions and talk about how to deal with restrictions in the practical implementation of a psychological theory.

8288

A comparison of mental-attentional capacity parameters across monolinguals and bilinguals in Canada

Morteza Charkhabi (1), Juan Pascual-Leone (2), Marie Arsalidou (1), (2), (3) 1. Higher School of Economics, Institute of Education, Russia; 2. York University, Canada; 3. Sirius University, Russia

Extensive research demonstrates a cognitive advantage of bilinguals over monolinguals during childhood and during senescence in

older adulthood. A growing literature supports that there is no solid bilingual advantage in young adult bilinguals over monolinguals, how-ever this phenomenon is not well explicated. We investigate effects of language background on cognitive performance in young adults using measures of mental-attentional capacity that have multiple levels of difficulty. Eighty-two participants completed parametric measures of mental-attentional capacity in visual-spatial' (the color matching task; CMT, and the figural intersection task FIT) and numerical domains (the number matching tasks (NMT), along with the language and social background questionnaire (LSBQ). No significant differences among monolinguals and bilinguals were observed on mental-attentional capacity scores. Significant group differences were identified for composite scores that distinguish easy and difficult levels in of the tasks, albeit these differ by domain. Specifically, between group differences were observed in reaction time scores for the CMT, and in accuracy scores for the NMT. Interestingly, reaction times that index executive efficiency show significant group differences in easier levels of the task for the CMT; and in accuracy at harder levels of the task for the NMT. Overall language background has complex effects on cognition in young adults. These findings suggest that measures of mental attentional capacity can serve as promising tools to study cognitive effects of language background.

7988

Self-compassion and emotional reactivity of adolescents: The moderator role of institutional care

Bilge Göz Çengelli (1), Figen Eroğlu Ada (2), Şule Pala Sağlam (3), Sinem Hayali Emir (1), Havva Alimoğlu (4) 1. İstanbul University, Turkey; 2. Istanbul Medipol University, Turkey; 3. Anadolu University, Turkey; 4. Acıbadem University, Turkey

Adolescents receiving institutional care are much more likely to develop any psychological problems at some point in their lives, than those living with their biological parents. In addition to the cognitive and social difficulties they experience, there are various studies demonstrating that they are at risk, in the field of emotional development too. Emotional development constitutes only a part of important outcomes but it covers crucial concepts such as self-compassion and emotional reactivity. Although these concepts are so important for adolescents to establish healthy relationships with themselves and others, no study has so far studied these in this special group. In the light of the literature the aim of the present study is to investigate the moderating role of institutional experience on the relation between self-compassion and emotional reactivity. Firstly, it is expected that children who are residing in institutions will have higher scores on emotional reactivity compared to children in a family environment. Secondly, it is predicted that there will be a significant and negative relationship between self-compassion and emotional reactivity. Additionally, this potential relationship is expected to be stronger for institutionalised adolescents. A total of 90 adolescents from two different care types (institutional care and biological family homes) will be included in the study. Data will be collected using the Self-Compassion Scale and the Emotion Reactivity Scale. A moderation model will be tested that includes emotional reactivity as a criterion variable, self-compassion as a predictor variable, and care type (institutional care vs. biological family homes) as a moderator. The results of the present study may contribute to enlighten the emotional regulation mechanisms of adolescents receiving institutional care and develop effective intervention programs regarding the protective role of self-compassion, which is a relatively new concept.

7777

Different paths of attachment in the relationship of depressive symptoms in emerging adult

Zhiqiang Yan (1), Xiaoqian Zhu (1), Qing Deng (1) 1. Hunan Normal University, China

The insecure attachment was regarded as a risk factor for depression. However, insecure attachment can be divided into attachment avoidance and attachment anxiety, and the relationship among attachment avoidance, attachment anxiety, and depression was not clear. The current study did a path analysis to verify our hypothesis that different facets of empathy mediate the relationship among attachment avoidance, attachment anxiety, and depression. Four hundred and ninety-two undergraduate students participated in this study, and they completed the Experiences in Close Relationships-Relationship Structures Questionnaire (ECR-RS), Interpersonal Reactivity Index (IRI), and Center for Epidemiologic Studies Depression Scale (CES-D). Path analysis results indicated that the correlation of attachment avoidance and depression was mediated by perspective taking, and the correlation of attachment anxiety and depression was mediated by perspective taking and personal distress. These results implied to us that attachment avoidance and attachment anxiety works on depression through different paths.

7713

Prenatal parenting factors in the transition to parenthood and infant's socio-emotional development

Figen Eroglu Ada (1), Sumeyye Ayaydin (1), Suzan Yildirimcakar (1), Telat Gul Sendil (2), Hulya Yazici Ozbek (3)

1. Istanbul Medipol University, Turkey;
2. Istanbul 29 Mayis University, Turkey;
3. Istanbul University, Turkey

In the prenatal period of transition to parenthood, parenting factors such as parenting stress, parenting expectations, perceived social support and quality of marital relationship play an important role in predicting development of children. In the present study, the mediating role of the prenatal anxiety in the relationship between prenatal parenting factors in the transition to parenthood and infant's socio-emotional development will be examined longitudinally. The participants of the study will consist of 99 first-time mothers, their partners and infants. The data of this longitudinal study will be collected at three different times. In Time 1, which represents the third trimester of pregnancy, the participants will be parents only, while in Time 2, which represents the 6th postnatal month and in Time 3, which represents the 12th postnatal month, the participants will be parents and their infants. The data will be collected by convenience sampling method. In order to evaluate the prenatal parenting factors, pregnant women who are in 28th–40th gestational week and their partners will be requested to complete Parenting Expectations, Multidimensional Scale of Perceived Social Support, Dyadic Adjustment Scale, Brief Symptom Inventory. In addition, parents will be asked to complete Brief Symptom Inventory, Edinburgh Postnatal Depression Scale, Parenting Stress Index-Short Form, Parenting Alliance Inventory and Ages and Stages Questionnaires: Social-Emotional and Infant Behavior Questionnaire–Revised Very Short Form at 6th and 12th postnatal month. Based on previous research, it is expected that parents' prenatal anxiety will mediate the relationship between parents' prenatal parenting expectancies, perceived social support and quality of marital relationship and socio-emotional development of infants at 6 and 12 months of age. The hypotheses of the study will be tested with Conditional Process Analysis. The present study is thought to be important in drawing attention to preventive programs by highlighting the potential roles of this transition process.

7490

Attachment and relationship satisfaction: An Actor-Partner Interdependence Model at the empty nest

Geneviève Bouchard (1), Jannie Thibodeau (2) 1. Canada; 2. Université de Moncton, Canada

The empty nest represents the stage of the family life cycle when grown children have left the family home to live independently. Despite the unique nature of this period, few studies have examined the empty nest compared to other stages of the family life cycle. The aim of this study was to fill this gap in the literature

by studying the influence of parents' attachment dimensions on their marital and parental satisfaction during this specific period of the family life cycle. We used the Actor-Partner Interdependence Model in order to examine the dyadic nature of the experience. The sample comprised 165 Canadian couples who had been in the empty-nest stage of the family life cycle for an average of 9 years. Participants first signed the consent form and then completed a series of questionnaires independently, without consulting their partners. In the hypothesized model, attachment dimensions (i.e., secure, anxious/ambivalent, avoidant) served as independent variables to predict each partner's marital and parental satisfaction. The results of a path analysis revealed that husbands' and wives' anxious/ambivalent attachment was negatively associated with their own and their partners' marital satisfaction. In addition, findings showed that husbands who had high levels of avoidant attachment had lower levels of marital and parental satisfaction, and their wives also had lower levels of parental satisfaction. Moreover, partner effects indicated that wives' avoidant attachment was negatively associated with their husbands' parental satisfaction. Overall, the results suggest that parents who have high levels of insecure attachment (i.e., anxious/ambivalent or avoidant) are less happy in their marital and parental roles at the empty-nest stage. Our results also highlight the dyadic influences of individual characteristics, in this case romantic attachment, on the marital and parental satisfaction of couples at the empty-nest stage.

7329

Compassion fatigue in care workers for orphans and vulnerable children in South Africa

Jasmyn Pretorius South Africa

South Africa is plagued with poverty and death of parents due to HIV/Aids. As a result, many children are left Vulnerable and Orphaned. Some of these children are cared for by caregivers in children's homes in under privileged communities. These caregivers work in highly stressful circumstances and often suffer psychologically from compassion fatigue resulting in symptoms of depression, apathy and numbness which in its turn effect the psychological well-being of the vulnerable children they care for. In this paper, a study, using participatory Action Research, investigating the psychological effects of compassion fatigue in the caregivers as well as the children in a community based children's home will be presented. The research method will be elucidated and the results of the research, indicating the devastating effects of compassion fatigue on the psychological well-being of caregivers and children, in this community, will be presented. Lastly a group intervention to enhance the psychological well-being of these caregivers and

promote the mental health of the orphaned and vulnerable children will be presented.

7246

Which emotion regulation strategy parents support children to use by age

Chihiro Norichika University of Tokyo, Japan

The purpose of this study is to explore how parents regulate their children's negative emotions, and how parental support differs by children's age. It is suggested that children learn how and when to regulate their own emotions from parental extrinsic regulation of their emotion. However, most previous studies were limited to parental attitudes, and little research has studied the emotion regulation strategies parents support their children using. In this study, we measure five emotion regulation strategy supports (situation selection, situation modification, attentional deployment, cognitive change, and response modulation) for children's emotion. In this study, 467 parents of children aged 3–6 years were divided into two groups that reported their extrinsic emotion regulation strategies toward their children's anger or fear. Parents were found to use situation selection strategy support (avoiding the emotional situation before encountering it) more often with younger children, suggesting that parents recognize it as one of the most appropriate strategies for young children, who often meet negative emotional situations they cannot handle. There is no significant difference by age in other strategies, but correlations between some strategies vary by age. For example, parents of 4- to 6-year-old children shows the negative correlation between situation modification support and response modulation support for children's fear, but parents of 3-year-old children didn't show it. The results suggest some emotion regulation strategy supports for children may vary by age.

5771

Economic predictors of loneliness and coping strategies among people in early adulthood

Liliya V. Babakova (1), Nataliya H. Alexandrova (2), Plamen A. Tzokov (3) 1. Bulgaria; 2. International Business School, Bulgaria; 3. Plovdiv University "Paisii Hilendarski", Bulgaria

Personal loneliness is one of the most current topics in time. According to some studies, loneliness has become epidemic after early adulthood. The purpose of this study is to identify which socio-economic factors affect the experience of loneliness and how people cope with it. The survey was conducted in Bulgaria among 170 young people. Methods: Quantitative methods were used in the study and the data were analyzed using descriptive statistics, ANOVA and regression analysis. Results: The strongest economic factors influencing

loneliness were: gender ($F = 6,526$; $p = .012$), career prospects ($F = 2,541$; $p = .052$) and marital status ($F = 17.551$; $p \leq .001$). Factors influencing emotional loneliness are family status ($F = 4,729$; $p = .004$) area of work ($F = 3,351$; $p = .017$) and people's expectations for change in income ($F = 4,736$; $p = .006$). Regression analysis found that people who use confrontational coping are most likely to experience social loneliness ($\beta = 0.280$; $p = .015$), and people who experience emotional loneliness tend to seek social support ($\beta = 0.231$; $p = .034$). Conclusion: Certain socio-economic factors can be a serious predictor of loneliness and well-being among young people. For instance, people, who are married or live in couples, are much more vulnerable to experiencing intimate-personal loneliness, whereas emotional loneliness is predominantly experienced by divorced and unmarried. Women are more vulnerable to experiencing intimate-personal loneliness, while people who expect a minimal increase in total income are more likely to suffer from emotional loneliness. Coping strategies play a significant role in overcoming loneliness. People who tend to deal with their problems confrontationally tend to report higher levels of social loneliness, while people seeking ways to cope with social loneliness seek social support.

