



2nd Annual Meeting

November 18, 2020

**Breaking through interdisciplinary
barriers**

Abstract book

Swiss Society for Early Childhood Research

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Online Program

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Program overview

Wednesday, 18th November 2020

Morning

- 09h15 Opening remarks by Prof. Dr. Sonja Perren, President of the SSECR
- 09h30** **Keynote** [Prof. Dr. Doris Bühler-Niederberger](#) | University of Wuppertal
Young children and their social contexts
- 10h15** **Coffee & Morning poster session**
- 11h15 [Simone Schaub](#), [Matthias Lütolf](#)
Inclusive early childhood education and care: Attitudes, self-efficacy and behavioral intentions of caregivers
- 11h30 [Julien Mayor](#), [Natalia Kartushina](#)
Language acquisition in time of Covid-19 – a multi-site, multi-country, multi-language study
- 11h45 [Martin Moser](#), [Michael von Rhein](#), [Corina Müllner](#), [Patricia Ferro](#), [Oskar Jenni](#)
Early identification of children with developmental delays
- 12h00 [Mariëtte H van Loon](#), [Claudia M. Roebbers](#)
Effects of Feedback on Kindergartner`s Self-Monitoring and Self-Rewarding
- 12h15 [Vania Sandoz](#), [Suzannah Stuijtzand](#), [Nadine Messerli-Bürgy](#), [Camille Deforges](#), [Magali Quillet Diop](#), [Ulrike Ehlert](#), [Marius Rubo](#), [Antje Horsch](#)
The Lausanne Infant Crying Stress Paradigm: Development and validation of an Early Postpartum Stress Paradigm within birth-related traumatised vs non-traumatised women
- 12h30** **Lunch**

Program overview

Wednesday, 18th November 2020

Afternoon

- 13h30** **Keynote** [Prof. Dr. Michael J. Shanahan](#) | University of Zurich
Early life experience and gene expression patterns in young adulthood
- 14h15** **SSECR General Assembly**
- 15h00** **Coffee & Afternoon poster session**
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Involving multilingual children in sustained shared thinking interactions in kindergarten
- 16h00** [Bretz Kathrin](#), [Christian Herrmann](#), [Ilaria Ferrari](#), [Harald Seelig](#), [Roger Keller](#),
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Association between basic motor competencies of 4-8-year olds and social relationships with classmates
- 16h15** [Sonja Perren](#), [Isabelle Kalkusch](#), [Ann-Kathrin Jaggy](#), [Barbara Weiss](#), [Carine Burkhardt Bossi](#), [Fabio Sticca](#)
The impact of social pretend play on pre-schooler's social development: A randomized controlled intervention study
- 16h30** [Lynn V. Fehlbaum](#), [Lien Peters](#), [Réka Borbás](#), [Plamina Dimanova](#), [Margot Röell](#), [Daniel Ansari](#), [Nora M. Raschle](#)
Intergenerational effects on the neuronal characteristics of the reading network in mother-child dyads
- 16h45** [Maren Zeller](#), [Bettina Grubenmann](#)
Infant welfare in Switzerland. A discourse analysis on infant mortality, hospitalism, and early intervention
- 17h00** **Farewell**

Keynote | 09:30 – 10:15 a.m.

Young children and their social contexts

Prof. Dr. Doris Bühler-Niederberger
University of Wuppertal

In my contribution I will pursue the question of the extent to which young children are to be seen as a product of their society, i.e. shaped by social conditions on which, in turn, they cannot yet have any influence? Or how much must they nevertheless be considered as members of society, as co-producers of social situations and their own person in these interactions. *Theoretically*, this is an attempt to bridge childhood sociological approaches and socialization theory. *Empirically*, it will be examined to what extent children fit into existing social practices and social rules and to what extent they vary them, adapt them to their own concerns or occasionally (try to) reject them.

It is the observation of young children in a context that was foreign to the researcher herself, the Kyrgyz Republic in Central Asia, that made the social contributions of the young children impossible to overlook. In the interpretations, desires and actions of kindergarten children, the rules of a more collectivist society became apparent and at the same time the (not only unconditional) appropriation of the set of rules by the children. Contrasting the insights with studies/material from Western societies reveals the special form of young children's agency, which we can mostly characterize as *competent compliance*.

Keynote | 13:30 – 14:15 p.m.

Early life experience and gene expression patterns in young adulthood

Prof. Dr. Michael J. Shanahan
University of Zurich

Social genomics refers to efforts to study behavioral development in terms of genetic factors and experiences. This talk provides a brief overview of this field and then focuses on studies of birth weight, and how birth weight has long-term associations with health and aging as assessed with gene expression patterns. Data come from the first nationally representative sample that includes mRNA expression levels, the National Longitudinal Study of Adolescent and Adult Health. Adjusting for body mass at many points in life, birth weight is associated with genetic risk for disease and senescence over thirty years later.

Morning poster session A | 10:15 – 10:30 a.m. | Poster #1

Validation of the Tools-of-the-Play-Scale: Factorial Structure and Associations with Age and Social Skills

[Ann-Kathrin Jaggy¹](#), [Perren Sonja¹](#), [Seeger Dorothee²](#), [Holodynski Manfred²](#)

¹Pädagogische Hochschule Thurgau, Universität Konstanz; ²Westfälische Wilhelms-Universität Münster

Pretend play may be beneficial for young children's social development. However, empirical results to date are inconsistent and limited, which is partly due to a lack of sound and standardized measures for children's social pretend play competence (Lillard et al., 2013). From a theoretical perspective, especially children's social pretend play competence seems to be important in fostering children's social and social-cognitive skills because it helps children to better understand the social world (Bodrova et al., 2013). The Tools-of-the-Play-Scale (ToPS; Seeger & Holodynski, 2016) is a newly developed measurement tool that enables to assess children's social pretend play competence.

The aim of the present study was to validate the factorial structure of the ToPS in two different samples. Furthermore, associations with children's age, prosocial behavior as well as their sociability were examined. For this purpose, two samples were assessed: A German preschool sample with 97 children aged between 47 and 73 months ($M = 60$, $SD = 7.3$), and a Swiss preschool sample with 71 children aged between 37 and 56 months ($M = 54.9$, $SD = 9.1$). Children's social pretend play competence was assessed by the ToPS. Educators completed a questionnaire on children's prosocial behavior and sociability (SOCOMP; Perren et al., 2008, KIPPS; Seeger et al., 2014). Preliminary results confirmed the proposed factorial structure in both samples, but also showed that the measurement was not completely invariant between the samples. Further analyses will be made to establish measurement invariance and test whether potential measurement differences between samples can be explained by age composition. Furthermore, positive associations were found between children social pretend play competence and their age ($r = .39$, $p < .001$), their prosocial behaviour ($r = .54$, $p < .001$) as well as their sociability ($r = .38$, $p < .01$). Detailed results concerning the validity of the ToPS will be presented and discussed.

Morning poster session A | 10:30 – 10:45 a.m. | Poster #2

Participation of Immigrant Families in Family Centres

[Janine Rüdösüli¹](#), [Emely Knör²](#), [Jutta Sechtig²](#), [Franziska Vogt¹](#)

¹University of Teacher Education St. Gallen (PHSG), Switzerland; ²University of Education Weingarten, Germany

Background: Family centres vary regarding their goals and structures as they seek to serve differing social contexts (Calderón & Mulle, 2017; Schreiber & Tietze, 2008). In family centres, various services for young children and parents (e.g. family counselling, creative activities for children and parents, language courses and childcare services) are bundled in one institution (Calderón & Mulle, 2017; Stöbe-Blossey, 2013). An important aspect of family centres is the social platform they provide: Parents can meet up in a casual surrounding and children are given the opportunity to play with each other (Kühnl et al., 2013). These opportunities can foster social integration. Immigrant families often lack adequate access to early childhood services (Poureslami et al., 2013). However, studies have shown that the participation of immigrant families in early childhood services is facilitated in so-called family centres (Evangelou et al., 2013; Hayward et al., 2013; Kühnl et al., 2013). Our study aims at exploring the organisational and structural variety of family centres and examines ways of participation of immigrant families in family centres.

Methods: A survey among family centres heads in Germany, Liechtenstein, Vorarlberg and Switzerland was conducted via online-questionnaire. The online-questionnaire was sent to 370 family centres heads. Data collection is expected to be finalized in May.

Relevance: The results will show how many immigrant families visit family centres, which strategies family centres use to be attractive for immigrant families and how immigrant families shape family centres.

Morning poster session A | 10:45 – 11:00 a.m. | Poster #3

The Impact of Mother-Infant Interaction on Emotion Regulation of Very Preterm Infants

Valeria Laquale¹, Céline Sunier¹, Sébastien Urben², Mathilde Morisod-Harari², Nevena Dimitrova³

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Previous research has shown that very preterm (VPT) infants show difficulties including greater emotional problems than full-term (FT) infants. Importantly, mothers of VPT infants display more intrusive behaviors during mother-infant interactions. In this study, we asked whether mother-infant interaction plays a role in emotion regulation of VPT and FT infants.

38 VPT and 19 FT children along with their mothers participated in the study. Quality of parent-child interaction was assessed at 4 months of child age during free play using the Coding Interactive Behavior. The arm restriction episode of the Laboratory Temperament Assessment Battery was used to generate frustration in infants at 6 months. Emotion regulation was assessed with an adaptation of the Body Action and Posture.

