

VNOP

VERENIGING VOOR NEDERLANDSE ONTWIKKELINGSPSYCHOLOGIE

Conference 2022 – Full program

Tuesday, May 24 & Wednesday, May 25

Academic Building, Utrecht

Welcome!

On behalf of the VNOP board, we welcome you to the 2022 VNOP conference organized by Utrecht University. We are delighted that we are able to once again meet in person and we very much look forward to seeing you at the Academy Building in downtown Utrecht.

Both the invited and submitted program are sure to provide a state-of-the art overview of the field of child development. We are pleased with both the number and quality of the symposia, flash talks, and posters that have been submitted. The teaching roundtable session provides a great opportunity to discuss and brainstorm about issues that many of us encounter in teaching and training our future child development professionals. The General Assembly meeting on Tuesday is an opportunity to hear about VNOP's plans for the future, and the Awards Ceremony on Wednesday allows us to recognize some outstanding contributions to the field. Aside from keeping up with the latest developments in the field, the conference is a great opportunity to network with colleagues from Belgium and the Netherlands on an informal basis. The coffee breaks, lunch and poster sessions are good opportunities to meet and mingle, as is the walking tour of the city center and dinner planned for Tuesday evening.

For the first time we will use a conference application (Sched). In this app you can find the full program of the conference and create your own personalized schedule. All attendees will receive an invitation to use the app by e-mail. You can access the program in your internet browser, but you can also download the Sched App from the Apple Store or Google Play (search within the app for: 'VNOP conference 2022'). We hope it is convenient for you!

We hope these next two days will spark your inspiration and enthusiasm for new developments in the field. We look forward to welcoming you in Utrecht.

The organizing committee,

Sheida Novin (chair)

Jan Boom

Judith Dubas

Stathis Grapsas

Liesbeth Hallers-Haalboom

Marissa Hofstee

Odilia Laceulle

Lisanne de Moor

Program at a glance

Tuesday May 24		Wednesday May 25	
9:00	Registration	Registration	9:00
9:15			9:15
9:30	Opening	Parallel sessions (symposia)	9:30
9:45	Keynote:		9:45
10:00	Maarten Vansteenkiste		10:00
10:15			10:15
10:30			10:30
10:45	GROUP PHOTO	BREAK	10:45
11:00	General Assembly VNOP	Parallel sessions (teaching roundtable, flash talks)	11:00
11:15			11:15
11:30			11:30
11:45	LUNCH		11:45
12:00		LUNCH	12:00
12:15			12:15
12:30			12:30
12:45	Parallel sessions (symposia)		12:45
13:00		Parallel sessions (flash talks)	13:00
13:15			13:15
13:30			13:30
13:45		BREAK	13:45
14:00	POSTERS & COFFEE	Parallel sessions (flash talks)	14:00
14:15			14:15
14:30			14:30
14:45		BREAK	14:45
15:00	Parallel sessions (symposia)	Keynote: Mariska Kret	15:00
15:15			15:15
15:30			15:30
15:45			15:45
16:00		Award Ceremony & Closing	16:00
16:15	BREAK		16:15
16:30	Keynote:		16:30
16:45	Marloes Kleinjan		
17:00			
17:15			
17:30	BREAK		
17:45	Walking Tour Utrecht		
18:00			
18:15			
18:30	Dinner at Humphrey's <i>Stadshuisbrug 3</i>		

Keynote speaker: Maarten Vansteenkiste

Tuesday 24 May, 9:45 – 10:45 hrs

Keynote title: Nourishing children's engagement and growth? The critical role of basic psychological needs and need-supportive socialization