5766

Association of family communication pattern and friendship quality among adolescents in Jakarta

Annisa P. Yudiani (1), Fitri Fausiah (1), Sherly S. Turnip (1) 1. Universitas Indonesia, Indonesia

Friendship quality is an important aspect in adolescent's life that requires good social skills. The formation of social skills of adolescents in return depend on family communication pattern. Children coming from family with high conversation orientation have better interpersonal competence and conflict management skills, and therefore possess better social skills, compared to those coming from family with high conformity orientation. The objective of this study was to examine the role of family communication pattern from both parents to friendship quality among adolescents in Indonesia. This study used follow-up data with one-year interval from a larger longitudinal data set of adolescent's mental health in Jakarta. Data were collected from 475 students (205 males, 270 females) from 5 senior high schools in Jakarta. The model investigated family communication pattern and gender as predictors of friendship quality. The result indicated a total of 15.7% contribution from predictors towards friendship quality (adjusted R square $= .157$). The most important predictor for friendship quality consecutively were gender (27.2%), paternal conversation orientation (19.8%), and maternal conversation orientation (11.4%). It was concluded that girls coming

from family with high conversation orientation were predicted to have best friendship quality among all adolescents.

5752

Body image, self-esteem and ambiguity tolerance in adolescence

Elizaveta A. Erokhina (1), Maria V. Bulygina (1), Elena V. Filippova (1)
1. Moscow State University of Psychology & Education, Russia

We aimed to explore body image and its relationship with self-esteem and ambiguity tolerance in 273 adolescence recruited from Moscow schools (133 females and 140 males). Among them, 119 adolescence aged 12 to 14 (younger adolescence) and 154 adolescents aged 15 to 17 (older adolescence). Methods: Body Image Questionnaire, Body Appreciation Scale, Self-esteem and Claims' Level Scale, and Multiple Stimulus Types Ambiguity Tolerance-1 were measured to assess body image and self-esteem. Pearson's chi-squared test (χ^2), Mann–Whitney U test, regression analysis and Pearson correlation (r) were performed to compare body image to self-esteem measures. Results: We found girls were considerably more dissatisfied with their bodies than boys (54.3% of females and 25.7% of males significantly dissatisfied). No differences were observed between younger and older adolescents. Comparison of groups by self-esteem index found that adolescents who are satisfied with their bodies have higher self-esteem, both in terms of overall self-esteem and in terms of individual indicators ($p \leq .001$). Adolescents, both male and female, who are satisfied with their bodies also have higher ambiguity tolerance, are more positive about novelty ($p \leq .001$) and prefer situations of uncertainty ($p = .023$), compared to adolescents who are dissatisfied with their bodies. Regression analysis shows that body image is a predictor of self-esteem, this is true for all groups ($p \leq .001$). It also shows that body image is a predictor of attitude to ambiguity for older adolescent boys ($p \leq .05$). The impact of body image on the attitude to ambiguity is significant only at the tendency level for the whole sample ($p = .056$). The ability to be tolerant of ambiguity is an important quality for a modern person, it contributes to personal growth, striving for achievements and resistance to stress. The results of this study helped us conclude that body image may be both a risk factor and a factor of personal growth.

5175

Efficacy of a multilevel intervention to promote resilience among at-risk adolescents

Annalakshmi Narayanan India

Adolescent students from rural low SES backgrounds are exposed to cumulative risk factors that challenge their healthy psychosocial development. The present study involved designing and testing the efficacy of multilevel intervention based on the socio-ecological model in promoting resilience among rural adolescents from low-income families. A sample of 414 adolescents from low SES studying in rural schools in the age group 12 to 18 years was administered Youth Self-Report, and 216 students who scored high on psychological problems were selected as sample. These students were assigned to three conditions, viz., EG1 that was provided multilevel intervention, EG2 that was provided student-level intervention, and CG that was control condition. The multilevel intervention focused on three systems, viz., individual, family, and schools. At the individual level, the intervention focused on the Cognitive system (metacognition), Self-regulation system, and attachment relationships. Concepts like Yama, Niyama, and Pratyahara were introduced to promote self-regulation. At the school level, the intervention for teachers in the school focused on work meaningfulness, teaching styles, positive school climate, and positive education. The intervention also included introducing duties of 'guru' and students and the 'gurukul' system of education. At the family level, intervention delivered to parents focused on attachment-based intervention for parents of adolescents, authoritative parenting style, and parental support of education. A 2-way Mixed ANOVA and thematic analysis of interviews were used to examine the effectiveness of intervention among students. The students who participated in the intervention delivered at multilevel (EG1), as well as the students who participated in single-level (EG2) intervention, showed a definite improvement compared to the control group on knowledge of cognition, regulation of cognition, metacognitive awareness, self-regulation, and resilience. Qualitative data revealed interesting improvements on both parents and teachers after the intervention. The present study makes a compelling case for using multilevel interventions for underprivileged adolescents.

4559

Early and robust use of phonological syllables as segmental and prelexical reading units

Ophélie Lucas (1), Ludovic Ferrand (1), Norbert Maïonchi-Pino (2) 1. Université Clermont Auvergne – LAPSCO CNRS UMR 6024, France; 2. Université Clermont Auvergne – LRL EA 999, France

This study focused on the automation of phonological processing through the status of the syllable as a prelexical and segmental unit in French typically developing children. For the first time in French children, we used an adapted version of the word-spotting paradigm with 90 French children (from first to fifth grade). They had to detect monosyllabic words located at the beginning of pseudowords (e.g., the word SAC 'bag' in SACTI). Two experimental conditions were proposed, where the syllabic boundary corresponded to the word's end (i.e., SAC-SACTI, compatibility) or did not correspond (i.e., SAC-SACUV, incompatibility). The phonological frequency of the initial syllable, the lexical frequency, the orthographic frequency (i.e., bigrams, trigrams and bigram trough; e.g., CT in SACTI or AC in SACUV) have been manipulated. Our results showed that: (1) there is an early but progressive use of the syllable (response time and accuracy) from first to fifth grade (sensitivity to the compatibility condition); (2) a "late" automatic use of the syllable as segmental and prelexical unit – the phonological frequency has facilitatory effects in first and second grade, while it has inhibitory effects from third to fifth grade (i.e., "late" lexical competition in the time course of reading acquisition); (3) the importance of the phonological frequency over the orthographic properties in the early steps of reading acquisition (i.e., sensitivity to orthographic frequency becomes increasingly important from third grade). Our results suggest that syllable-sized units, even the "complex ones" like CVC (consonant-vowel-consonant) are fundamental phonological units in segmenting and accessing the lexical representations. We discussed our results towards a developmental perspective for an integration in the interactive activation model with syllable.

4505

On the preference for linear regression models in children—Results of a field study in elementary

Thomas Ostermann (1), Nadine Maussner (1), Martin J. Tomasik (1)
1. Witten/Herdecke University, Germany

Background: Linear regression is a core concept in social and psychological sciences and fundamental for understanding concepts such as moderation or causal inference. We aimed at showing that children are able to identify and to draw a line of best fit through a cloud of points. As there is more than one possible metric to minimize the distance between the data and the linear function we supposed that this line was drawn according to the concept of ordinary least squares OLS(X|Y). Methods: A sample of 72 children in third and fourth primary school grade were given two different tasks. In the first task, ten different sheets with three illustrations of the same scatterplot with different lines of regression to choose from were presented. In a second task scatterplots were given and children were asked to draw a line of best fit with ruler and pencil. Results: In the first task bisector regression was preferred (Chi2 = 15.21, df = 4, $p = .004$) while in the second conventional regression OLS (X|Y) was favored (Chi2 = 27.14, df = 4, $p < .001$). No difference was found with respect to grade (Chi2 = 4.04, df = 4, $p = .40$) or gender (Chi2 = 1.39, df = 4,

p = .84). Discussion: Our results show that primary school children are able to handle the concept of drawing a line of best fit. The assumed preference of the traditional regression model OLS (X|Y) using a vertical minimization is only partly supported by our data.

4322

Implicit theories of intelligence and academic procrastination among school students

Rachita Pant (1), Indu Toby (1)
1. Manipal Academy of Higher Education, India

The beliefs about one's abilities or intelligence have previously been found to have important consequences on various aspects of one's academic life including achievement, motivation, coping, learning, perseverance, attribution to failure and self-handicapping or disengagement behaviors. Implicit theories of intelligence can be fundamental in understanding how students' underlying beliefs about their abilities or intelligence influence their behaviours particularly in challenging and demanding academic situations. The present study examined the relationship between implicit theories of intelligence and academic procrastination among school students. Using a cross-sectional study design and convenience sampling, 226 school students (60% males and 40% females) between the ages of 15–18 years (mean age being 15 years), were recruited from two schools of Jorhat, Assam (India). The two variables in the present study were measured using Implicit Theories of Intelligence Scale (Self-Theory Scale) (2015) and Academic Procrastination Scale (2016). The chi square analysis revealed a significant association between implicit theories of intelligence and academic procrastination (13.249, *p*-value < .001). However, the *t*-test analysis found no significant differences in the mean values of implicit theories of intelligence scores and academic procrastination scores among the two groups of gender. The results indicate that students' implicit beliefs may be useful for understanding procrastination and ways to deal with it. Future studies can look into the cultural and environmental factors influencing the differences in the variables, incorporating data not only from self-report measures but also parent and teacher ratings.

4258

Exploring consequences and antecedents of Chinese youth's perceived norms for experiencing emotions

Qian Wang (1), Zeyi Shi (1) 1. The Chinese University of Hong Kong, Hong Kong

Objective: Norms for experiencing emotions (i.e., perceived appropriateness to experience positive and negative emotions; Eid & Diener, 2001) have been documented to be of much significance for individual and group functioning in social and cross-cultural psychology, while little is known about the developmental consequences and antecedents of such norms. This study examined how Chinese adolescents' norms for experiencing emotions may relate to their actual experience of emotions, and how their parents' reactions to their emotions may shape their norms. Methods: Chinese adolescents (*N* = 233; 111 females, mean age = 12.19 years) completed a survey twice approximately six months apart. At time 1, they reported on their parents' supportive versus non-supportive reactions to their positive (e.g., joy, pride; Katz et al., 2014) and negative emotions (e.g., sadness, fear, anger; Fabes & Eisenberg, 1998); at both times, they reported on their norms for experiencing emotions and actual experience of emotions. Results: Over time, adjusting for youth's initial experience of emotions, greater perceived appropriateness to experience negative emotions predicted lesser actual experience of positive emotions, and greater perceived appropriateness to experience positive emotions predicted lesser actual experience of negative emotions; adjusting for youth's initial norms, parental supportive reactions both to youth's positive emotions and to youth's negative emotions predicted youth's greater perceived appropriateness to experience positive emotions, and parental supportive reactions to youth's negative emotions predicted youth's lesser perceived appropriateness to experience negative emotions. Conclusions: The results reveal the role of norms for experiencing emotions in actual emotional functioning and the socialization processes shaping such norms.

4256

The relationship between children's and parents' technology use and children's emotional development

Hale Ogel-Balaban (1), Sebnem Altan (2) 1. Bahcesehir University, Turkey; 2. Isik University, Turkey

In today's technology-driven world, children are exposed to technology very frequently. Starting from early ages, they watch television, use tablet or cellphones to play games, watch videos and listen to music. Children's use of technology was claimed to have significant effects on their cognitive functions and social behaviors. The aim of the present study was to explore whether children's technology use is related to their aggression and emotion regulation. It also examined the relationship between children's and their parents' use of technology and the impact of parents' attitude toward technology on it. One hundred seventy-eight Turkish mothers (*M* = 34.35, SD = 4.71) with at least one 3- to 6-year-old child completed the demographic information questionnaire, the use of technology by parents and their children questionnaire, the attitude towards technology scale, the aggression tendency scale and the emotion regulation checklist. Results indicated that mothers' positive attitude toward children's technology use was positively correlated with the number of children's technological devices. The duration of children's daily technology use was found to correlate positively with the duration of the mother's daily technology use. The latter was found to correlate negatively with children's starting age for watching TV and positively with the starting age for using tablets or other handheld devices. The duration of children's daily technology use also correlated marginally positively with their aggression level and negatively with their emotion regulation. The findings of the present study indicated that children's use of technology in terms of its daily duration and the starting age is related to their parents' use of and attitude toward technology. Moreover, it might have negative effects on children's emotional development such as increased aggression level and decreased emotion regulation. These findings will be discussed in terms of their implications for social and emotional development.