Mothers of VPT infants showed more intrusive behavior than mothers of FT infants ($U=224$, $z=-2.340$, $p=.019$). To regulate emotion, the strategy of attention diversion was more used by FT than VPT infants (head towards spinning object: $Z=-2.083$, $p=.037$; gaze towards camera: $Z=-2.124$, $p=.034$; gaze towards spinning object: $Z=-2.108$, $p=.035$). Nevertheless, no link was found between the quality of mother-infant interaction and infant's emotional regulation strategies (ns).

Results confirm existing differences between VPT vs. FT infants: by displaying more intrusive behavior, mothers of VPT infants contribute to poorer quality of interaction. A greater use of attentional emotion regulation strategies by FT infants suggests they possess better emotional skills than VPT infants. Contrary to our predictions, infant emotion regulation skills are not linked to the quality of mother-infant interaction.

Morning poster session B | 10:15 – 10:30 a.m. | Poster #4

Work-Related Self-Efficacy in ECEC and its Impact on Interactional Quality

Yvonne Reyhing, Bettina Brun, Sonja Perren

University of Konstanz, Germany, Thurgau University of Teacher Education

High educator-child-interaction quality in early childhood education and care (ECEC) is associated with better child outcomes such as children's language and social skills (Mashburn et al., 2008). Several studies suggest that teachers with high self-efficacy are more likely to perform better teaching behavior (Zee and Koomen, 2016). However, this effect has not yet been well examined for ECEC with studies showing mixed findings (e.g. Hu et al., 2018; Spear et al., 2018). In this study we assess the relationship between self-efficacy and interaction quality in early childhood educators. We hypothesize a positive relation between work-related self-efficacy beliefs of ECEC educators and the quality of educator-child interactions.

We analyzed data from 88 Swiss ECEC groups. The quality of educator-child interactions was observed with CLASS toddler (La Paro et al., 2012). Educators reported on their work-related self-efficacy (ECEC SE) and demographic data.

CFA of the observed data (CLASS) on cycle level confirmed a the two factor model (emotional and behavioral support and engaged support for learning). Since ICCs between .58 and .36 indicated a nested structure within the daycare groups, we conducted a multilevel SEM with 245 cycles in 88 groups. ECEC SE of all educators who were present during the specific observation cycle, as well as educator-child ratio, activity setting, and professional experience of the educators were used as predictors. First results indicate no significant associations between ECEC SE and interactional quality, whereas educators' experience and the setting show significant relationships with interactional quality.

Morning poster session B | 10:30 – 10:45 a.m. | Poster #5

Mathematical teaching opportunities during pretend play

[Linda Amrar](#)^{1,2}, [Anne Clerc-Georgy](#)¹, [Jean-Luc Dorier](#)²

¹Vaud University of Teacher Education; ²University of Geneva

Child-initiated activities contain a lot of mathematical activities (Seo and Ginsburg, 2004) which can become mathematical teaching opportunities (van Oers, 19996) under certain conditions. The aim of this research is to highlight the specific conditions under which a mathematical activity which arise from a child-initiated activity can become a mathematical teaching opportunity. 7 teachers (with ample experience in teaching through play) and 2 researchers (expert in play-based learning) will be part of a Lesson Study (postponed to september due to the closure of classes) designed to develop the mathematical thinking of children during child-initiated activities. The research lesson will be given by all the teachers 5 times to make a progression in the mathematical challenges proposed during the play of the 5-6 years old children. Video recordings of the research lessons will be analyzed using the methodology developed by Hedegaard and Fleer (2008). The maturity of the pretend play of children will be assessed using the PRoPELS (Leong and Bodrova, 2012). The hypothesis is that teachers will foster dialectically the mathematical thinking of the children as well as the maturity of the pretend play of children. The presentation will include the first results. This study will contribute to the understanding of the mechanisms involved in the development of the mathematical thinking of children during child-initiated activities in preschool.

Morning poster session B | 10:45 – 11:00 a.m. | Poster #6

Use of Pain Relief Medication during Childbirth Impacts Birth-related Posttraumatic Stress Disorder Symptoms

[Camille Deforges](#)¹, [Suzannah Stuijtzand](#)¹, [Yvonnick Noël](#)², [Moira Robertson](#)³, [Malin Eberhard-Gran](#)^{4,5}, [Susan Garthus-Niegel](#)^{6,7}, [Antje Horsch](#)^{1,3,7}

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Four to six percent of women develop childbirth-related Post-Traumatic Stress Disorder (C-PTSD), which can have deleterious consequences on the child's development and the couple relationship. In other

populations, pain relief administration after a traumatic event seems to prevent PTSD symptoms development. Commonly used in obstetrics, these drugs might have unexpected effects on C-PTSD. The aim of this study was to evaluate whether intake of morphine and nitrous oxide, two common types of obstetrical pain relief, impact C-PTSD symptom development. Data are derived from the Akershus Birth Cohort, a large Norwegian population-based prospective cohort study. 3,752 women scheduled to give birth at Akershus University Hospital between 2008 and 2010 were included. For each woman, medical staff completed a birth record including morphine and nitrous oxide intake during childbirth and mode of delivery. At 8 weeks and 2 years postpartum, C-PTSD symptoms were measured with the Impact of Event Scale. Peripartum pain was measured at 8 weeks. A regression with drug administration as main effects was conducted, and confounders were included in their main effects and interaction terms with the groups. Confounders were subjective pain during labour and instrumental birth as a proxy for medical severity. Results showed that both morphine and nitrous oxide predicted reduced C-PTSD symptoms when administered during birth. This is the first study to address the question of unexpected effects of medicine intake during childbirth on C-PTSD symptoms. Beyond the obstetrical context, these results may constitute a first step toward the development of a pharmacological prevention of PTSD.

Morning poster session C | 10:15 – 10:30 a.m. | Poster #7

Posttraumatic stress symptoms following childbirth: associations with prenatal attachment in subsequent pregnancies

[Antje Horsch^{1,2}](#), [Susan Garthus-Niegel^{3,4}](#), [Tilmann von Soest⁵](#), [Silje Marie Haga⁶](#), [Filip Drozd⁶](#), [Susan Ayers⁷](#), [Malin Eberhard-Gran^{5,6,8}](#)

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Background: Prenatal attachment is influenced by maternal mental health but the association with posttraumatic stress disorder (PTSD) symptoms following a previous childbirth and the role of fear in relation to the upcoming childbirth remain understudied. This longitudinal population-based study aimed to investigate the prospective relationship between PTSD symptoms following childbirth and prenatal attachment in the subsequent pregnancy.

Methods: Data from 1,473 women who had given birth at least once before and who had completed questionnaires at 17 and 32 weeks of gestation were included. Structural equation modeling techniques were used to estimate prospective associations of PTSD symptoms following childbirth with prenatal attachment. Finally, to explore potential mechanisms of the association, mediation and moderation analyses were conducted.

Results: PTSD symptoms following previous childbirth were found to be prospectively related to higher levels of prenatal attachment in the subsequent pregnancy, whilst controlling for important confounding factors, such as symptoms of maternal depression and anxiety, previous pregnancy loss, and sociodemographic factors (maternal age, educational level, marital status, and number of children). When fear of childbirth was included as a potential mediating variable, the prospective relationship between PTSD symptoms following childbirth and prenatal attachment in the subsequent pregnancy increased, thereby indicating a suppressor effect. Fear of childbirth did not act as a significant moderator.

Discussion: Our findings suggest that a subsequent pregnancy following a traumatic childbirth may for some women represent an opportunity for a higher level of prenatal attachment, whereas high levels of fear of childbirth may be detrimental for prenatal attachment.

Morning poster session C | 10:30 – 10:45 a.m. | Poster #8

Neural correlates of Theory of Mind processing in children, mothers and child-mother dyads

[Réka Borbás](#)^{1,2}, [Lynn V. Fehlbauer](#)¹, [Plamina Dimanova](#)¹, [Nora M. Raschle](#)^{1,2}

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Background: Theory of Mind (ToM) or mentalizing is a socio-cognitive skill enabling the understanding of mental states of others and ourselves. ToM is central to our everyday life and is influenced by various familial factors. Initial evidence indicates an early start for the development of the mentalizing network. However, region-specific differences in trajectories exist (e.g., relatively consistent activation of temporoparietal areas, but inverted u-shaped curve for prefrontal cortices across age).

Methods: Here we assessed the neural correlates of ToM using CAToon, a ToM task developed for functional neuroimaging: (1) in 33 school children ages 7-13 years (18♂/15♀), (2) in their biological mothers (n=27/31-50 years), and (3) by comparing neuronal similarity during ToM in mother-child dyads. Neural correlates of mentalizing were based on the contrast ('affective ToM' + 'cognitive ToM') > 'Physical Causality'; and FWE-corrected.

Results: In both children, and their mothers increased activation during mentalizing was observed in areas previously described as the social brain network, including bilateral temporoparietal junctions, temporal poles, precuneus, medial prefrontal cortex and anterior cingulate cortex. While the overall activation pattern in mothers and children was similar, there was significantly less activation in frontal areas in mothers compared to children.