3481

Conversations of mothers and their children with learning disabilities: The role of maternal affect

Cansu Alsancak-Akbulut (1), Kerem C. Demirtaş (2), Gülsen Erden (1) 1. Ankara University, Turkey; 2. Middle East Technical University, Turkey

Learning disabilities contribute to difficulties in the parent-child relationship. Emotional reactions of mothers of children with learning disabilities may be one of the important factors in examining mother- and child-related developmental outcomes. Therefore, the present study aims to examine the predictive role of maternal positive and negative affect on maternal and child elaboration during a memory conversation among mothers and their children with learning disabilities. The participants included 36 mother-child dyads (N_{girl} = 13, N_{boy} = 23), who reside in Ankara/Turkey. All children are diagnosed with a learning disability. Mothers and their children were asked to converse about the school-related problems of the child for five minutes. Then, mothers filled the Positive and Negative Affectivity Scale. Open-ended questions and information statements in these conversations were coded and united to form an elaboration score, which was divided by the total duration of conversation to standardize the scores. Results showed that maternal negative affect was negatively associated with mother ($r = -.45$, $p = .01$) and child elaboration ($r = -.40$, $p = .03$). There was no relationship between maternal positive affect and mother and child elaboration.

Linear regression analyses to predict maternal and child elaboration based on maternal negative affect showed that there was a significant regression equation [respectively, $F(1, 29) = 7.44$, Adj $R2 = .18$, $p = .01$; $F(1, 29) = 4.68$, Adj $R2 = .11$, $p = .04$]. The findings indicated that maternal negative affect, but not positive affect, predicted elaboration of mothers and their children with learning disabilities during a conversation about a school-related problem. Mothers with lower levels of negative affect may provide children with a more welcoming environment to discuss their problems. These findings will be discussed in line with the relevant literature.

3370

Spelling acquisition in adults and children: Examining the role of fine motor skills

Margaux Lê (1), Pauline Quémart (1), Eric Lambert (1) 1. CeRCA, University of Poitiers, France

Several studies suggest that fine motor skills (FMS) influence spelling acquisition (i.e., Doyen et al., 2017). However, the mechanisms that underlie this influence are unclear. One hypothesis is that FMS facilitate handwriting development that in turn enhance spelling acquisition (Suggate et al., 2016). Indeed, a few studies reported that learning by copy, which is a handwriting task, enhance the learning of new orthographic knowledge (Bosse et al., 2014). Moreover, some authors suggest that only the FMS that are the most implicated in handwriting (i.e., graphomotor skills that implicate the use of a pen) influence spelling acquisition. However, most of the studies investigating this issue focused on the first years of learning. Hence, further studies are needed in older groups to investigate the evolution of this relationship across development. To address these issues, 60 adults performed a pseudo-word learning task in two learning conditions (handwriting vs. spelling aloud) and two motor skills tasks (manual dexterity and figure copy). Two groups of children (60 fourth graders, 60 sixth graders) performed the same tasks to investigate the development of the influence of motor skills on spelling acquisition. Results in adults suggest that learning by copy facilitate spelling acquisition compared to learning by spelling aloud. In addition, only graphomotor skills (i.e., figure copy) were linked to orthographic learning. However, this correlation was found in the copy condition, but not in the spelling aloud condition. This result suggest that the link between motor skills and orthography is explained by the implication of motor skills in handwriting in adults. Results of children are still under analysis and will provide more information about the evolution of the influence of motor skills and handwriting in spelling acquisition.

3045

The association between consideration of future and online social capital: The linked mediation

Guanghui Chen (1), Ying Wang (1) 1. Shandong Normal University, China

Online bonding social capital plays an important role in individual psychological and physical health, yet little is known about how to build it, especially the association between the personality traits and online bonding social capital. The present study investigated the link between consideration of future consequences (i.e., future and immediate orientation) and online bonding social capital, and explored the mediating effects of self-control and cooperation on this relationship. A total of 795 sophomore Chinese students (588 girls, 73.96% of sample; $M_{age} = 19.44$, $SD = 0.69$) conducted an online survey questionnaire. The results indicated that the future orientation can directly predict online bonding social capital; the indirect effects of future orientation on online bonding social capital could be explained fully by self-control and cooperation respectively; and future orientation was also sequentially linked to increased self-control and cooperation, which associated with increased individuals' online bonding social capital. These findings suggest that when individuals possess future orientation, self-control and cooperation traits, the online bonding social capital might be easily built. Findings from the present study research provide a possible mechanism regarding building online bonding social capital.

2866

Evaluation of an intervention on forming perspectives of masculinity and gender equality for boys

Maretha J. Visser University of Pretoria, South Africa

Interventions that aim to address gender-based violence and HIV-risk behaviour among men, should focus on changing some destructive perceptions of masculinity by facilitating an appreciation of alternative perspectives on masculinity emphasising gender equality and respectful relationships. The Hero Empathy Programme implemented by Action Breaks Silence aims to address gender-based violence through an intervention for primary school boys to assist in forming positive constructions of masculinity. The intervention focuses on promotion of self-esteem, emotional expression, change in gender stereotypes and respectful relationships. Goal: The goal of the research is to explore change that took place in the boys' perspectives on masculinity and gender equality after participating in the intervention. Method: The 12 session intervention over two years was implemented in 10 primary schools in South Africa. A mixed method approach using a pre- and post-assessment design was used. A survey on acceptance of traditional gender roles, self-esteem and family relationships ($n = 685$) and 10 focus group discussions were done. Results: There was a significant difference in the gender perceptions of boys after the intervention ($p < .001$). The boys perceived gender roles as more equal, showed less gender stereotypes, agreed that men could express their feelings and showed less acceptance of violence towards women. Boys expressed that they have gained self-confidence, emotional control and learned to talk about their problems. Some boys could stand up against peer pressure and engaged in non-violent communication with boys and girls. The intervention strengthened boys' positive perspective of masculinity – being strong, the family provider and protector. Boys recommended that their parents participate in the programme to strengthen gender relationships in their communities. Conclusion: This intervention promises to affect difference in gender relationships. It should extend its reach and be upgraded for secondary schools.

2797

Unskilled but aware of it? Investigating metacognitive monitoring with clustering analysis

Kamila Urban (1), Marek Urban (2) 1. Institute for Research in Social Communication, SAS, Slovakia; Department of History and Theory of Art, UJEP, Czechia

Objective: The Dunning-Kruger effect is a cognitive bias. This occurs when low-performing individuals overestimate their performance, while high-performers underestimate it. Research on metacognitive monitoring has therefore divided participants into two groups: overconfident and underconfident (e.g., using quartiles, median split). Present study employed clustering analysis to explore whether these two groups are a natural occurrence or mere scientific construct. Methods: The sample consisted of four age groups: preschoolers ($N = 59$, mean age = 5.73 years), elementary school students ($N = 62$, mean age = 10.78 years), high school students ($N = 49$, mean age = 17.33 years) and university students ($N = 92$, mean age = 22.5 years). An Alternative Uses Task (paperclip) was used to measure the level of divergent thinking. What followed was the use of two, metacognitive monitoring scales, (1) participants judging their own performance and (2) comparing their performance with others. A Bias Index (level of under- or overconfidence) was calculated for each scale. Results: A non-hierarchical clustering analysis was conducted on the whole sample. The analysis identified three separate clusters: overconfident unskilled-and-unaware (35.1% of participants), underconfident skilled-and-unaware (35.9%) and, surprisingly, an unskilled-but-aware group (29%). These three groups were present across the whole sample, from preschoolers to university

students, but their distribution developed with age. The most "unskilled-and-unaware" participants were in the group of preschoolers, while the most "unskilled-but-aware" were amongst the university students. Conclusions: Research can take advantage of clustering analysis in the identification of naturally occurring participant over a manual division approach.

2677
Perceptual categorization of bi-racial morphing faces in adults and 3- to 12-year-old children

Sarina Hui-Lin Chien (1), Yu-Shao Kuo (1), En-Yun Hsiung (1) 1. China Medical University, Taiwan

Race is both a perceptual and social category. In the last decade, bi-racial face categorization has become an emerging challenge. While classification of mono-racial faces is fast, categorizing racially ambiguous faces can be cognitively taxing and biased. To date, most studies focused on western adults, racial categorization in Eastern adults and children is relatively unexplored. The present study investigated the perceptual categorization of race in Taiwanese adults and children age 3 to 12. We morphed Asian and White faces to create four series of 11 morphing images (from A100/C0 (100% Asian) to A0/C100 (100% Caucasian) in 10% increment); all images were oval-cropped and converted to grey scale. Children and adults were asked to judge the face images as either Asian or White. In Experiment 1, we tested 40 adults and 64 3- to 7-year-old children with printed cards. In Experiment 2, we tested 33 adults and 65 7- to 12-year-old children with a computerized task. We found that as the Asian component increased, all participants were more likely to perceive the morphing faces as Asian. Importantly, for the A50/C50 face (half Asian half Caucasian), adults and older children (9–12 year) tended to categorize as "White," while 3- to 8-year-olds consistently judged it to be more like "Asian." The estimated point of subjective equality (PSE) across age groups further supported this finding. In sum, using the morphing paradigm, the present study revealed a developmental change in race categorization with Taiwanese children and adults, providing a cross-cultural comparison on ambiguous race categorization.

1607
Neural underpinnings of goal maintenance in young children

Kaichi Yanaoka (1), Yusuke Moriguchi (2), Satoru Saito (2) 1. The University of Tokyo, Japan; 2. Kyoto University, Japan

Active maintenance of goal representations is a strong driver of the development of executive functions. Previous developmental studies have demonstrated developmental changes of the ability to maintain goal representations among preschoolers. Although recent studies have shown that preschoolers recruit lateral prefrontal regions in performing executive functions tasks, few studies have specified the neural underpinnings of goal maintenance in young children. Thus, the current study aimed to examine whether lateral prefrontal regions played a key role in maintaining goal representations using functional near-infrared spectroscopy (fNIRS). Fifty-five 4-to 6-year-olds wore the fNIRS probe and completed a card sorting task that required children to sort consecutive 'conflict' cards and consecutive 'redundant' cards alternatively according to one dimension of target cards. 'Conflict' cards shared only one dimension with the target cards and encouraged awareness of the rules, and 'redundant' cards were identical to the target cards and could be sorted without attending to the rules. Thus, after sorting redundant cards consecutively, children are likely to fail to sort conflict cards because they lose sight of goal representations during the redundant sort. Our results showed that young children showed stronger activations in the right prefrontal regions when sorting conflict cards, but they did not exhibit significant prefrontal activations when sorting redundant cards. Yet, importantly, increased activation in a region of the right lateral prefrontal cortex when sorting redundant cards predicted the performance of the subsequent conflict sort. These findings provide the first evidence for the neural underpinning of goal maintenance in young children.

14
Can early experiences enlarge global human identification?

Katarzyna Hamer (1), Sam McFarland (2) 1. Institute of Psychology, Polish Academy of Sciences, Poland; 2. Western Kentucky University, United States of America

Individuals who strongly identify with all humanity feel close to people all over the world, care for them, and perceive them as an in-group. Global human identification has become increasingly popular as a concept, and there has been a surge in calls for "global citizenship" (see McFarland et al., 2019; UNESCO, n.d.). Superordinate identities, such as identification with all humanity (also called global human identification), may be considered the result of situational activation or as individual characteristic. In the latter approach identification with all humanity (IWAH) is positively correlated with empathy, openness to experience and universalism and negatively correlated with ethnocentrism, blind patriotism, right-wing authoritarianism (RWA), social dominance orientation (SDO), and indices of self-centeredness (Hamer, McFarland & Penczek, 2019; McFarland et al., 2019). It predicts a human rights orientation, prosocial activities, concern for global issues and willingness to solve global problems (McFarland et al., 2019), intergroup forgiveness (Hamer, Penczek, Bilewicz, 2017; 2018), and opposition to torture (McFarland et al., 2019). Thus developing this broad identification would be potentially beneficial for societies (see also UNESCO, n.d.). But how can Global Human Identification be enlarged? The research made on 313 U.S. participants explored potential role of early experiences using a new scale of childhood/adolescence early experiences, 'opening-up' individual towards others (OUE scale). It assesses memory of being raised in diversity, adults' teaching empathy and openness toward all and of experiences enhancing multiple social auto-categorizations. We also used parenting styles scale (Duckitt, 2001). The results showed that this kind of childhood/adolescence experiences as described by OUE was a good predictor of identification with all humanity, beyond the role of empathy, openness to experience, values of universalism, RWA, SDO and ethnocentrism. The role of parenting styles was not confirmed. This study shows potential ways of enlarging global human identification during childhood and adolescence.

POSTER PRESENTATION

9102
Rewards system in children with Autism Spectrum Disorder: A narrative review

Maryfe M. Roxas (1), Marilou B. Francisco (2), Angelbert Z. Hernandez (3) 1. Philippine Normal University, Philippines; 2. St. Joseph's College of Quezon City, Philippines; 3. WCC Aeronautical and Technological College, Philippines

This paper will examine the existing literature reviews related to Autism Spectrum Disorder (ASD). The different findings shall reveal current studies and theoretical underpinnings particularly on how these children respond to social rewards. Based on the consolidated data, it was found out that ASD children respond less to social rewards when compared to typically developing children. The studies also showed that there is a need for heightened response with ASD children. Yet upon critical analysis, it has been found out that there is only literature on the rewards system but not the actual task. To bridge this gap, this paper shall enable researchers to address it using the model of social motivation and the characteristics of lacking sensitivity of ASD children as focus thus enabling to design an intensive experiment to attest the culled theories. Implications for future research and localization of the findings shall also be discussed.

9090

The balance of power in an international marriage—Analysis of two patterns

Rie Yabuki Tokyo City University, Japan

Many international families move between wives' and husbands' countries (Kawakami, I. 2013; Shibuya, M. 2014). At any given time, one spouse will be in their native culture, while the other spouse will be in a foreign culture. This alters the power balance in the family and the couple's relationship. This study focuses on Japanese wife and American husband couples who married in Japan and moved to the U.S. a few years later. While living in Japan, the wives held career positions and were the breadwinners. They also assumed the role of "family representative" to the community because of their native language and cultural ability. When they moved to the U.S., two patterns were observed. In the first pattern, the wife gave up their career and had a reduced role as a family representative. In the second pattern, the Japanese wives continued as breadwinner. This research describes the psychological process of the wives during this transition and the change in the power balance in the relationship. Qualitative data derived from in-depth interviews of six wives who used to have a professional full-time job were analyzed. The results show that the power balance in the couple changed. After moving to the U.S., the wives' position shifted from "main stream" to "marginal" in society. Wives who gave up the role of breadwinner valued time to explore what they really want to do in their life. On the other hand, wives who continued as breadwinner in a non-native culture struggled, as did their marriage.

8159

Relationship between recent graduates' adjustment to work and perceived apathy during academic life

Kyoko Sumioka Japan

In this study, the relationship between recent graduates' adjustment to work and perceived apathy during academic life was examined. Perceived apathy is defined as a state of perceived decreasing motivation and mental energy. In contrast to research on apathy, this study focused on individuals' perceptions. In association with Cross Marketing, Inc., we conducted a questionnaire survey. The participants included 300 adults who had graduated less than three years previously (138 males, 161 females, one other). Their average age was 24.5 years (SD = 1.19). The following measures were included in the questionnaire: the perceived apathy states scale in academic (PASS-A) (Onishi, 2016), which assesses avoidance, conflict, and non-emphasis; the Japanese version of Utrecht work engagement scale (UWES-J) (Shimazu et al., 2008), which evaluates vigor, dedication, and absorption; the job adjustment scale (Noda and Ki, 2016), which evaluates good relationships, task and purposes, trust and acceptance, non-inferiority, and a calm feeling; and the Japanese self-rating depression scale (SDS) (Fukuda and Kobayashi,1983). The results of correlation analysis revealed a negative correlation between vigor of work engagement and conflict of perceived apathy. Furthermore, there were positive correlations between non-inferiority of job adjustment and conflict of perceived apathy, and between non-inferiority and non-emphasis of perceived apathy. There was also a negative correlation between a calm feeling associated with job adjustment and conflict of perceived apathy. The results indicated that recent graduates who had experienced conflict for their perceived apathy during their academic life are more likely to suffer a sense of inferiority and experience difficulty discovering vigor in their job. It was further indicated that students who did not emphasize achievement were more likely to feel inferior after starting to work.

7950

Exploring the links between resilience and socio-emotional functioning in adolescence

Paulina Zelviene (1), Lina Jovarauskaite (2), Inga Truskauskaite-Kuneviciene (2) 1. Lithuania; 2. Vilnius University, Lithuania

Resilience reflects the capacity to overcome stressful life events. The results of the previous studies showed that resilience is related to better mental health and socio-emotional functioning. However, little is known whether the level of resilience can differentiate adolescents regarding their emotional and behavioral problems. The study aimed to compare the resilience levels in adolescents' groups with different profiles of their socio-emotional functioning. In total, 1299 Lithuanian adolescents (56.6% female) participated in the study. The mean age of the participants was 14.24 (SD = 1.26). We used the Resilience scale (RS-14; Wagnild, 2009) to evaluate the level of resilience in adolescents and the Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001) to measure emotional and behavioral problems. We used the data-driven approach to identify the subgroups of the participants in terms of their socio-emotional functioning and therefore conducted the Latent Class Analysis (LCA; Muthén & Muthén, 2000) based on adolescents' emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems; and prosocial behavior. Four classes were distinguished, in particular, low-symptom, emotional problems, behavioral problems, and high-symptom. To compare the resilience levels in the distinguished groups, we tested a series of Structural equation models (SEM) by using the particular group (vs. reference group) as an independent variable and latent variable of resilience as the dependent variable. The results of the current study indicated that adolescents characterized by high levels of socio-emotional problems reported lower levels of resilience and vice versa. However, the study showed that adolescents from emotional problems and behavioral problems groups cannot be differentiated by their level of resilience. Further longitudinal studies are needed to evaluate the links between resilience and socio-emotional problems in adolescent samples.

7933

Changes and stability within internal assets and external resources of resilience among adolescents

Lenka Abrinkova (1), Oľga Orosová (1), Maria Bacikova-Sleskova (1), Viera Čurová (1) 1. Pavol Jozef Šafárik University in Košice, Slovakia

Resilience and its factors are key determinants in the positive youth development therefore it is crucial to examine its stability and changes over time. The main aim of this study is to investigate changes in internal assets and perceived external resources of resilience among early adolescents within two years. 325 (49% girls) adolescents ($T1$ mean age = 13.51) participated in a four wave repeated measures design study with a baseline ($T1$), 6-month follow up ($T2$), 12-month follow-up ($T3$) and 24-month follow-up ($T4$). Internal assets of resilience were measured by self-control and self-esteem scales and perceived external resources of resilience by the RYDM questionnaire. Linear Mixed Model (LMM) in SPSS was used to analyze the data. Within internal assets of resilience LMM revealed significant increase in self-esteem. Moreover, the interaction effect of gender revealed that both self-esteem and self-control are significantly more increasing among boys comparing to girls. Within perceived external resources of resilience LMM revealed significant increase in Peer and Community Support while significant decrease in Home Participation and School Connectedness. Gender differences in $T1$ were significant in Peer and Community Support and School and Community Participation in favor of girls. To conclude, self-esteem and self-control tend to raise slowly among boys but merely changing among girls which support the idea about critical self-image trends as a part of early onset of adolescence among girls. However, it seems that support from peers and community is rising and it could be explained as a part of separation processes from home and school environment – which is decreasing through home participation and school connectedness.

7765

Positive and negative risk-taking: Age patterns and predictors

---

Joanna Fryt (1), Monika Szczygieł (2)
1. Poland; 2. Pedagogical University of Krakow, Poland

Despite empirical and epidemiological research indicating that risk-taking propensity increases in adolescence, it is unknown whether this is true for positive risk-taking. Moreover, little is known about which individual and social factors lead to positive risk-taking. In the presented study we examined how positive and negative risk-taking change from adolescence to adulthood and to what extent both are explained by similar or different factors. Specifically, we tested whether positive and negative risk-taking change with age linearly or in the form of an inverted-U, and when they eventually peak. We also tested sensitivity to reward and punishment, self-control, trait anxiety, and tolerance to ambiguity as individual predictors, and peers' risk-taking and perceived social support (from family, friends, and particular person) as social predictors of positive and negative risk-taking. We examined 338 participants aged 12–25 ($M = 18.99$; SD = 3.37). We found that positive risk-taking and anti-social risk-taking increase subtly and linearly from early adolescence to young adulthood, whereas health risk-taking takes the form of an inverted-U, peaking in young adulthood. Individual predictors of positive risk taking were reward sensitivity and tolerance to ambiguity, and social predictors were peers' positive risk-taking and (low) perceived support from family. Individual predictors of negative risk-taking were gender, sensitivity to reward and (low) sensitivity to punishment, and social predictors were peers' negative risk-taking and (low) perceived support from family. The knowledge about what determines the choice of specific types of risk-taking is of great importance because it allows us to design environments that protect young people from severe negative effects.

7658

Social development of junior high school students enrolled in special needs classes

Aya Fujisawa Japan

Previous studies have indicated that the sociality of junior high school students is not linear in development, but rather U-shaped and with zigzag development (Nucci & Power, 2014; Fujisawa, 2019). In Yamaguchi and Fujisawa (2019), seventh graders scored higher than eighth and ninth graders in regional standards on the Standard for Public Spaces (SPS) subscales (Sugawara et al., 2006). There was no significant difference among the three grades in the subscales of the multidimensional empathy scale (MES) (Davis, 1983). However, there are few studies on atypical neurotypical children. Therefore, in this cross-sectional study, using the same scales in Yamaguchi and Fujisawa (2019), we examined the development of junior high school students enrolled in special needs classes. Participants were 32 junior high school students. We carried out an analysis of variance with each subscale score of SPS (egocentric, peer standards, regional standards, care about others, public interests) and MES (perspective-taking, fantasy, empathic concerns, personal distress) as the dependent variable and grade as the independent variable. Results indicated a significant difference in the egocentric subscale ($F(2) = 9.5$, $p < .001$) and a significant tendency was found in personal distress ($F(2) = 2.8$, $p > .10$). As a result of performing the Bonferroni method for egocentric, the scores of eighth graders were significantly higher than the seventh ($p < .01$) and ninth graders ($p < .01$). Therefore, it is considered that egocentric has a U-shaped development that increases in the eighth grade and decreases in the ninth grade. Thus, the aspects of social development may be partially different between neurotypical children and students enrolled in special needs classes. A limitation of the study is that the number of collaborators in this study is small; it is necessary to increase the sample size future studies.