Discussion: In line with previous evidence, we found neuronal activation increases in the mentalizing network in school-aged children and mothers. Prefrontal brain regions were less recruited in adults, which aligns with previous findings of an initial increase of PFC engagement from childhood to youth, but relative decrease from youth to adulthood, reflecting behavioral specialization.

Morning poster session C | 10:45 – 11:00 a.m. | Poster #9

Thinking Play and Curriculum dialectically in early childhood

[Anne Clerc-Georgy](#)¹, [Daniel Martin](#)¹, [Béatrice Maire Sardi](#)¹, [Isabelle Truffer Moreau](#)²

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In our context, we observe the gradual disappearance of play at preschool and the implementation of teachers' practices that imitate more and more the ones of primary school. These changes shed light on the traditional tensions between the social-pedagogical and the preparation-for-school traditions, between play and learning, and between child's program and school program (Vygotski, 1935/1995). To overcome these tensions, we defend the need to develop a third way (Clerc-Georgy, 2016).

At preschool age, the child experiments cultural tools according to his own interests. To do it, play seems the most conducive activity (Bodrova, 2008). However, neither development can be seen as the sole result of a maturation process, nor can learning be seen as the result of children's experiences in which they would be expected to discover knowledge. (Pramling & al., 2017). Thus, the third way proposed here breaks

through disciplinary barriers, knowledge from all disciplines can appear in play. It should make possible to articulate play and curriculum dialectically (Clerc-Georgy & Maire Sardi, 2020; Truffer Moreau, Soumis, Fleer, 2009) and taking into account child's experience (Vygotski, 1934/2018; Veresov & Fleer, 2016).

Based on videos made in classes in French-speaking Switzerland, our analyses of play time and teacher-managed learning situations led us to identify different types of articulation between play and curriculum. Sometimes the focus is clearly on the play itself and its development. At other times, the teacher may take advantage of learning opportunities that emerge from the play. Still other times, the teacher makes use of "make-believe" to help pupils encounter subject knowledge.

Morning poster session D | 10:15 – 10:30 a.m. | Poster #10

Parental birth-related PTSD symptoms and bonding in the early postpartum period: a prospective cohort study

[Suzannah Stuijtzand¹](#), [Susan Garthus-Niegel^{2,3}](#), [Antje Horsch⁴](#)

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Intro: The parent-infant bond following childbirth is an important facilitator of optimal infant development. So far, research has mainly focused on mother-infant bonding. Data on fathers is still sparse. Parental mental health may influence mother-infant relations and/or interactions, for example childbirth-related posttraumatic stress symptoms (CB-PTSD). There is evidence that both parents can experience CB-PTSD symptoms. The aim of this study is to investigate the prospective relationship between parental CB-PTSD symptoms and perceived parent-infant bonding, while controlling for antenatal confounders.

Methods: This study used a subsample ($n_{\text{Total sample}} = 488$, $n_{\text{mothers}} = 356$, $n_{\text{fathers}} = 132$) of an ongoing prospective cohort study, which recruits future parents awaiting their third trimester antenatal appointments at a Swiss university hospital. Self-report questionnaires assessed CB-PTSD symptoms and psychological distress at 1 month postpartum, and parent-infant bonding at 3 months postpartum. Confounders included antenatal PTSD symptoms and social support measured via self-report questionnaires, and gestity and gestational age, extracted from medical records.

Results: Using structural equation modelling, maternal CB-PTSD symptoms were found to negatively influence mother-infant bonding; however, this effect disappeared after controlling for psychological distress. No such effects were found for fathers. There was no evidence of mediation of the relationship between parental CB-PTSD symptoms or parental-infant bonding via psychological distress.

Discussion: Results expand the current literature on the impact of CB-PTSD on parent-child relations to partners, and to a community sample. Results should be discussed in view of the postpartum timeframe: evidence relates to parent-infant bonding at 3 months postpartum.

Morning poster session D | 10:30 – 10:45 a.m. | Poster #11

Do Early Family Risks and Early Social-Emotional Problems Matter for Friendship Quality in Preadolescence?

[Olivia Gasser-Haas¹](#), [Fabio Sticca¹](#), [Corina Wustmann Seiler^{1,2}](#)

¹Marie Meierhofer Children's Institute, Switzerland; ²Zurich University of Teacher Education, Switzerland

The importance of friendship quality in preadolescence as a promotive and protective factor is well documented (Bukowski et al., 1996). However, our understanding of early predictors of the positive and especially the negative dimension of friendship quality is limited (Way & Pahl, 2003). While the positive dimension is based on mutual understanding and solidarity, the negative dimension consists of rivalry, and a lack of conflict resolution (Berndt, 2002; Parker & Asher, 1993).

For this reason, the study investigated if family risks and social-emotional problems in early childhood longitudinally predict the positive and negative dimension of friendship quality in preadolescence. A total of 293 (T1), 238 (T2), and 189 (T3) children from 24 childcare centers participated in the study. Family risks were assessed at T1 (Mage = 2.81 years), while social-emotional problems (behavioral problems, anxious, and depressive symptoms) were assessed at T2 (Mage = 3.76 years). Self-perceived friendship quality was measured at T3 (Mage = 9.69 years).

The results confirmed that early family risks were positively associated with the negative dimension of friendship quality. Further, early depressive symptoms were found to have a negative effect on both dimensions of friendship quality, while early anxious symptoms were a positive predictor of the positive dimension only. Finally, early behavioral problems had a negligible effect on both dimensions in preadolescence.

These results indicate the importance of supporting young children with family risks and depressive symptoms to strengthen their positive relationships with peers and to enable them to make later high-quality friendships.

Morning poster session D | 10:45 – 11:00 a.m. | Poster #12

Correcting for prematurity at school-age – Effects on executive functions

[Flavia Wehrle¹](#), [Alexandra Stöckli¹](#), [Barbara Schnider²](#), [Vera Disselhoff²](#), [Bea Latal¹](#), [Cornelia Hagmann²](#), [Regula Everts³](#)

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Objective: To avoid underestimation of very preterm children's neurodevelopmental outcome, correcting for prematurity is recommended in early childhood. As executive functions develop rapidly across school-age, correcting may, however, remain relevant at this age to adequately estimate abilities. This study, thus, explored the effect of correcting executive function test scores for prematurity in very preterm children at school-age.

Methods: A total of 141 very preterm and 232 term-born children were assessed at a mean age of 10.5 years (SD: 1.5; range: 7.7 to 13.7). Inhibition, working memory and shifting were assessed with standardized neuropsychological tests. Children were grouped into 4-months age categories (e.g., 10;0 to 10;3 years) and raw scores were converted into z-scores using the mean and standard deviation of the term-born children of the respective age category. For very preterm children, this was done once with their chronological (uncorrected) age and once with their chronological age adjusted for prematurity (corrected age). Regression models were used to compare very preterm participants' uncorrected and corrected scores to the term-born peers' scores while taking into account sex and family socio-economic status.

Results: When age was not corrected for prematurity, inhibition and cognitive flexibility scores were lower in the very preterm compared to the term-born group (standardized mean difference (d) = -.37, p = .03 and d = -.35, p = .01, respectively). 56.7% of very preterm children fell into a younger age category when their

chronological age was corrected for prematurity. When age-corrected test scores were used, the difference between very preterm and term-born children was attenuated ($d = -.18$, $p = .65$ and $d = -.17$, $p = .45$).

Conclusion: Correcting test scores for prematurity up to school-age is necessary to adequately reflect very preterm children's executive function abilities.

Morning poster session E | 10:15 – 10:30 a.m. | Poster #13

Associations between maternal post-traumatic stress disorder and child psychopathology: Results from the longitudinal Geneva Early Childhood Stress Project study

[Jennifer Glaus](#)¹, [Virginie Pointet Perizzolo](#)², [Marylène Vital](#)³, [Sandra Rusconi Serpa](#)², [Sébastien Urban](#)¹, [Kerstin von Plessen](#)¹, [Daniel S Schechter](#)^{1,2,4}

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Introduction: Exposure to interpersonal violence can lead to post-traumatic stress disorder (PTSD) in mothers and can adversely affect the mental health of their children and their children's own propensity for aggression. Our objectives are to assess: (1) the effect of a maternal interpersonal violence-related PTSD (IPV-PTSD) on child psychopathology and (2) the association between bullying and the psychopathology of these children.

Methods: We used data from the longitudinal Geneva Early Childhood Stress Project. The sample included 61 children (mean age = 2.4 [1.2-3.7] years) of mothers with or without a diagnosis of IPV-PTSD. Data on maternal IPV-PTSD was collected using the Clinical Administered PTSD Scale (CAPS) at baseline. Modules of a semi-structured interview, and a questionnaire on bullying were used to collect information on child psychopathology and bullying at follow-up

Results: A higher CAPS score in mothers at baseline was associated with an increased risk of symptoms of separation anxiety disorder ($\beta=0.013$, $p=0.025$), attention deficit/hyperactivity disorder (ADHD) ($\beta=0.010$, $p=0.048$) and PTSD in children at follow-up. The association between maternal IPV-PTSD and child PTSD symptoms remained significant ($\beta=0.046$, $p=0.027$) after adjustment for potential confounders. Among children, bullies had an increased number of ADHD ($\beta=1.06$, $p=0.015$), depressive ($\beta=1.16$, $p=0.012$) and oppositional defiant disorder ($\beta=0.63$, $p=0.024$) symptoms.

Conclusion: Our findings suggest that maternal IPV-PTSD has an influence on the development of psychopathology in children, particularly PTSD. Addressing maternal IPV-PTSD, screening for child psychopathology, and supporting preventive school-based programs targeted at bullying may help to interrupt the development of child psychopathology and aggressive behavior.

Morning poster session E | 10:30 – 10:45 a.m. | Poster #14

The role of interoception in early development of the bodily self: a behavioural and neurophysiological assessment in five- to seven-month-old infants

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University of Zurich, Switzerland

Interoception, the perception of internal bodily signals, is fundamental to our sense of self. Even though theoretical accounts suggest an important role for interoception in development of the self, empirical investigations are limited. It has been suggested that development of the self in infants is based on the

perception of contingencies between the self and the outside world. This has been informed by studies using preferential-looking paradigms. From birth, infants are able to detect sensorimotor and multisensory contingencies, and thus show a minimal awareness of the self as distinct from others or the world. Recently, a single study reported that infants detect contingencies between interoceptive (cardiac) and audiovisual signals, and that this detection is related to heartbeat evoked potentials (HEP), a neural correlate of interoception. In the current study, we aim to disentangle this contingency detection, by investigating whether there is a difference in looking and grasping preferences between synchronous and asynchronous visuocardiac, and audiovisualcardiac stimuli. Additionally, we measured HEP in response to live and 2-second delayed videos of the infant, as well as videos of emotional (happy and angry) faces. In contrast to a previous study, preliminary data analyses do not show a difference in looking time, nor a difference in HEP amplitude between experimental conditions. This study adds to the growing literature on the role of interoception in early development of the bodily self and will inform about the role of interoception in current theories of development of the bodily self.

Morning poster session E | 10:45 – 11:00 a.m. | Poster #15

Do children with developmental disorders receive appropriate support?

[Michael von Rhein](#)^{1,2}, [Daniela Jepathavakumar](#)¹, [Patricia Ferro](#)¹, [Corina Müllner](#)¹, [Oskar Jenni](#)^{1,2}

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Developmental delay (DD) with a prevalence of 15 percent of all children is one of the most frequent disorders in early childhood affecting annually thousands of individuals in Switzerland. Early identification of children with DD is critical to ensure appropriate therapeutic interventions, to support the families and finally to prevent chronic (i.e., life-long) health, educational and social consequences. It is widely accepted that early intervention programs are both ethically mandatory and cost-effective for the society on a long-term perspective. However, we note that there is a large paucity of information about supply, demand and effectiveness of services for children with DD in Switzerland. In the Canton of Zurich (Switzerland), there is a centrally organized registration of all children with DD in need of early interventions at the Unit of Special Needs Education (USNE).

We have collected and analyzed a comprehensive data set from all children (age 0-4) admitted to the USNE in 2017 (n=2033). The talk presents a description of the cohort as well as the spectrum of the special needs support of children evaluated by the USNE and contrasts the findings to the eventually utilized interventions. Surprisingly, the number of hours used is by far lower than the assigned amount of support. Various reasons lead to a gap between recommended and utilized early interventions.

Morning poster session F | 10:15 – 10:30 a.m. | Poster #16

Assessment of structural similarity in the developing social brain network of mother-child dyads

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Background: Socioemotional skills are crucial for everyday functioning, one's own well-being and that of others. Such skills are supported by brain regions commonly referred to as the social brain network (e.g., temporoparietal junction, precuneus, superior temporal sulcus and prefrontal cortex). Parent-child relationships play a pivotal role in the development of social behavior, brain structure and functioning. The

behavioral coherence between caregivers and children has been suggested to be reflected through biological caregiver-child similarity, including structural brain similarity of the social brain network. Our aim is to assess intergenerational transmission effects in mother-child dyads on the developing social brain.

Methods: 33 dyads (27 mothers; 31-50 years and 33 children; 7-13 years; 18 girls) underwent standardized testing and magnetic resonance imaging. Structural T1-weighted MPRAGE data was preprocessed and analyzed using the computational anatomy toolbox running in SPM. Standard preprocessing included segmentation and Gaussian smoothing. Using the marsbar toolbox, gray matter volume indices were extracted for frontal (i.e., prefrontal cortex) and posterior (i.e., temporoparietal, precuneus and superior temporal sulcus) brain regions.

Results: Preliminary analyses indicate similarity in the social brain network of mother-child dyads. Concordance was greater for posterior as compared to frontal brain regions, which conforms with studies indicating a shift in specialization from posterior to frontal areas across development.

Conclusion: Investigating the transmission of biological (i.e., brain structure) and behavioral (i.e., clinical and behavioral testing) variables within caregiver-child dyads may hold the potential to further understanding of the mechanisms underlying genetic and/or environmental impacts on the developing social brain.

Morning poster session F | 10:45 – 11:00 a.m. | Poster #17

Early-Childhood Special Needs Education (ESNE) - and what remains of it? Parental estimations about strengthening their parental competences during Early-Childhood Special Needs Education

Raphaela Iffländer

Universitäts-Kinderspital Zürich, Switzerland

The Early-Childhood Special Needs Education (ESNE, dt. Heilpädagogische Früherziehung HFE) is a family centered measure, which does not only focus on the child and its special needs, but also on the parents and the entire family.

Therefore, the ongoing PhD project wants to investigate, whether and in which aspects parents are benefiting from the specific support given by the ESNE professional.

Based on the concept of parental competences and the parents' faith in their parenting skills, the project focuses on the following research questions:

Did the parents benefit from ESNE regarding their parental competences? And if so, in which domains (e.g. promotion of the child, links to institutions / services, participation in society)? And moreover, are those outcomes sustainable? Can working with parents during ESNE medium-/long-term strengthen the competences and the perceived self-efficacy of the parents?

In order to answer these questions as diversely as possible, a quantitative survey was conducted in spring 2019, which included all families that had terminated ESNE one year before in the canton of Zurich (n=470 families, complete survey). Subsequently, some families were selected for an additional qualitative interview (n=24), to gain a deeper understanding of the family's specific situation and experiences.

The goal of the analysis is to examine how parents estimate the helpfulness of the ESNE services in general and if these estimations differ between different subgroups. The results will greatly help to increase knowledge about the parents' specific needs and moreover, they will reveal approaches to the improvement of work with parents within the framework of ESNE, thus improving the development of the children by improving their developmental environment.

The PhD project is funded by the SNSF and part of the national research program 74 «Smarter Health Care».

Morning poster session F | 10:45 – 11:00 a.m. | Poster #18

Impact of Coronavirus-Related Lockdown on Screen Use and Vocabulary in Children Aged 12-to-30 Months

[Nevena Dimitrova](#), [Sandra Pache](#)

[Haute Ecole de Travail Social de Lausanne, Switzerland](#)

The coronavirus lockdown had a direct impact on individuals, including very young children. Given the restrictions on the everyday activities of toddlers, we asked whether the lockdown changed their screen use and whether screen use influenced their expressive vocabulary.

400 parents of children (52% girls) aged either 12-17 months, 18-23 months or 24-30 months completed an online survey about demographics, child activities, screen use, and child expressive vocabulary (MCDI). Results indicate that 66% of children use screens, with 41% of 12-17 month-olds, 64% of 18-23 month-olds and 81% of 24-30 month-olds using screens, $\chi^2(2)=42.610$, $p=.000$. Lockdown increased screen use, with more children using screens ($ps>.001$), more screens being used ($Z=-7.385$, $p>.001$) and screens being used more often during lockdown compared to in general ($Z=-6.475$, $p>.001$). Screen use did not negatively affect expressive vocabulary, $U=13845.00$, $p=.458$; it actually, affected it positively for 12-17 month-olds, $U=472,500$, $p=.002$. Such positive effect is likely due to the fact that young children are generally accompanied by a parent during screen use (92%). Importantly, children of parents who adopt co-viewing strategies (name, point, ask) show higher expressive vocabulary scores than children whose parents do not ($ps>.05$).

Despite the fact that screen use starts from very early on and that it has intensified during the coronavirus-related lockdown, it does not show the negative effect on toddlers' vocabulary that parents are typically concerned about. Instead, findings are discussed in light of the various strategies parents can adopt in order to turn toddlers' screen use into learning opportunities.

Oral Session I | 11:15 – 11:30 a.m.

Inclusive early childhood education and care: Attitudes, self-efficacy and behavioral intentions of caregivers

Simone Schaub, Matthias Lütolf

University of Applied Sciences in Special Needs Education, Switzerland

Children with disabilities are increasingly being included into public Swiss daycare facilities. Attitudes and self-efficacy expectations of caregivers contribute substantially to the effective implementation of inclusive practices. In the study, 329 caregivers completed a questionnaire on their attitudes towards inclusion (i.e., cognitive, affective, behavioral), their self-efficacy towards inclusive care, and their behavioral intentions to include children with disabilities. Age, gender, professional function, professional experience in general and in inclusive care, as well as private experience with people with disabilities were recorded as personal characteristics. Preliminary regression analyses show that experience in inclusive care is associated with more positive attitudes and higher self-efficacy. Caregivers in leading positions and qualified caregivers expressed more positive affective attitudes than caregivers without qualification. Finally, more positive behavioral attitudes and higher self-efficacy both increased the behavioral intention to include children with disabilities. In addition, private experience with people with disabilities proved to be the only significant predictor of behavioral intention. Results will be discussed in relation to current developments in inclusive early childhood education and care.