7243

Longitudinal survey on young children's size comparison strategies based on drawing figures

Masato Kawasaki (1), Taisuke Morita (2), Tomoko Hayashi (1), Shin Sugimoto (1), Nao Matsubayasi (1) 1. Teikyo University of Science, Japan; 2. Tokyo University of Science, Japan

It has been shown that comparative judgment of the size of figures follows a U-shaped development curve, yet the reasoning for this, as well as the developmental processes behind judgment ability and strategies, remains unclear. The purpose of this study was to investigate the longitudinal changes in the children's ability of size comparison. Participants were seven kindergartners aged three years in June 2017. They participated in experimental sessions twice a year over three years (June 2017, December 2017, June 2018, December 2018, June 2017, and December 2019). In each experimental session, the participants performed a rectangle drawing task using a tablet PC. The stimuli of the task were blue rectangles of 3.3 × 3.3, 3.3 × 5.0, and 5.0 × 3.3 cm presented on the display of the tablet. The task composed of six trials, in which the participants were presented one of the three stimuli, and were instructed to draw either larger or smaller rectangles on the display than the presented stimuli. The followings were found out. When it comes to comparing area, correct answer was a decline for Task 3. There was no change in the number of children drawing the height longer than the presented figure, but there was a decline in children drawing the width longer. The child lengthens the width when drawing a figure bigger than a portrait-oriented rectangle, and lengthens the height when drawing a smaller figure. Three-year-olds focus on the width and adjust size by changing the length of the width. In conclusion, as children grow older, they might become increasingly more focused on the length of the height.

7203

A related research on the joint attention for the infants and toddlers

Pe-Sun Ho (1), Chin-Kai Lin (2) 1. Taiwan; 2. National Taichung University of Education, Taiwan

The development of shared attention is critical to other developments for infants. Literature provides extensive statistics in terms of ages and capabilities, but not much about whether different objects lead to variances in shared attention by infants. This paper seeks to explore the development of shared attention by regular infants, the factors that affect such development and the influence of different objects on such development. This paper uses purposive sampling of the infants from 6 to 24 months old in two care centers in Taichung City. A total of 45 subjects are selected. Their average age is 15.64 months. The experiment is to test their shared attention to adults in the familiar scenarios using different objects (toys with sounds and lights; toys with no sounds or lights; daily essentials; foods). A descriptive statistical analysis is performed with details in ANOVA analysis, independent sample T tests and posteriori tests. 1. There is more activeness than passiveness in the shared attention of infants. Gazing happens more than pointing. The response time for both infants and adults to share attention is approximately 3 to 4 seconds; 2. The development of shared attention for infants from 6 to 24 months old exhibits different responses and behaviors in terms of activeness and passiveness. This is dependent on how many months old they are, and body hints occur more than movements. The expressions are positively correlated with physical developments; 3. Infants show different levels of interest to objects in terms of shared attention. Foods and toys making sounds can better entice shared attention from infants compared to other items. The research findings can serve as a reference to main caretakers regarding the training of shared attention, selection of objects, and the statistics of response times and behaviors.

7193

Fluid intelligence and working memory in children with severe speech disorders

Yuila Burdukova (1), Olga Alekseeva (2), Irina Rzhanova (2), Maria Budina (3), Anastasia Nikolaeva (3), Andrey Prokofiev (3) 1. Russia; 2. Psychological

Institute of Russian Academy of Education, Russia; 3. Moscow State University of Psychology and Education, Russia

Fluid intelligence provides the flexibility of thinking processes in solving non-standard tasks, showing the adaptability and success of children in learning. In many studies links between fluid intelligence and working memory were shown both in adults and children. Our study (this work was supported by grant RFBR 18-013-01179) involved 20 typically developing children, and 23 preschool children with severe speech disorders (SSD). To assess of fluid intelligence and working memory the WPPSI-IV was selected, the subtests for Fluid Reasoning Index and Working Memory Index were used. We found significantly lower working memory scores (but not fluid reasoning scores) for children with SSD to compare to typically developing preschool children ($p < .04$). Children with severe speech disorders showed lower results both for Zoo Locations and Picture Memory subtests ($p < .04$). In the group of typically developing children relations between Fluid Reasoning Index and Working Memory Index were found ($r = .60$; $p < .04$). But in group of children with severe speech disorders there were no such relations between Fluid Reasoning Index and Working Memory Index ($p > .10$). We've suggested, that in children with severe speech disorders deficit of working memory have changed the typical structure of cognitive functions.

7005

A study of predictors on kana character reading in Japan
Eishi Tsutamori Japan

Three types of characters are used in japan, which are divided into kanji and kana characters. Kanji has inconsistent correspondence between characters and sounds, but Kana has almost one-to-one relationship between characters and sounds. According to Uno et al. (2009) 0.2% of Japanese children had a decline of 1.5 SD or more in Kana reading, indicating that there were few children who were not good at kana characters. Among kana characters, there is a special morae character in which one more is assigned to two characters. The special syllable is called a "yo-on", and characters such as "しゅ" correspond to this. It has been reported that developmental dyslexia in Japan shows difficulty in learning the sounds of "yo-on" (Suzuki et al., 2010), so it is necessary to anticipate early acquisition of kana characters that include "yo-on" in order to detect them early. It has been reported that "yo-on" readings develop after 6 years of age (Amano, 1986), while "choku-on" reading which has one-to-one relationship between character and sound has been acquired in 5 years olds (Ota et al., 2018). The purpose of this study is to examine whether the reading performance of "choku-on" in February of a five-year-old child

can predict the score of character reading containing "yo-on" in December of a six year-old child. Multiple regression analysis was conducted. We used the kana reading score containing "yo-on" at the age of 6 was used as the dependent variable, and "choku-on" reading score, RAN, phonological awareness at the age of 5 as the independent variables. As a result, only reading performance at the age of 5 was found to have a significant predictor ($\beta = .62$, $R2$ change $= 37.7\%$, $p < .001$).

6937

Evaluation of a training for kindergarten teachers in Germany to improve emotion knowledge
Aileen Wosniak Germany

Background: Emotion knowledge is important for self-regulation and school success (Voltmer & von Salisch, 2017). In addition, picture book reading and mealtime are suitable situations in kindergarten to improve emotion knowledge. Unfortunately, these situations aren't used for emotion talk regularly, because kindergarten teachers don't know how to deal with it. There is a lack of specific trainings for kindergarten teachers in Germany to improve emotion knowledge in preschoolers. The goal of this study was to create and evaluate a training and took the following questions in account: (1) Acceptance of kindergarten teachers. (2) Increase in emotion knowledge of kindergarten teachers. (3) Change of emotional-related interaction between kindergarten teachers and preschoolers. Methods: Sample size ($N = 41$) was acquired in six kindergartens in the north of Germany.(1) Self-reported acceptance was raised after training. (2) To test the knowledge growth of kindergarten teachers, a pre-experimental design with one experimental group (with measuring repetition) was applied. (3) Self-reported frequency of emotional-related interaction with preschoolers in different situations was raised backdated. Results: (1) Summing up, there are "good" reviews (MV $= 1.90$, SD $= .598$) for the training. (2) Data analysis shows knowledge growth in kindergarten teachers over time ($F = 14.500$, $p = .000$, η^2part $= .592$). (3) At least a third of all kindergarten teachers try to use emotion talk once per week or more in a variety of situations. Discussion: Kindergarten teachers generally accept this training. Evidence shows that teachers' emotion knowledge improved over time. Limitations: Whether training improved preschooler's emotion knowledge can´t be determined, because this level wasn´t examined in this study.

6788

Theory of mind and emotions: Relationship between understanding emotions and mental states
Krystian Macheta (1), Arkadiusz Gut (2) 1. John Paul II Catholic University

of Lublin, Poland; 2. Nicolaus Copernicus University in Toruń, Poland

The place of emotions within the general economy of the mind has been discussed since antiquity – starting from Plato through Spinoza and finally James or Salomon. Understandably, it has been a major object of interest in psychology as well. We see emotion understanding as just as important to social understanding as cognitive-state understanding. We investigate the relationship between understanding cognitive states (beliefs, thoughts, etc.) and understanding affective states (emotions, feelings, moods, etc.); we are interested how theory of mind relates to emotion understanding. Referring to our own studies and recent research done by others, we point out a correlation between results on tasks measuring theory of mind and those that target emotion understanding. Our own studies ($N = 97$) show similarities in children's passing the Test of Emotion Comprehension and three tasks targeting four aspects of theory of mind (the first order false belief task, the appearance-reality test, the intensionality test). Our results raise the question whether understanding epistemic states and understanding affective states are two different psychological processes. Do we really have grounds to claim their separation as is often implicitly assumed in the literature? It may turn out, for example, that emotion comprehension is developmentally contingent on cognitive-state comprehension, or vice versa. There is just not enough data to rule that hypothesis out at the moment. Our results suggest that it is rather possible. The issue is central to contemporary research on social cognition as it may force a re-evaluation of the current emphases in the field that target cognitive-state understanding and disregard emotion understanding.

6554

Representations of personal and role-based social expectations as a factor of generative development
Maria Polyakova Russia

The formation of generativity is the main task of the adulthood stage according to the E. Erickson theory. Generative orientation and frequency of generative actions are structural components of generativity, introduced by D. P. MacAdams (D. P. McAdams, E. de St. Aubin, 1998). Since generativity is closely related to cultural characteristics, we assumed that it would have distinctive features among Russians. The study involved young adults ($N = 61$). Methods: Loyola Generativity Scale, Generativity Behavior Checklist and content analysis incomplete sentences. We formulated unfinished sentences: "my relatives and friends believe that I need...", "sometimes they tell me that it's time to...". We found that the concepts of role (family and professional) and personal expectations (the formation of certain personal qualities) were important. We revealed that the

generative orientation was higher when only one type of social expectation was identified: professional or personal ($p = .001$), while the generative orientation was lower in the absence of an emphasis on one of the types of society's demand. However, the frequency of generative actions increased when both types of social expectation were identified: the family sphere and the personal sphere ($p = .01$). Grounded on the data we assumed that the mechanisms of the beginning of the formation of generativity types in early adulthood have two trends: personal and social.

6222
In-group effect on children's theory of mind use
Fumikazu Furumi Japan

Objectives: Preschoolers build relationships with their friends and make their own groups in their daily life. This study focused on the in-group bias about children's reading the mind of others. According to the social motivation hypothesis (Chevallier et al., 2012), the hypothesis of this study was that children can read the mind of group members more easily than that of out-group members. Methods: Nineteen preschoolers took part in this study. Their parents applied for the experiment. They participated individually at the preschool they were attending. The human ethics committee at Shizuoka University approved this study. In the experiment, two puppets which experimenter A operated were shown to the participants. Experimenter B asked the participant to choose one sticker from 5 kinds of stickers. One puppet had the same sticker as the participant (in-group condition) and the other had the different sticker (out-group condition). Then the participant introduced to a modified smarties task. The experimenter showed crayon box and brown paper bag, and asked the participant, "There are crayons and marbles. Which do you think the crayons are?" Then the experimenter showed the real contents, the crayons were in the paper bag, and the marbles were in the crayon box. After that, the experimenter asked about the two puppets' beliefs. Results: According to chi-square test, there was a significant difference between in-group condition and out-group condition ($\chi^2 = 4.26$, $p < .05$). More children passed the modified smarties task of in-group condition. Conclusions: This result indicates that children can easily pass the false belief task when they infer in-group member's belief. In the further research, we should investigate why this "in-group effect" affect children's theory of mind use.

6147
A potential discriminant for ASD? Distance of binoculus point of regard
Shihuan Gao (1), Yanjie Su (1) 1. Peking University, China

Autism Spectrum Disorder (ASD) often co-occur with obvious visual impairments, especially in the processing of dynamic stimuli. Studies revealed that ASD children, compared with typically developing (TD) children, showed differences in Distance of Binocular Point of Regard (DBPR), which could impact further processing of visual information. To date, it is still unclear about the characteristics of DBPR and whether this index could be a biomarker for assessing ASD. The present study was implemented by using a smooth pursuit task with eye-tracking technique to measure the differences of DBPR in time course and explore the discriminability of this index. We recruited 25 children with ASD and 20 of them finally finished the task ($3 \sim 5$ years old, $M = 3.62$, SD = 0.64, 2 females), and 20 age-matched TD children to participate in the study ($M = 3.72$, SD = 0.74). Participants were required to watch six task-videos of sinusoidal motion of a small dot with a baffle to mask part of the dot motion. Results showed that DBPR manifested different trends in time course between the two groups where DBPR of ASD children was significantly larger than that of TD children when the dot disappeared. Meanwhile, the Area Under Receiver Operating Curve (AUROC) analysis was conducted on the whole participants, DBPR was able to discriminate between groups of ASD and TD in all task as the dot disappeared. These results suggested that DBPR in ASD children demonstrated different trends from that of TD children as time passes. DBPR may be a good index for discriminating children with ASD from TD.

5582
Early studies of attachment behavior of Korean infants
Jae-Ho Cha The National Academy of Sciences, Republic of Korea, South Korea

The paper is a summary of the research findings emanating from 6 Master's theses (by Home Economics students) which the writer supervised. The theses date from 1976 to 1985, and represent the earliest works done on Korean infants' attachment behavior. The writer's main task was to bring together data on each of these attachment behaviors, compare the results, and draw conclusions. Special efforts were made to ferret out variables responsible for the appearance of each attachment behavior and to develop explanation which account for the observed relations. Evidence was presented which shows that stranger anxiety, separation anxiety, and object attachment are in fact related to attachment. Contrary to Bowlby's view that stranger anxiety reduces child's "sensitivity" to be attached, it was contended that it is the result of attachment because stronger attachment is shown to promote stronger anxiety. Appearance of separation anxiety is also shown to be positively related to development of attachment. As for object attachment, the lack of bodily contact with mother was found to be the major determinant of its occurrence, confirming the interpretation that child's desire for mother's touch is displaced to objects which are similar in characteristics to mother's breast or other parts of her body.

5117
Relationship between attachment security and emotional prosocial behaviors among Turkish adolescent
Mohammed Mubarique (1), Ayşe N. Akyüz (1), Ayda B. Sunal (1) 1. Ankara University, Turkey

The main purpose of this study was to examine the mediating role of emotion regulation difficulties in explaining the relationship between two dimensions of attachment security (i.e., attachment to mother and attachment to father) and emotional prosocial behavior on a sample of teenagers in the mid-adolescence. The results of the study, as supported our hypothesis, indicated attachment security predicted negatively emotion regulation difficulties but predicted positively emotional prosocial behavior. In addition, difficulties in emotion regulation were negatively correlated with both types of attachment security and emotional prosocial behaviors. Also, in line with our expectation, emotion regulation difficulties mediated relationship between adolescent's attachment security for both parents and emotional prosocial behaviors. Specifically, more-secure children were rated lower in emotion regulation difficulties, in turn, higher in emotional prosocial behaviors. Overall, the results support the notion that more-secure children display more emotional prosocial behavior because they have less emotion regulation difficulties.

4970
Changes in friendship quality differ between men and women
Stéphanie Langheit (1), François Poulin (1) 1. Université du Québec à Montréal, Canada

Gender differences in friendship quality have been seen at all ages (Maqubela 2013). In general, friendships between women are described as more intimate and supportive, while friendships between men revolves more around companionship (Ryle, 2011). These differences suggest that friendship quality could evolve distinctly for women and men between adolescence and adulthood. Some of the few longitudinal studies available report an increase in intimacy and support for women, but not men, while others report the opposite (Miething et al., 2016). This question needs to be clarified, especially since these studies neglect important components of friendship quality and are based on only two measurement points.

The purpose of this study is to examine gender differences in five components of best friendship quality (intimacy, emotional support, companionship, reliable alliance and conflict) between ages 19 to 30. A sample of 320 participants (58% female) completed five scales from the Network Relationships Inventory (Furman and Buhrmester, 1992) at ages 19, 20, 21, 22, 25 and 30. Each component was analyzed separately using growth curve modeling. Linear, quadratic and cubic effects of age were tested in interaction with sex. For gender differences related to intercepts, women show higher levels of intimacy and emotional support with their best friend compared to men. However, there is no such effect for initial levels of conflict, loyalty and companionship. When looking to the slopes, only intimacy and emotional support shows differences. For intimacy, women have a significant negative quadratic effect while men show a significant positive linear effect over time. For emotional support, women have a significant negative quadratic effect while men have no significant effect (neither quadratic nor linear). These results support that change in friendships between men compared to friendships between women in EA are mainly differentiated by the component of intimacy and emotional support.

4965

Emerging adulthood in Puerto Rico

Taysha Bruno-Ortiz (1), Jesús J. Marrero-Centeno (1), Aida Jiménez (1) *1. University of Puerto Rico, Puerto Rico*

During the past two decades, adulthood has undergone a thorough theoretical revision and the concept of "emerging adulthood" has been considered as a result of socio-economic transformations in industrialized societies. Due to these changes, there has been a growing interest in the psychology field to evaluate and measure the concept of emerging adulthood as it might reflect a new developmental stage. However, it is crucial to take into consideration sociocultural factors since life stages are conceptually embedded in the political, economic and cultural aspects of a society. A cross-sectional survey was conducted that examined the five dimensions of emerging adulthood as measured by the Inventory of the Dimensions of Emerging Adulthood (IDEA), symptoms of depression, anxiety, stress, self-efficacy, and flourishing. The sample ($n = 140$) was selected by convenience and participants were adults living in Puerto Rico between the ages of 18 and 29. Results showed significant correlations between subscales of the IDEA with depression, anxiety, stress, self-efficacy and flourishing. Negativity/Instability ($r = .24$) and Self-focused ($r = -.23$) correlated with depression ($p < .05$), while Negativity/Instability ($r = .33$), Self-focused ($r = -.25$) and Feeling "In-Between" ($r = -.25$) with anxiety ($p < .05$). Meanwhile Negativity/Instability

($r = .29$) only correlated with stress ($p < .05$), and Negativity/Instability ($r = -.19$) and Self-focused ($r = .26$) correlated significantly with self-efficacy ($p < .05$), while Extermination/Possibilities ($r = .19$), Negativity/Instability ($r = -.23$) and Self-focused ($r = .24$) correlated with flourishing ($p < .05$). Statistically significant differences were found between sociodemographic variables with subscales of the IDEA. These main differences were between the ages of 18–23 and 24–29 with Negativity/Instability ($p < .05$), Self-focused ($p < .05$), and Feeling "In-Between" ($p < .05$). There were significant differences between financial dependence (low, moderate and high) with Self-focused ($p < .05$) and Feeling "In-Between" ($p < .05$). In conclusion, emerging adulthood is a concept that is influenced by sociohistorical factors, so it is imperative to take into consideration the country in which the adult is embedded to make sense of the different dimensions.

4711

Identity content and academic orientation among diverse American college students

Bridget Murphy (1), Velinka Marton (1), Mareena Atalla (1), Douglas Barnett (1) *1. Wayne State University, United States of America*

Emerging identity for many attending university is considered an "institutionalized moratorium" (Cote, 2006). We examined the relations between positive identity content (e.g., determined, successful, social) among undergraduates and factors contributing to academic success (i.e., supported, resiliency, grit). Students ($N = 230$, $M = 19.43$, SD $= 1.64$; 81.3% women) from a large American university completed an online survey, including a revised version of the Twenty Statements Test (TST; Kuhn & McPartland, 1954), completing the prompt "I am … " 15 times. Responses were categorized by Linguistic Inquiry and Word Count Software (LIWC, Pennebaker, Francis, & Booth, 2001), yielding the percentage of responses related to social relationships (e.g., family), positive emotions (e.g., happy), and achievement (e.g., student), which were converted to total number of responses in those categories. The sample was ethnically diverse (41.3% European American; 19.6% Asian/Pacific Islander; 17.8% Middle Eastern, 10.9% Black/African American, and 10.4% other), with 49.6% reporting that they were bilingual, 17.0% indicating a nation of origin outside the United States, and 41.7% identifying as first-generation college students. A higher number of identifications with positive emotions was significantly associated with resilience ($r = .166$, $p = .012$), grit ($r = .151$, $p = .022$), and social support ($r = .136$, $p = .043$), as well as identification

with achievement ($r = .257$, $p < .001$), suggesting undergraduate identity content is associated with academic orientation.

4171

Features of emerging adulthood and intergenerational solidarity in South Korea: Differences by age

Hyeji Kim (1), Jaerim Lee (1) *1. Seoul National University, South Korea*

The literature on emerging adulthood (i.e., 18–29 years) has focused on the unique features of this developmental stage. However, little attention has been given to the psychological differences between the earlier and later periods of emerging adulthood. Using a South Korean sample, we aimed to examine these differences in emerging adulthood including identity exploration, instability, self-focus, and feeling in-between and the six dimensions of intergenerational solidarity. The participants ($N = 1,148$) were divided into three age groups: early 20s (19–24 years; $n = 400$), late 20s (25–29 years; $n = 378$), and early 30s (30–34 years; $n = 370$). The early 30s group was included for comparison. Our one-way ANOVA analyses showed that scores for all features of emerging adulthood, measured by the Inventory of the Dimensions of Emerging Adulthood (IDEA), were significantly higher in the following order: early 20s, late 20s, and early 30s. As for the six dimensions of intergenerational solidarity, affectual solidarity was significantly higher in the following order: early 20s, late 20s, and early 30s. The early 30s groups were significantly lower in consensual (values similarity), and functional (support exchange) solidarity. However, no significant difference was found in structural (living arrangements), associational (contact), and normative (attitudes toward intergenerational support) solidarity. The results imply that there are differences in terms of the features of emerging adulthood and some aspects of intergenerational solidarity, both within emerging adulthood and between emerging adulthood and early adulthood. We call for more research capturing the diversity within emerging adulthood to better understand the uniqueness of this developmental stage.

3817

Physical forms of self-harm in adolescence, its personality, family, gender and age predictors

Zuzana Rojková (1), Slávka Démuthová (2) 1. Slovakia; 2. University of Ss. Cyril and Methodius, Slovakia

Objectives: The paper deals with self-harm (SH) behavior in adolescence in relation to personality traits (E, P, N), depressivity, age, family structure, and gender. Attention is focused on 6 self-harm physical forms: deliberate cutting, burning, beating, banging head, scratching and wounding, of which two variables – intensity and occurrence of

self-harm – are obtained. The aim to confirm the relation between intensity of self-harm and neurotism, psychotism, depressivity; differences in intensity of self-harm by gender, family structure factor, and in the next step, to explore (interaction) effects of factors as predictors to self-harm within multivariate models. Methods: The sample (currently, it is still completing) consists of 620 primary and secondary school pupils aged 14–19 years (35% boys, 65% girls). The sample is divided according to the occurrence of self-harm (33% with SH), and according to the age in two groups (12–15 years: 48%, 16–19 years: 52%). The questionnaire battery includes B-JEPI (Eysenck & Eysenck, 1993) CDI (Kovacs, 1998) and Self-harm Inventory (Sansone & Sansone, 2010, in the translation of Démuthová, unpubl.). Bivariate analysis and binary logistic regression analysis in statistical processing have been applied. (Interim) Results: The bivariate analysis confirmed assumptions about incomplete family, female gender, higher neurotism, psychotism and depressivity as risk factors in linear relation to the intensity of self-harm; all the factors are significant to the occurrence of SH in a regression model. Some interaction effects can be interpreted.