Oral Session II | 11:30am - 11:45 a.m.

Language acquisition in time of Covid-19 – a multi-site, multi-country, multi-language study

Julien Mayor, Natalia Kartushina

University of Oslo, Norway

In an attempt to contain the Covid-19 pandemic, kindergartens closed nation-widely across the globe. In the current, preregistered, longitudinal study, we evaluate the consequences of home-“schooling” on language acquisition in 8-36-month-old children. In particular, we aim to assess home activities and infant-parent interactions during confinement, and their role in early vocabulary development.

We hypothesized that vocabulary gains during confinement would be modulated by (a) differences in SES, as low-SES families might provide their children with a learning environment less conducive to rapid increases in vocabulary size (Kelly et al., 2011, Melhuish et al., 2008), and (b) activities that parents engage in with their children during confinement; positive effects of shared book reading and structured parent-infant interactions, and negative effects of screen exposure (O'Farrelly et al., 2018; Sénéchal & Young, 2008).

To test these hypotheses, we contacted parents of young children via social media and participants databases and asked them to fill in Communicative Development Inventories (CDI) early (T1) and towards the end (T2) of the confinement period, supplemented with questions about daily routines during confinement.

Preliminary results on data collected in Norway (n=192) confirmed our hypotheses that book reading predicts larger increases in vocabulary (in production) and that tablet-based games correlate negatively with vocabulary gains (in comprehension). While our initial analyses did not find any impact of SES, free play appeared to contribute positively to vocabulary in both comprehension and production.

In parallel, data collection is on-going across a dozen countries with over 4000 children contributing to data at T1.

Oral Session III | 11:45 - 12:00 a.m.

Early identification of children with developmental delays

Martin Moser, Michael von Rhein, Corina Müllner, Patricia Ferro, Oskar Jenni
University Children's Hospital Zurich, Switzerland

The early identification of children (age 0-4) with developmental delays (DD) is one of the main goals in well-child visits. It allows for early intervention with the chance of improvements with sustainable effects. In the Canton of Zurich two centrally organised Units of Special Needs Education (USNE) coordinate all registrations and evaluate the early intervention demands of all children before Kindergarten. While in theory everybody can assign children with suspected DD to the service, children are mostly referred by primary care providers (primary care paediatricians (PCP) and general practitioners (GP)) in private praxis. It is unknown how self-confident primary care providers are to identify children with special education needs and how familiar they are with the new USNE.

Our online survey included 129 (59.2%) of all PCPs and 142 (11.3%) of all GPs in the Canton of Zurich (representing 17.8% of the Swiss population).

The vast majority of children (98.6%) with DD is being referred to the USNEs by PCPs and only 1.4% by GPs while GPs perform 13.4% of all preschool well-child visits. The self-rated confident level to identify DD such as mental retardation or speech retardation differs between the primary care providers. PCPs feel more secure over the GPs and an additional board certification increases the effect. In the subgroup of paediatricians, the self-confident level is dependent on the number of well-child visits per week and the years of experience as a primary care provider. In contrast, these effects could not be shown for the diagnosis of autism spectrum disorder. The above-mentioned factors are also associated with an increased awareness level of the USNE.

Primary care providers have a central role in identifying children with DD and referring them to early intervention. However, ongoing education is essential to improve the awareness level for DD and its intervention possibilities, especially for new and foreign primary care providers.

Oral Session IV | 12:00 - 12:15 p.m.

Effects of Feedback on Kindergartners' Self-Monitoring and Self-Rewarding

Mariëtte H van Loon, Claudia M Roebbers
University of Bern, Switzerland

Young children have problems accurately monitoring their performance; they are typically overconfident and not aware of errors. This is disadvantageous for their learning. The present study aimed to investigate whether two types of feedback, performance feedback and metacognitive feedback, may be suitable to improve kindergartners' monitoring accuracy and self-rewards. Kindergartners ($n = 105$, mean age 5.8 years) completed six analogical reasoning tasks, made monitoring judgments (indicating for each item whether they thought their response was correct or incorrect), and then gave themselves reward points for each completed task (indicating how many gold coins they deserved for their performance). Children were randomly assigned to performance feedback (PF - i.e., receiving feedback on the correctness of the test response), calibration feedback (CF - i.e., receiving feedback on the correctness of the test response and on their monitoring judgment), and no-feedback (NF) groups. Results show that kindergartners were overconfident, and did not recognize most of their errors. Importantly, feedback improved self-monitoring and self-reward judgments in comparison to the NF control group. The children who received PF or CF were

better able to recognize their errors, and PF was most effective to improve kindergartners' self-rewarding. Findings indicate that feedback, and especially PF can improve monitoring accuracy, error detection, and realism of self-rewarding in the pre-school context.

Oral Session V | 12:15 - 12:30 p.m.

The Lausanne Infant Crying Stress Paradigm: Development and Validation of an Early Postpartum Stress Paradigm within Birth-Related Traumatized vs Non-Traumatized Women

[Vania Sandoz](#)¹, [Suzannah Stuijzand](#)¹, [Nadine Messerli-Bürge](#)², [Camille Deforges](#)¹, [Magali Quillet Diop](#)¹, [Ulrike Ehler](#)³, [Marius Rubo](#)², [Antje Horsch](#)^{1,4}

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Evidence suggests that maternal biological changes due to a traumatic event (e.g., childbirth) could be intergenerationally transmitted via early postnatal care and negatively impact child developmental and biological outcomes. Maternal stress physiological mechanisms in the days following childbirth are under-researched despite their potential clinical implications for mothers and children. To our knowledge, no validated stress induction protocol exists for this population. This study aims: 1. to validate the Lausanne Infant Crying Stress Paradigm (LICSP) as an induction protocol of moderate psychological stress in non-traumatized women following CB (≤ 5 days); 2. to assess whether their stress responses differ from women reporting to be traumatized following CB. An a priori power analysis estimated a sample size of $n=20$ per group to have 80% power to detect a between-group difference. Participants were allocated to the non-traumatized ($n=28$) or traumatized group ($n=24$) based on PTSD criteria A of the Diagnostic and Statistical Manual of Mental Disorder, 5th edition. Maternal stress reactivity was measured with pre- and post-stressor salivary cortisol samples, and with heart rate variability and a subjective stress perception at rest, under stress and during recovery. Data analysis is currently ongoing. Findings of this study could support the validity of the LICSP as an efficient stress induction in women who recently gave birth. Furthermore, this could lead to a better understanding of physiological mechanisms occurring shortly after birth in women at risk of posttraumatic stress disorder following childbirth and form the base for the development of early interventions for this population.

Afternoon poster session A | 3:00 - 3:15 p.m. | Poster #19

Can children improve their attention skills in multisensory environments during a single session?

[Cristina Simon-Martinez](#)^{1,2}, [Nora Turoman](#)^{1,2}, [Lora Fanda](#)^{1,2,3}, [Pawel J. Matusz](#)^{1,2,4}

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Tasks designed to study adult attention skills have helped clarify the development of such skills in childhood. We recently demonstrated how children develop goal-based visual and stimulus-driven multisensory attention. Here, we tested whether children improve these attention skills within a single testing session, and whether this depended on age.

Ninety-two children [5y (n=28, M± SDage 5y±3m, 13 females), 7y (n=38, M± SDage 6y10m±4m, 18 females) and 9y (n=26, M± SDage 8y9m±5m, 16 females)] searched for colour-defined targets preceded by colour and colour-sound distractors during a task including 8 blocks of 64 trials. Attention capture effects (faster responses when distractors and targets shared their location) measured how attention was enhanced by visual goal-based attention (stronger for colour-matching than non-matching stimuli) and multisensory attention (stronger for audiovisual than visual stimuli). We also computed accuracy and reaction times. To investigate how attention fluctuates during the session, we extracted the data iteratively per additional block, and analysed them using block*age mixed ANOVAs.

Visual and multisensory attention markers trended towards stabilisation after the 2nd/3rd block, but the ANOVAs did not support these observations, in any age group or when analysed together. 5y-children decreased their accuracy after the 3rd block ($p < 0.01$), although not at the expense of reaction times. 9y-children gradually increased their accuracy scores ($p = 0.04$), whilst 7y-children remained stable ($p = 0.24$). Overall, no child group statistically improved their attention skills within a single session, while the youngest group's concentration decreased halfway. More sensitive statistical methods (i.e. growth models) may detect improvements in attention skills.

Afternoon poster session A | 3:15 - 3:30 p.m. | Poster #20

Mental imagery in children with and without ADHD

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As we communicate, navigate and problem-solve our way through life, we are constantly generating and manipulating mental representations. Mental imagery (MI) involves the generation of visual images, in the absence of sensory input, which we can attend to and manipulate at will in working memory (WM). Neural and behavioural evidence in the adult literature suggests MI and WM are closely related. However, a recent study of MI development indicated that only specific components of MI and WM were positively associated, namely, transformation of representations but not generation and maintenance of visual images. Studying the development of MI using a separable-component model, measuring Image Generation, Image Maintenance, Mental Rotation and Image Scanning, alongside WM can provide insight into the function and format of children's thinking and has implications for strategies in learning. Children with attention-deficit/hyperactivity disorder (ADHD) have been characterised as possessing a WM impairment, as well as sustained attention difficulties. Despite this, research is yet to investigate MI in ADHD. This study employs

a case-control design to investigate differences in MI and WM abilities between children with ADHD (age 8-16 years, anticipated N=30) and typically developing children (age 6-11 years, N=73). Data collection will be completed by October 2020. This research will further elucidate the relationship between MI, WM and attention in typical and atypical development.