3769

Teaching student physicians the Calgary-Cambridge Guides Communication Model

Aikumis Omarbekova (1), Dauren Dochshanov (2), Kuldarkhan Orazbayeva (3), Sara Mussina (4) *1. L.N.Gumilyov Eurasian National University, Kazakhstan; 2. Kazakh National Medical University, Kazakhstan; 3. Ualikhanov Kokshetau State University, Kazakhstan; 4. Institute of Professional Development of Pedagogical Workers, Kazakhstan*

In 2006, all Kazakhstan higher education institutions were required to change from the Russian (memorization-based) to the United States (performance-based) curriculum model. In 2011, like other Central Asia countries, Kazakh National Medical University in Almaty, Kazakhstan installed WiFi creating interest in technology-based medical school online pedagogical practices. In 2013, using the revised Bloom's Taxonomy and Gagne's Hierarchy of Learning, the Kazakh National Medical University Juliet Draper Center for Communicative Skills faculty developed a blended online critical review "Accordion Learning" instructional methodology to teach physician-patient communication skills using the Calgary-Communication Guides Model. The results evidenced by improved learning. In addition, one previously unrecognized variable found that Kazak students preferred to work in groups in comparison to the Russian and English speaking students who preferred to work alone, thereby necessitating different instructional methodologies to teach each ethnic student group.

3155

Teacher-child relationship that promotes school adaptation in childhood

Yasuyuki Kaneko *Shizuoka University, Japan*

Objectives: The purpose of this study was to compare effect of Teacher-child relationships on school adaptation by contrasting between elementary school grade. How should teachers change their interactions with developing children? How should teachers change the way they relate to children moving from childhood to adolescence? Methods: The participants were 1103 elementary school students (Fourth grade ($N = 367$), Fifth grade($N = 411$), Sixth grade ($N = 324$)) at nine public elementary schools. They answered a sheet of questionnaire. Teacher-student relations were examined by student's four point scale evaluation on three types of teacher's involvement; (a) after the event involvement for student's problem behavior, (b) active commonly involvement for student and (c) involvement for student during class. School adjustment was examined by student's four points scale evaluation. Results: The results suggested that the way in which teachers promote school adaptation was shared by 4th and 5th graders. In 4th and 5th grades, active commonly involvement for students and involvement for student during classes influenced the promotion of school adaptation. In sixth graders, the teacher's after the event involvement for student 's problem behavior affected students' school adaptation. Conclusion: In 4th grade and 5th grade, active involvement from teachers promoted school adaptation. For example, teachers talk to children and teacher greets a child. In 6th grade, after the event involvement from teachers promoted school adaptation. For example, a teacher consult with a student in need and teacher discuss with students who have problems. Sixth graders are standing at the entrance of adolescence. For sixth graders, it is important for the teacher to rely on the child's initiative. And it is necessary for sixth graders that teachers respond when students ask for help. It is necessary to change student guidance according to child development.

3087

Reciprocal links between teacher disciplinary practices, peer status and aggression in kindergarten

Roxane L'Écuyer (1), François Poulin (1), Frank Vitaro (2), France Capuano (1) *1. University of Québec at Montreal, Canada; 2. University of Montreal, Canada*

According to social referencing theory (Hughes et al., 2001), classmates make inferences about children likeability based, in part, on their observations of teacher behavior. Despite recent advances in our understanding of the links between teacher behaviors and peer relationships, important gaps remain. First, the few existing longitudinal studies have been conducted with middle and late childhood samples. Second, only affective domain of teacher-child interactions (teacher-child relationship quality) has been considered. To address these gaps, the present study examine the relationships between peer status (rejection and acceptance) and two types of teacher disciplinary practices (positive versus coercive) (a) using a longitudinal design with two assessments during the same school year, (b) focusing on kindergarten students and (c) taking into account children own characteristics (aggression). The sample included 1038 children (62% boys) assessed in Fall (T1) and Spring (T2) of kindergarten. Teachers reported how frequently they use positive and coercive disciplinary practices specifically with each student of their class using validated items from the National Longitudinal Survey of Children and Youth. Peer rejection, peer acceptance and aggression were assessed through peer nominations. Autoregressive cross-lagged modeling was applied. The results shown that coercive disciplinary practices and peer rejection were reciprocally associated: coercive disciplinary practices at the beginning of the year predict higher peer rejection at the end of the school year ($\beta = 0.19$, $p < .000$). On the other hand, peer rejection at the beginning of the year predict a higher level of coercive disciplinary practices at the end of the school year beyond effects of child aggression ($\beta = 0.07$, $p < .01$). However, no significant cross-lagged link between positive disciplinary practices and peer status were found. Results stress the importance of peer rejection in shaping coercive teacher disciplinary practices and vice versa. They also have implications for prevention programs.

2863

Imagination development in children with visual impairments

Natalya Medina Brakamonte (1), Viktor Sorokin (1), Anton Schukin (1), Elena Kitaeva (1) *1. St. Petersburg State University, Russia*

The research is aimed to identify visual impairment influence on the imagination development in children with this disability. The study sample consisted of 75 children of 6–8 years old. They were randomized in 3 groups with 25 children in each: Group 1 – children with visual impairments (experimental); Group 2 – children with visual impairments, Group 3 – without vision problems (both control). All children did not show any sensory or intellectual deviations. Methodology implemented

in the research included the method of finishing the picture and Statistical Package for the Social Sciences 3.0. The method of finishing the picture assumes that single images of geometric figures are presented on A4 sheets and the study subjects should finish pictures with some complete image. The research experiment consisted of two stages, the second one incorporating individual discussion with each child. The study results showed that visual impairment can cause retardation in both qualitative and quantitative parameters in imagination development. However, it can be compensated by individual abilities in the sphere of vision images transformation or active involvement in various creative activities. Informative aspect of imagination both in children with or without visual impairment is inalterable. Children with visual impairments possess a high developmental potential related to creative imagination. Individual communication with a child is of the paramount importance in the process of development. Methodology of finishing the picture can be applied both as a developmental and instructional approach.

2850

When the bouba/kiki effect begins to occur in Japanese children

Chinatsu Ishikawa (1), Tessei Kobayashi (2) 1. NTT Service Evolution Laboratories, Japan; 2. NTT Communication Science Laboratories, Japan

The bouba/kiki effect, linking particular sounds with particular shapes, has been consistently shown in adults. For example, adults tend to associate the round-sounding nonword "bouba" with curved shapes, whereas they tend to associate the sharp-sounding nonword "kiki" with angular shapes (e.g., Ramachandran & Hubbard, 2001). However, it's unclear when the effect begins to occur in children. Although some studies have argued that the effect already exists the first two years (Fort et al., 2018; Maurer et al., 2006), others have reported that the effect begins to occur in 6-year-olds (Irwin & Newport, 1940).The present study investigated the age of onset of the bouba/kiki effect in Japanese children. Japanese-speaking 3- to 9-year-olds and adults ($n = 728$) completed a forced-choice matching task, which consists of auditory stimuli and visual figures adapted from Ramachandran and Hubbard's (2001) and Kohler's (1929) studies. When participants were shown one auditory stimulus (i.e., bouba, kiki, lumama, takete), they were asked to point to one of two figures (curved vs. angular). Results showed that on all stimuli, 5- to 9-year-olds (but not 3- to 4-year-olds) performed at a significantly correct level (binominal test, ps < .01). In contrast, the majority of adults performed perfectly. These findings suggest that the bouba/kiki effect begins to occur in 5–6 years of age in Japanese children, similar to the age that Irwin & Newport (1940) reported. The findings will

be discussed in light of the Japanese language's phonological and orthographic influence on the bouba/kiki effect.

2774

Does sensory processing sensitivity predict changes in the Big Five personality traits?

Kosuke Yano (1), Kazuo Oishi (1) 1. Rikkyo University, Japan

Objective: Sensory processing sensitivity (SPS) is a temperament trait describing sensitivity and reactivity to environmental stimuli, and underlies individual differences in personality development. Previous research shows that SPS correlates with other temperament/personality traits, such as the Big Five personality traits (i.e., Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness). However, previous studies typically used a cross-sectional design; therefore, little is known about how SPS affects the development of personality. This study examined the correlation between SPS and changes in Big Five personality traits. Methods: A total of 285 Japanese young adults consented to participate in a two-wave survey (111 men and 174 women; mean age = 22.2 years, SD = 3.3 years, range = 18 to 29), with an interval of approximately three months. Participants were assessed for levels of SPS at Time 1 (using a Japanese version of the 19-item Highly Sensitive Person Scale; HSPS-J19), and each Big Five personality trait at Times 1 and 2 (using a Short-Form of the Japanese Big Five Scale). The reliability and validity of these scales was confirmed. Latent change models were used to estimate the levels and changes of Big Five personality traits and how SPS was associated with them. Results: The latent change models indicated interindividual differences in intraindividual changes in each Big Five personality trait. SPS significantly correlated with the levels of all Big Five personality traits, but not with changes in them. Conclusions: The present study found that SPS does not predict changes in Big Five personality traits. However, our samples were relatively older and the interval of surveys may be too short to detect changes. Future studies should use younger samples (e.g., adolescents, children) and a longer longitudinal design.

2671

Developmental change in Korean adolescents' implicit theories of intelligence

Myung-Seop Kim Incheon National University, South Korea

An incremental theory of intelligence is an important asset that affects students' continuous efforts for achievement. As students getting older, the difficulty in learning they face increases. Thus, incremental theories of intelligence could be more important for overcoming frustration and adversity in learning. This

means that it is necessary to investigate implicit theories of intelligence in a developmental context. The purpose of this study was to identify how Korean adolescents' incremental theories of intelligence changed from middle school to high school and to investigate whether there were individual differences within this change. Korean Education Longitudinal Study (KELS) data were analyzed for this study. In this data, 6,491 Korean adolescents' incremental theories of intelligence of three consecutive years were collected. Results revealed that incremental theories of intelligence decreased during this period. This decline was closely related to students' early fixed mindset. In other words, the students who had higher fixed mindset decreased incremental mindset more rapidly than students who had lower fixed mindset. Also, there were individual differences within this change, which indicates that there are some possible developmental trajectories in adolescents' implicit theories of intelligence. The results of this study have implications for understanding adolescents' developmental change in implicit theories of intelligence, and suggest that educational intervention should be considered for this period. It is especially important to consider students who had higher fixed mindset in earlier developmental phase. Further exploration is also needed for understanding individual differences in developmental change and where these individual differences may come from.

Co-authors:

- Keunchan Baek – Seoul National University – KR

2575

Development of construction of shared context in symbolic play of child and parent

Tsutomu Nagasaki Jissen Women's University, Japan

This study was aimed to know the developmental process of shared context in co-operative symbolic play of child and parent. Participants were two typical developmental children from 2 years and 8 months old to 3 years and 4 months old, and one 3 years and one month old child with Down's syndrome whose developmental age was one and half years old, and own their mothers. Typical developmental children were observed in symbolic play for fifteen minutes every month. One child with Down's syndrome was observed at tree years and one month old. In symbolic play, twenty toys and materials were prepared. Symbolic play was analyzed by two indexes. One index is the mean length of interaction of meaningful joint action routine chaining between the child and mother. The other is the rate of initiation of mother in the joint action routine. Results were as follows. The mean length of interaction in joint action routine chaining of typical developmental children gradually increased to three

years old then decreased after three years old. The rate of initiation of mother of typical children were 70%–80% at 2 years old and eight months old and gradually decreased to 30% in three years old. The mean length of interaction of child with Down's syndrome showed quarter of typical developmental children. The rate of initiation of mother of child with Down's syndrome showed over 70%. These results showed that at first the mother tried to induce the child into play and reduced the initiation gradually after the child began to initiate the actions. In these ways, child and mother generatively construct shared context. The limit of construction of shared context of mentally retarded child indicated the needs for helping for mother to suggest to make chaining routines with her child.