Afternoon poster session A | 3:30 - 3:45 p.m. | Poster #21

Communicative Participation during Shared Reading in Kindergarten

Johanna Quiring

St.Gallen University of Teacher Education (PHSG), Switzerland

Worldwide research indicates that shared reading has substantial effects on various emerging language skills (e.g. Whitehurst et al., 1988; Flack, Field & Horst, 2018) and is therefore considered to be a valuable pedagogical setting in early childhood education. This study explores interactional patterns during shared reading sessions with small groups of children to answer the question how teachers can enable all children to participate in conversations and experience themselves as valued interlocutors.

The data for this research project is derived from a larger quasi-experimental intervention study and consists of several videotaped shared reading sessions from kindergartens in the Lake of Constance region. The professionals have been asked to read a picture book to a small group of children. Conversation analysis (Deppermann, 2017) serves as methodological approach to analyse specific conversational phenomena such as “turn-taking” (Sacks, Schegloff, & Jefferson, 1974). The socio-philosophical theory of recognition (Honneth, 2016) and its adaptations for education (e.g. Schäfer & Thompson, 2010) serve as concept for the evaluation of certain practices.

First analyses indicate that depending on the interactional style of the teacher, shared reading sessions allow for interactions that come closer to natural conversations than typical teacher centred interactions in classrooms where the pattern of “question – answer – evaluation” prevails (Mehan, 1979). Children select themselves as next speaker, ask questions themselves and address each other directly. Further analyses will provide more insight into how teachers follow the natural course of a discussion while ensuring that all children have the opportunity to participate (Waring, 2017).

Afternoon poster session B | 3:00 - 3:15 p.m. | Poster #22

Do children spontaneously use attentional refreshing to maintain information in working memory?

Evie Vergauwe, Vincent Besch, Caren Latrèche, Naomi Langerock

University of Geneva, Switzerland

The capacity of working memory is limited and undergoes important developmental changes during childhood. One proposed reason for the expansion of working memory capacity during childhood is the emergence and increased efficiency of active maintenance mechanisms, such as that of refreshing. Refreshing is a proposed mechanism to keep information active in working memory by bringing memory items back into the focus of attention. One prevalent view is that the spontaneous use of refreshing emerges around the age of 7, and becomes more efficient during middle childhood and beyond. Using a novel approach to examine refreshing in children in Experiment 1, we show, against common conceptions, that simply giving free time in a basic working memory task does not lead to spontaneous refreshing in 9 to 12 year old children. Instead, their focus of attention appears to linger on the last-presented memory item, even when ample time for refreshing is provided. Experimentally imposing the use of refreshing in Experiment 2,

however, showed that children in this age range are able to switch their focus of attention away from the last-presented item in order to switch to another memory item. Thus, the current study uncovers that children in middle childhood do not always spontaneously switch attention away from the last-presented memory item to refresh the entire list, even though they are able to switch attention away from the last-presented memory item when instructed to do so.

Afternoon poster session B | 3:15 - 3:30 p.m. | Poster #23

The development of oral text abilities: Validation of a new measurement tool

Judith Maier

Thurgau University of Teacher Education, Switzerland

Background: Challenging communicative tasks such as relating experiences, telling stories, and explaining knowledge are essential in classroom communication and crucial for academic success. Kindergarten classrooms can provide opportunities for children to successfully acquire these oral text abilities. Some intervention studies have demonstrated positive effects of language promotion on children's language skills. These results still have to be confirmed for children's higher order text abilities. For this purpose, an appropriate measurement instrument is required. Therefore, a new instrument was designed and tested on 109 children in the pilot study (Isler, Hefti, Kirchhofer & Dinkelmann, 2018). Further validation of this new instrument with a larger sample size is necessary.

Method: Data is collected from 270 children in the first year of kindergarten participating in the ongoing intervention study «Promoting oral texts in kindergarten classrooms». During the test, the children are shown a video cartoon and asked to retell the story. The oral texts obtained from the children are rated using a low-inferential procedure. A confirmatory factor analysis is then conducted. Additionally, the influence of the child's age on their result is checked along with the following variables: gender, foreign language and special educational support measures.

Current state of the research: The data collection has been completed. The oral texts are currently being rated. The statistical calculations will be conducted in June. Therefore, the results and conclusions will be available in November.

Afternoon poster session B | 3:30 - 3:45 p.m. | Poster #24

Do children rely on domain-general or domain-specific resources when multi-tasking?

Naomi Langerock, Isabele Jacot de Alcantara, Lolita Monnet, Evie Vergauwe

University of Geneva, Switzerland

Background: When children perform complex tasks in daily life, do they rely purely on domain-specific resources, purely on a pool of domain-general resources, or rather on a combination of both? We tested this question in a working memory context.

Method: A sample of 123 10-year old children performed one out of four complex span task. These four versions of the complex span task were created by combining verbal or spatial maintenance with a verbal or spatial processing task. This led to two complex span tasks with maintenance and processing belonging to the same domain, and two between-domain task. A comparison of these different crossings allowed testing the involvement of both the verbal and the spatial domain-specific resources. The cognitive load of the processing task was manipulated, allowing to test the involvement of domain-general resources.

Results: We found evidence for the involvement of domain-general resources as well as some evidence for the involvement of domain-specific verbal and spatial resources.

Discussion: The obtained pattern differs from what has been observed for adults. Vergauwe et al. (2010) had observed domain-general resources supplemented only by verbal domain-specific resources, when using this same kind of methodology in an adult population. According to the present study, children seem to rely more than adults on spatial domain-specific resources, yet less on verbal domain-specific resources.

Afternoon poster session C | 3:00 - 3:15 p.m. | Poster #25

Cognition, Psychosocial Functioning, and Health-related Quality of Life among Childhood Cancer Survivors

[Valerie Siegwart](#)¹, [Valentin Benzing](#)^{2,3}, [Janine Spitzhuettl](#)^{1,2,4}, [Mirko Schmidt](#)³, [Michael Grotzer](#)⁵, [Maja Steinlin](#)¹, [Kurt Leibundgut](#)², [Claudia Roebbers](#)⁴, [Regula Everts](#)^{1,2}

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Long-term sequelae of cancer and its treatment render childhood cancer (CC) survivors vulnerable to cognitive and behavioral difficulties and likely affect their quality of life (QoL). We adopted a holistic approach and investigated the relationship between cognition, psychosocial functioning, and health-related QoL of CC survivors in a cross-sectional study design. Special attention was paid to executive functions, which are crucial to cognitive development and academic achievement and tend to be impaired in survivors. Seventy-eight CC survivors (age range = 7–16 years, ≥ one year since cancer treatment) and 56 healthy controls were included. Cognition, psychosocial functioning, and health-related QoL were assessed using standardized tests and questionnaires. The cognitive performance, parent-reported psychosocial behavior, and health-related QoL of the CC survivors were within the normative range. However, working memory was significantly poorer in survivors than controls, and visuospatial working memory impairment was more commonly observed among survivors than among controls. Processing speed significantly predicted survivors' performance in executive functions. Among survivors, peer problems were significantly associated with cognitive functions and health-related QoL. Despite the evidence for good intellectual functioning, which might point towards adequate reserves, in some survivors, domain-specific impairments may emerge years after cancer relating to psychosocial development and QoL.

Afternoon poster session C | 3:15 - 3:30 p.m. | Poster #26

Long-term ECG measurement on the effect of young children's digital media consumption on psychological and physiological parameters

[Karoline Rettenbacher](#)¹, [Marina Eglmaier](#)³, [Lars Eichen](#)¹, [Sigrid Wimmer](#)³, [Christian Rominger](#)², [Helmut Karl Lackner](#)², [Manuela Paechter](#)³, [Catherine Walter-Laager](#)¹

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The use of digital media by young children is currently critically discussed. An early use, especially of smartphones and tablets, is assumed to have negative effects on children's health and sleep, but also on

language development, learning and the ability to concentrate. Up until now research has paid little attention to whether digital media use harms children's development or whether it bears potential (Anderson et al., 2017; Galetzka, 2017). The research project "Young children in the digital world" (KiddiW) investigates the influence of different types of apps on a tablet in comparison to other play activities, on the short-term stress and recovery of young children. 69 families with young children aged 16 to 43 months filled out a questionnaire about their type and extent of digital media use at home. The activation of the children in different everyday-life situations and during an experimental parent-child play situation (while playing with two apps on the tablet, which differed in the intensity of the audio-visual stimulation, reading a picture book, and during a motoric game) was measured via long-term ECG-recording (approx. 30 hours). Based on the collected data, conclusions about immediate reactions in the different settings and whether the children's ability to recover during the night is related to their media use, are possible. The collection of cardiac parameters and their valid assessment in young children represents an innovative measurement approach, which shows promise due to the limited possibilities of self-reported access to children's sensations and experiences.

Afternoon poster session C | 3:30 - 3:45 p.m. | Poster #27

Parental Smartphone Use and Child Development: First findings of the SMARTIES study

[Eva Unternaehrer](#), [Carla Holzapfel](#), [Alex Traut](#), [Linda Kersten](#), [Christina Stadler](#)
[Psychiatric University Hospitals Basel \(UPK\), Switzerland](#)

Aims: To investigate the association between parental smartphone use and child behavioral problems; and to examine the role of socio-emotional development in this association.

Methods: We are conducting an online survey including German-speaking parents with children aged 3-16 years. Parental smartphone usage behavior is assessed through the Problematic Mobile Phone Use Scale (PMPUS) and the Generic Scale of Phubbing (GSP, adapted version for parental phubbing). Child developmental outcomes are measured using the Strength and Difficulties Questionnaire (SDQ) and the Behavioral Scales for the Kindergarten Age (VSK, Verhaltensskalen für das Kindergartenalter).

Results: First, we will use appropriate regression models to examine whether parental smartphone use predicts total and subscale scores on the SDQ. Second, we will use bootstrapped parallel mediation models to examine the VSK subscales for emotion dysregulation, self-regulation, empathy, and social competencies as potential mediators in the association between parental smartphone use (PMPUS, GSP) and SDQ scores.

Discussion: The findings of this study will not only indicate if, but also how, parental smartphone use might affect child behavioral outcomes.

Afternoon poster session D | 3:00 - 3:15 p.m. | Poster #28

What Role Do Parents' and Children's Gestures Play in Vocabulary Skills of Typically Developing Children and of Children with Autism Spectrum Disorder?

[Sandra Pache](#)¹, [Francesca Martinelli](#)¹, [Nevena Dimitrova](#)²
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Both children's own gestures as well as parental gestures are important for language development in both typically developing children (TD) and in children with autism spectrum disorder (ASD). In this study, we

examine whether parental gesture production has a direct influence on children's expressive vocabulary and whether children's own gesture production might be mediating this link.

Participants included 41 TD children and 35 ASD children (mean age : 42 and 79 months, respectively). Gestures were coded during 10min parent-child play according to type (deictic, conventional, representational, give) and gesture-speech combination type (reinforcing, disambiguating, supplementary, gesture-vocalization). Expressive vocabulary was assessed with the Expressive Vocabulary Test.

Results indicate that expressive vocabulary of ASD—but not TD—children correlated positively with child production of reinforcing and disambiguating gesture-speech combinations ($p < .05$). Parental production of total and deictic gestures and of reinforcing and supplementary combinations correlated positively ($p < .05$) with expressive vocabulary of TD children, but not of children with ASD. Mediation analysis revealed that child gestures coupled with vocalizations mediate negatively the link between parental gestures and child's vocabulary in TD children, indicating that the more the parents produce such gesture-speech combinations, the more children will do ($p < .01$), leading to a poorer child vocabulary ($p < .05$).

Results are discussed according to the difference of importance of children's own gesture production vs. parental gesture production to the development of language abilities in TD children vs. in children with ASD.

Afternoon poster session D | 3:15 - 3:30 p.m. | Poster #29

The role of digital media in early childhood development. A systematic literature review.

[Valérie Brauchli](#), [Fabio Sticca](#), [Naomi Gnägi](#), [Patricia Lannen](#)
[Marie Meierhofer](#) Institut für das Kind, Switzerland

Digital media devices are becoming increasingly accessible and pervade many aspects of our lives, including those of young children. Most research on the effects of digital media on child development has focused on examining the effects of television viewing on language acquisition, cognition, and motor skills. However, few studies have addressed the influences of modern and portable digital media, despite the fact that technological development has opened up new possibilities that go far beyond passive, socially isolated television viewing. Hence, it cannot be assumed that modern digital media are to be equated with findings from previous research. Furthermore, data on the impact of exposure to digital media on the development of young children under three years of age is especially scarce, even though it has been shown that the early years are relevant for the individual's development across the life span given that rapid and crucial neuronal development takes place during this time. The available evidence-base on the topic is evolving rapidly and yet no systematic literature review exists. Thus, the aim of this work is to develop a systematic literature review on (1) the influences of the use of digital media on different outcomes related to young children's development and (2) the role of individual and contextual moderator variables. Ten large databases were systematically searched and a total of 49 relevant studies were identified. The results of the literature review will be presented and discussed in terms of knowledge gaps that need to be addressed in future research.

Afternoon poster session D | 3:30 - 3:45 p.m. | Poster #30

Influence of age at pediatric arterial ischemic stroke on verbal and visual episodic memory performance

[Jasmin Grolimund](#)¹, [Qendresa Thaqi](#)^{1,2}, [Maja Steinlin](#)¹, [Sebastian Grunt](#)¹, [Regula Everts](#)¹

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Age is - among others - a critical variable when defining the degree of plasticity of the child's brain, although the relationship is not simple in nature. To disentangle the impact of age at onset of focal brain lesion on

episodic memory functions, three mnemonic processes, namely learning, retrieval, and recognition were investigated in the verbal and visual modality in fifty-four patients after arterial ischemic stroke (AIS) and 50 healthy controls comparable for age and sex (aged between 5-25 years). Patients suffered either from neonatal stroke (0-28 days; n=16), early childhood stroke (29 days-5 years; n=22) or late childhood stroke (6-15.6 years; n=16). Intelligence (IQ), verbal and visual episodic memory processes (learning, retrieval and recognition) were assessed using standardized neuropsychological tests.

Measures of IQ ($p=.003$), verbal learning ($p=.001$), visual learning ($p=.000$) and verbal retrieval ($p=.003$) were significantly worse in patients than controls. Memory performance differed according to the age at AIS. Early childhood AIS entailed significantly worse memory performance than neonatal or late childhood AIS (visual learning $p=.036$; visual retrieval $p=.001$; visual recognition $p=.006$; verbal learning $p = .007$). Age at assessment, left-hemisphere lesion and IQ had the power to predicted memory performance significantly, whereas lesion size was no significant factor in the regression analysis.

Age at stroke crucially determines memory performance, with early childhood stroke having the highest impact on memory outcome in the long-term, in particular in the visual modality. Whether age at stroke impacts on later maturing cognitive functions differentially, remains to be determined.

Afternoon poster session E | 3:00 - 3:15 p.m. | Poster #31

The consequences of instructed refreshing on memory performance in children

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Refreshing is assumed to be an attention-based, domain-general maintenance mechanism in working memory, which improves the accessibility of mental representations. Although it is thought to be crucial for the maintenance of mental representations and memory performance, at present there is no agreement on its development throughout the childhood.

This preregistered study used an instructed refreshing paradigm to disentangle whether children aged 7 and 11 years old can perform the cognitive processes which underlie successful refreshing. In particular, the task included conditions with one or two sequential retro-cues, aiming to test whether children can, respectively, (1) focus their attention on a mental representation, and (2) switch attention between the representations.

Preliminary results suggest that children in both age groups can focus attention on a memory item, as reflected in the beneficial effect of a single retro-cue, but that they experience difficulties in switching attention between representations. Therefore, it seems that the mechanism of refreshing is not fully developed until 11 years old.

Afternoon poster session E | 3:15 - 3:30 p.m. | Poster #32

Collective learning at the beginning of schooling HarmoS: the example of collective learning on the entry into the written word

[Gabriel Kappeler](#), [Béatrice Maire Sardi](#), [Anne Clerc Georgy](#)
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In many contexts, playtime and collective learning are disappearing from our preschool classrooms. The child's development requires a change from spontaneous learning, in which the child follows his or her own curriculum, to reactive learning, in which the child pursues a specific teaching goal (Vygostki, 1935/1995). In learning collectives, pupils negotiate, share and create a common culture with their peers and their teacher (Bruner, 1986; Vygotsky, 1934/1985). Corsaro (1994) refers to interpretive production because children do not simply and individually integrate adult culture, but integrate it through interactions with adults and creative productions with their peers. During these collectives, the pupils are led to develop their skills as learners in a participative structure and to acquire the contents of the lesson (Amigues & Zerbato-Poudou, 2000). The aim of this paper is to understand how pupils appropriate and interpret the psychological tools specific to the functioning of the structure of the collective learning when entering the world of writing.

This research is based on a corpus of 21 sessions of approximately 20 minutes each, filmed during the 2016-2017 school year. Twice a week, the pupils were brought together to read a "message of the day" with the support of the group of pupils and the guidance of the teacher. The group of 11 pupils were in 2nd HarmoS and had an average age of 5.5 years.

Our analyses are based on the intersection of three theoretical models. Indeed, the first model is the dialogical analysis model of Muhonen et al. (2016) which makes possible to describe the movement of interactions by differentiating episodes initiated by the teacher from those initiated by the pupils, the Mercer model (2013) relating to the development of collective reasoning, and finally, the teacher's discourse taken from the model of Van der Veen et al. (2017) allows us to understand the teacher's contribution during this collective learning process.