2507

Intervention on personality behaviors related to the externalization of under controlled junior high school students

Songhan Liu (1), Lizhu Yang (1), Wen Zhang (1) 1. Liaoning Normal University, China

The aim of this study was to intervene on personality trait behavior related to the externalization of undercontrolled junior high school students. Methods: using latent class analysis to filtrate undercontrolled junior high school students, using experiential group activities as a carrier, and formulating intervention activities including 30 activities around the seven traits related to the undercontrolled junior high school students' externalization problems. The effect of the intervention was tested by analysis of variance and T test. Result: After one semester of intervention, the intervention effect was significant. The test results of the undercontrolled participants in experimental group was significantly lower than that in the control group, and in post-test, the personality score of experimental group was significantly higher than that of the control group. Conclusion: We discovered that he intervention program could ameliorate the externalization problem behaviors of undercontrolled junior high school students, and demonstrated a sustained promotion effect.

2423

Survey on doll play of young children at home in Japan

Honami Otsuka Minatogawa College, Japan

Dolls, stuffed toys, puppets, and so on, are very familiar toys for young children. These personified objects are often use in the study of developmental psychology. However, it is unknown how young children recognize them. The current study explored what kind of personified objects young children have, and how frequently young children play with them in their home in Japan. Eight hundred and forty mothers whose first child was a preschooler (0–6-years-olds) were recruited from the monitors registered with the research company. The investigation was conducted through the Internet. Target objects were baby dolls, dress up dolls, figures (animation or cartoon character or others), plastic models, puppets (character, animal, or person), finger puppets (character or others), festival dolls, Japanese dolls, antique dolls, doll house, and stuffed toys (character, animal, or person). They were asked (1) whether they have these objects in their home, (2) how often their first children play with these objects (per a month). In addition, they were asked whether mothers and their first children treat objects as if they were alive or had "mind" in daily life. The results showed there was a difference in the frequency of playing depending on the type of objects. Many children have the stuffed toys (528 children have the stuffed toys of animation or cartoon character, and 424 children have the stuffed animals) and they often play with them. Three hundred and ninety one children have festival dolls, but they rarely play with them. Children often treat objects as if they were alive, and their mothers also treat them as if they see and hear something, had a meal, sleep, and feel pain. Further research need to clarify the link between children's recognition of personified objects and mother's attitudes towards these objects.

2289

Effects of role-playing for adolescents' self-awareness and understanding of others' minds

Junko Mizugai (1), Mika Noi (1) 1. Seinan Jo Gakuin University, Japan

This study investigated the effectiveness of a role-playing group intervention for university students. The intervention is based on psychodrama and aimed to broaden self-awareness in students and awareness of others' minds. The intervention was conducted in a psychology class for 90 minutes. After the intervention, a sharing session was conducted for 90 minutes, where participants were asked to share (a) what they thought or felt when they played a role, and (b) what they thought or felt about themselves and others after role-playing. The interview data was analyzed using a qualitative categorizing techniques. Results showed that after the intervention, participants realized that they could play the new role much easily. Moreover, they awared that they could see their thoughts and attitudes from various dimensions. Role-playing helped the participants empirically understand that others' minds may differ from their points of view.

2065

Cognitive-motivational development of young hockey players aged 7–10

Ludmila Boyarskaya (1), Liudmila Rogaleva (1), Nurlan Aldabergenov (2), Julia Dubinkina (1) 1. Ural Federal University, Russia; 2. Turan University, Kazakhstan

The cognitive-motivational development of children aged 7–10 who engage in hockey is one of the new areas of research in sports psychology (A-J. Visek et al., 2013). This is primarily due to the early beginning of the inclusion of young athletes in competitive activity. At the same time, most authors notice that the participation of children in competitions is associated with a high risk of forming inadequate self-esteem, uncertainty and a decrease of motivation. Most often the reason of this lies in the peculiarities of the development of the cognitive sphere of young athletes, and above all in the establishment of cause-effect relationships. The purpose of the research was to elaborate and use psychological training for the development of the cognitive-motivational sphere of young hockey players of 7–10 years old. The psychological training was held with teams of young hockey players of the sports school Yunost in Yekaterinburg. One of the objectives of the training was to develop the ability to understand the causes of difficulties arising during the competitions and ways to overcome them. It was revealed that young hockey players as "obstacles" during the competitions most often name "referees", "rivals", "fans", "coach", "parents", "headlights", "themselves", "teammates". At the same time, they do not know how to overcome these obstacles, so it was formulated a series of exercises for them to develop the skills of self-control and attention, which ultimately helped them understand the importance of attitude in overcoming unexpected situations of competitive activity. It was revealed that for young hockey players there are such characteristic negative emotional states during the competitions as "fear of a strong rival", "fear of defeat", "punishment by the coach" or "negative parents' assessment". Therefore, we recommend use cognitive-motivational games, allowing to adjust young athletes to a positive perception of the competition.

1636

Desirability of explanation and support from medical workers and self-determination by patients

Hiroki Okuda Kinjo University, Japan

The purpose of this investigation is to compare the desirable degree of explanation from medical workers (DE) and support from medical workers (DS) and self-determination by patients (DSD) in medical situations in the Japanese young and elderly groups. The participants were 100 ordinary Japanese people who were not medical professionals or students. 50 participants were included in the young group (18–21 years) and the others were included in the elderly group (65 years and older). The purpose of this study and ethical considerations were explained and informed consent was

obtained. The participants were asked to imagine cases of mild, moderate or serious illness or injury. The participants were asked to evaluate 12 items on a 7-point scale regarding DE, DS and DSD for each level of seriousness. These 12 items were related to their own way of medical examination or treatment, refusal of the proposed medical examination or treatments, etc. A three-way ANOVA was conducted on the evaluation scores of DE, DS and DSD. The ANOVA revealed a significant main effect for different-aged group, level of seriousness and evaluated desirability as well as all the interactions ($p < .05$). Regarding DE and DS, the average scores were significantly high in the order of the case of serious, moderate, and mild illness or injury and the average scores of the elderly group were significantly higher than those of the young group ($p < .05$). However, regarding DSD, the difference in the average scores among the cases of mild, moderate, or serious illness or injury and the difference in the average scores between the young and the elderly groups did not reach significance level. The results of this investigation suggest that the seriousness of illness or injury and the age of the patient, etc., are factors in cognitive differences concerning desirable medical services.

1612

Cognitive/behavioral outcomes at ages 9–10 from maternal use of prescription opioids in pregnancy

Micah L. Hartwell (1), Julie M. Croff (1), Ashleigh L. Chiaf (1), Florence Breslin (2) 1. Oklahoma State University Center for Health Sciences, United States of America; 2. Laureate Institute for Brain Research, United States of America

Purpose: Upwards of one in five pregnant women receives an opioid prescription in the United States. The purpose of this study was to assess the risk of adverse birth outcomes and impaired cognitive development of 9 and 10-year-olds exposed in utero to prescription opioids. Methods: Using baseline data collected from the Adolescent Brain Cognitive Development (ABCD) study, prenatal opioid exposure among participants was identified through survey questions about the biological mothers' use of prescription medications during pregnancy. Regression analyses were used to assess whether adolescents with prenatal prescription opioid exposure were more likely to experience adverse birth outcomes and suffer from negative, long-term effects from exposure. Results: After assessing participants with known biological mother records ($N = 11{,}645$), 150 participants were documented as having been exposed to opioids during pregnancy. Several negative birth outcomes were associated with prenatal prescription opioid exposure. In the regression model, after controlling for sociodemographic variables and other

substance exposure, prenatal prescription opioid exposure significantly increased the risk of blue birth (AOR: 2.43; CI: 1.14–5.15), slow heart beat (AOR: 2.98; CI: 1.46–6.09), not breathing (AOR: 2.68; CI: 1.45–4.97), needing oxygen (AOR: 2.17; CI: 1.29–3.64), and needing a blood transfusion (AOR: 7.54; 1.65–34.48). Additionally, after controlling for the same variables, prenatal prescription opioid exposure significantly predicted reading scores of exposed children at ages 9 & 10 (B (SE) = −3.12 (1.46), $t = −2.13$, $p = .030$). Discussion: Our findings indicate that problems associated with prescription opioid exposure continue beyond negative birth outcomes. Children exposed to prescription opioids in pregnancy, regardless of neonatal abstinence symptoms are at risk for negative, long-term cognitive effects. Additional exploration of the ABCD dataset is necessary to understand whether adverse birth outcomes and impaired cognitive function continue over time.

1433

Life transitions in young adulthood in the context of further positive functioning

Katarína Millová Institute of Psychology, Czech Academy of Sciences, Czechia

Objective: Research on important life transitions show their significance to further positive psychosocial functioning. This study focused on timing of four life transitions in young adulthood in the context of positive characteristics – psychological well-being and life satisfaction. Methods: 743 former university students (267 men, 476 women) aged 28–43 years (mean age 33.4) completed online questionnaire battery consisted of methods related to well-being (PWB, SWLS) and timing of important life transitions – leaving parental home, entry into work, partnership, and parenthood (Life History Calendar). Results: On-time leaving of parental home experienced 73.5%, off-time (early or late) experienced 26.5% of participants; on-time entry into work experienced 54.8%, off-time experienced 45.2% of participants. 45.2% of participants entered partnership on-time, 54.8% of them entered earlier or later. On-time entry into parenthood experienced 25.7%, off-time entry experienced 22.6% of participants and 51.7% of them were still childless. Obtained results show that in the context of leaving parental home transition participants did not differ in well-being, regardless of whether they have left parental home on-time, earlier or later. Participants, who entered partnership early or on-time had higher levels of environmental mastery; participants who became parents earlier scored higher in autonomy. Even though participants did not differ in life satisfaction according to timing of parenthood, those who had already became parents had higher life satisfaction

compared to childless participants. The biggest differences in well-being showed participants according to timing of their entry into stable work: those who started early or on-time scored higher especially in environmental mastery, autonomy, and positive relations dimensions, and their life satisfaction was higher compared to participants who started their stable work late. Conclusions: Obtained results suggest that higher well-being is connected rather with early or on-time transitions than with late transitions that take place predominantly in young adulthood.

193

Modern approach to psycho prophylaxis of juvenile delinquency

Sveta Berdibayeva (1), Sharipbek Amirbekov (2), Dmitriy Ivanov (3), Satybaldy Berdibayev (4) 1. Al-Farabi Kazakh National University, Kazakhstan; 2. T. Zhurgenov Kazakh National Academy of Arts, Kazakhstan; 3. Samara State University of Social Sciences and Education, Russia; 4. L.N. Gumilev Eurasian National University, Kazakhstan

The aim of whole empirical study in the development of a psychodiagnostic package of techniques that would determine the influence of a family on the formation of illegal behavior of adolescents, and in identifying the particularity of adolescents prone to criminal behavior. Compiling a psychological portrait of the personality of adolescents who committed criminal acts, the following were studied: character accentuation type (G. Shmishek questionnaire), personal and situational anxiety (method of Charles D. Spielberger – Yu.L. Darki) and self-assessment (questionnaire S. Stepanov). The questionnaire "The behavior of parents and the attitude of adolescents towards them" was used to study the influence of the family. The experimental and control groups consisted respectively of 12 adolescents aged 13–14 who committed criminal acts and were registered in Affairs Division of minors and 12 socially adapted adolescents who did not commit illegal acts. Adolescents who have committed criminal acts evaluate their mother's attitude towards themselves more positively than their father's does, and they note "inconsistency", "directivity" and "autonomy" in relation to their parents. It can be concluded that the behavior bf adolescents who have committed criminal acts is the result of violations of parental upbringing, their pedagogical insolvency, consisting primarily of inconsistency, directivity and autonomy of the educational effect on the adolescent. Characteristic for adolescents who have committed criminal acts, personal characteristics and his attitude towards parents, which is the basis for the psycho prophylaxis of criminal behavior