Afternoon poster session E | 3:30 - 3:45 p.m. | Poster #33

Dialect and Standard German in Kindergarten

[Franziska Vogt](#)¹, [Johanna Quiring](#)¹, [Cordula Löffler](#)², [Andrea Haid](#)³, [Alexandra Zaugg](#)⁴, [Eva Frick](#)⁵, [Mirja Bohner-Kraus](#)³, [Oscar Eckardt](#)⁴, [Laura von Albedyll](#)², [Alexandra Waibel](#)¹, [Martina Zumtobel](#)⁵

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Policy makers suggested using standard German at school more consequently (EDK 2003). At the same time, political initiatives were launched to strengthen the use of dialect in kindergarten as part of the regional identity. At present, policies on the use of dialect and standard German in kindergarten vary from canton to canton, with some cantons legislating on dialect, others recommending certain practices regarding the two varieties.

To gain empirical insight into how dialect and standard German are used and whether this affects children's writing skills, data was collected in 42 Swiss kindergartens and further kindergartens in the neighbouring German speaking countries. Based on protocols of two full mornings of kindergarten activity in the Swiss kindergartens, the use of dialect and standard German per teacher was calculated, resulting in a percentage share. In all kindergartens, the children attending the last year of kindergarten before entering school were tested regarding the precursory literacy skills (Jansen 2002) and their writing skills (May 2013) as a baseline, and measured again at the end of kindergarten and the end of first grade.

Results show that teachers use of dialect varies (9-100%) but overall, dialect is predominantly used (M = 79%) in Swiss kindergartens. In regions with legislation on the exclusive use of dialect, teachers tend to speak more dialect. Teachers of classes with more children with German as their second or third language tend to speak more standard German. Overall, the use of either variety does not affect writing skills.

Oral Session VI | 3:45 - 4:00 p.m.

Involving multilingual children in sustained shared thinking interactions in kindergarten

Alexandra Waibel

Pädagogische Hochschule St.Gallen, Switzerland

Sustained shared thinking has proven to be a key quality feature of excellent practice in early childhood institutions (Siraj-Blatchford et al. 2002). Studies coincide that shared thinking processes are observed rarely (Wirts et al. 2017; Hopf 2012) and studied mostly as dyadic interactions between educator and child (Siraj-Blatchford 2009). However, interactions in kindergarten occur in group settings as well. Children with lower language competences receive less cognitive stimulation although content-related impulses and shared thinking processes are beneficial (Darsow et al. 2012). The present study aims to investigate strategies how kindergarten teachers devise polyadic sustained shared thinking-interactions and focuses on the involvement of children who are second language learners.

An explorative methodological approach was chosen, using data from the international research project SpriKiDS (Vogt et al. 2019): videography of teacher-child-interactions, tests of kindergarten children on emergent literacy (BISC, Jansen 2002) and a survey of family language. By means of Linguistic Conversation Analysis (Brinker & Sager 2010) and Grounded Theory (Glaser & Strauss 2010) micro-processes in sustained shared thinking interactions were analysed involving 6 kindergarten teachers and groups of 2 to 4 children. First results indicate that responsiveness to the interest and imagination of children (Siraj, Kingston & Melhuish 2015) and shared attention seem to facilitate shared thinking processes as well as referring to children's life, supporting communication with facial expressions and gestures and switching between practical discussion and cognitive reflection. Strategies to involve multilingual children in sustained shared thinking interactions will be discussed with regard to possible implications for pedagogical practice.

Oral Session VII | 4:00 - 4:15 p.m

Association between basic motor competencies of 4-8-year olds and social relationships with classmates

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Motor competencies are a central developmental task in early childhood and necessary for the participation in the culture of sport and movement (Hulteen et al., 2018). Social interactions with peers are related to mental and physical health as well as successful learning processes. Studies showed that children with better motor competencies are more popular and better integrated than children with poorer motor competencies (Kauer & Roebbers, 2012).

The motor competencies "object-movement" and "self-movement" were assessed with the MOBAK-instrument (Herrmann et al., 2019). Perceived social relationships of the children were recorded via teachers' assessment by using the subscale "social inclusion" of the Perception of Inclusion questionnaire (PIQ) (Venetz et al., 2019). The data of N=701 kindergarten children ($M=64.6$ months, $SD=10.3$) and N=379 first graders ($M=83.6$ months, $SD=5.2$) was measured in the cantons of Ticino and Nidwalden in February/March 2020. Structural Equation Models were used to investigate latent correlations considering the covariates gender and age.

In kindergarten the latent correlations between social relationships and "object-movement" ($r=.24^{**}$) as well as "self-movement" ($r=.24^{**}$) were moderate, whereas the covariates sex ($\beta=.24^*$) and age ($\beta=.14^*$) also have an influence on social relationships ($CFI=.97$; $RMSEA=.037$). In first grade the latent correlations between social relationships and "object-movement" ($r=.28^{**}$) resp. "self-movement" ($r=.26^{**}$) were

moderate, whereas only the covariate age ($\beta = -.10^*$) shows a significant correlation with social relationships ($CFI = .91$; $RMSEA = .029$).

In accordance with previous results moderate associations between measured motor competencies and social integration were found. Children with well-developed motor competencies seem to be better integrated socially. This finding is relevant both from a developmental and a health-oriented perspective.

Oral Session VIII | 4:15 - 4:30 p.m

The Impact of Social Pretend Play on Pre-schooler's Social Development: A Randomized Controlled Intervention Study

[Sonja Perren¹](#), [Isabelle Kalkusch¹](#), [Ann-Kathrin Jaggy¹](#), [Barbara Weiss¹](#), [Carine Burkhardt Bossi¹](#), [Fabio Sticca²](#)

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Social pretend play occurs early in young children's life and is presumed to foster children's positive development. Empirical findings confirm associations between children's social pretend play and their social and social-cognitive skills. However, the causality of these associations and the mechanism of change is not clarified yet. The present intervention study addresses this fact by investigating whether promoting social pretend play increases pre-schooler's pretend play competence and thereby their social competence. For this purpose, 27 Swiss playgroups (N= 211 three- to four-year-olds) were randomly assigned to the intervention group (play tutoring), the material group (role play material) and the control group (treatment as usual). The interventions took place once a week over 6 consecutive weeks. Pre-tests, post-tests and a follow-up were made. Children's social pretend play competence was assessed with the Tools of the Play Test (ToPS; Seeger & Holodynski, 2016) and an educator questionnaire. Standardized tests were used to assess children's emotion comprehension (IDS-P; Grob et al., 2013) and their Theory of Mind (ToM-Scale; Wellman et al., 2012). Educators completed a questionnaire on children's social and emotional skills and positive peer relations (SOCOMP; Perren, 2008). Latent change models indicated that children's pretend play competence, social skills and positive peer relations as reported by their educators increased most strongly for those children receiving the play tutoring intervention. No significant intervention effects emerged regarding children's social-cognitive or social-emotional skills. The results suggest a causal relationship between social pretend play tutoring and children's social competence.

Oral Session IX | 4:30 - 4:45.p.m

Intergenerational effects on the neuronal characteristics of the reading network in mother-child dyads

[Lynn V. Fehlbauer¹](#), [Lien Peters²](#), [Réka Borbás¹](#), [Plamina Dimanova¹](#), [Margot Röell³](#), [Daniel Ansari²](#), [Nora M. Raschle¹](#)

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Background: The human brain is shaped by genetic and environmental influences, e.g., when learning to read. However, the precise dynamics of how genes and environment impact the brain are currently unclear. Using intergenerational neuroimaging methods, we will investigate structural neuronal characteristics of the reading network in mother-child dyads. More specifically, we will examine structural measures that predominantly develop 1) in utero (i.e., gyrification, sulcal morphology) or 2) during childhood/adolescence (i.e., gray matter volume, cortical thickness).

Method: To date, we have collected data of 70 children and their mothers (N=140) in Switzerland (N=35) and Canada (N=35). Data analysis will focus on the left occipitotemporal cortex, which has been associated with reading. Similarity between mothers and children in gray matter volume, cortical thickness and gyrification will be assessed using CAT12 and correlation coefficients. Similarity in sulcal morphology will be analyzed using BrainVISA and chi-square goodness-of-fit tests.

Results: Analyses will start after preregistration (e.g., osf.io/5wbvtv). We will present first findings on structural similarity between mothers and children. We expect neuronal similarity to depend on the type of structural brain measurement: Gyrification/sulcal characteristics, known to depend more on genetics, are hypothesized to show higher familial similarity, and gray matter volume/cortical thickness, known to change with experience, may show reduced familial similarity.

Discussion: Our work will inform about familial transfer effects on structural measures of the reading network, either predominantly developing in utero or after birth. This may help to disentangle genetic and environmental effects on explicit learning, e.g., when learning to read in school.

Oral Session X | 4:45 - 5:00 p.m.

Infant Welfare in Switzerland. A Discourse Analysis on Infant Mortality, Hospitalism and Early Intervention

[Maren Zeller](#), [Bettina Grubenmann](#)
[Fachhochschule Ost, Switzerland](#)

Based on a recently approved NF-research project on «Infant Welfare in Switzerland», this presentation will discuss initial aspects regarding the following question: What discourses have shaped “infant welfare” and how have they changed over the last hundred years? The study aims to reconstruct discourses around three major events such as infant mortality, hospitalism and early intervention programs. It focuses on three different Swiss regions (Geneva, St. Gallen, Ticino) to find out how discourses might have modified across the different language areas. As we are at the beginning of this research, we would like to first outline the main methodological assumptions of the planned study and secondly to discuss first key concepts of how the well-being and protection of infants and young children is addressed during the above mentioned time span and throughout different language areas.