Keynote abstract: At the heart of Self-Determination Theory is the claim that all people have basic psychological needs for autonomy, competence, and relatedness, the satisfaction of which is beneficial for children's psychological growth and the frustration of which increases risk for ill-being and maladjustment. In the present presentation, the key criteria to characterize basic needs are addressed, together with supportive diary, longitudinal, and experimental research in diverse age groups, some of which was collected as part of a large-scale population study across the pandemic (www.motivationbarometer.com). Although basic needs are presumed to play a universal critical role across different developmental phases and challenges, there is room for contextual variation in the support of basic needs by key socialization figures (i.e., parents, teachers). Indeed, there is not a one-size-fits-all approach to support individuals' psychological needs. Recent work grounded in a circumplex-based approach on need-supportive and need-thwarting contextual conditions, thereby providing a deeper insight in the dynamic interplay between autonomy support (relative to control) and structure (relative to chaos), shows that different (but not all) roads can lead to Rome. Accordingly, the provision of adequate need support becomes a matter of calibration and of tailoring support to individual differences and situational demands. Finally, apart from contextual support of basic needs, individuals can also get their basic needs met through need crafting. This promising line of correlational and intervention research on need crafting testifies to the pro-active and growth-oriented nature of the human organism.

About Maarten Vansteenkiste: Professor of developmental and motivational psychology at Ghent University.

Recent publications:

Vansteenkiste, M., Niemiec, C., & Soenens, B. (2010). The development of the five mini-theories of Self-Determination Theory: An historical overview, emerging trends, and future directions. In T. Urdan & S. Karabenick (Eds.). *Advances in Motivation and Achievement, vol. 16: The Decade Ahead*. Bingley, UK: Emerald Publishing.

Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration, 3*, 263-280.

Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020). Basic Psychological Need Theory: Trends, critical themes, and future directions. *Motivation and Emotion, 44*, 1-31.



Keynote speaker: Marloes Kleinjan

Tuesday 24 May, 16:30 – 17:30 hrs

Keynote title: What is needed to promote child and adolescent mental health?

Keynote abstract: The significance of child and adolescent mental health on conditions across the life course has become clear in the past few decades. Also, because of covid-19 the attention for mental health has increased and more resources are becoming available to invest in mental health promotion. For example, in the Netherlands, 'well-being and social-emotional development' have become a subject within the National Education Investment Programme and a National Prevention Deal on Mental Health is currently in the making. This is good news, because investing in mental health and the prevention of psychological problems can contribute to experiencing a good quality of life and strengthen the feeling of belonging, as well as the feeling of being able to participate in society. Moreover, it could lead to lower healthcare costs and lower risks of developing psychological disorders later in life. However, the question is whether we currently have the right building blocks and infrastructure in the Netherlands and internationally to be able to effectively focus on strengthening mental health and the prevention of psychological problems in youth. I believe there is still much to be gained here: the range of preventive interventions is fragmented; we still know too little about their effectiveness; interventions are often not well embedded; and there is no good infrastructure for sustainable implementation. In my talk I will discuss what I believe is necessary to improve prevention in the field of mental health.

About Marloes Kleinjan: Professor of Youth Mental Health Promotion at Utrecht University and head of the department of Child and Adolescent Mental health at the Trimbos Institute.

Recent publications:

Rombouts, M., Duinhof, E. L., Kleinjan, M., Kraiss, J. T., Shields-Zeeman, L., & Monshouwer, K. (2022). A school-based program to prevent depressive symptoms and strengthen well-being among pre-vocational students (Happy Lessons): protocol for a cluster randomized controlled trial and implementation study. *BMC Public Health*, 22(1), 1-12.

van Starrenburg, M. L., Kuijpers, R. C., Kleinjan, M., Hutschemaekers, G. J., & Engels, R. C. (2017). Effectiveness of a cognitive behavioral therapy-based indicated prevention program for children with elevated anxiety levels: A randomized controlled trial. *Prevention Science*, 18(1), 31-39.

Kindt, K., Kleinjan, M., Janssens, J. M., & Scholte, R. H. (2014). Evaluation of a school-based depression prevention program among adolescents from low-income areas: A randomized controlled effectiveness trial. *International Journal of Environmental Research and Public Health*, 11(5), 5273-5293.



Keynote speaker: Mariska Kret

Wednesday 25 May, 15:30 – 16:30 hrs

Keynote title: Emotion processing in *Homo* and *Pan*

Keynote abstract: Evolution prepared group-living species, (non)human primates included, to quickly recognize and adequately respond to conspecifics' emotional expressions. Different theories propose that mimicry of emotional expressions facilitates these swift adaptive reactions. When species unconsciously mimic their companions' expressions of emotion, they feel reflections of their emotions which informs social decisions. The majority of emotion research has focused on full-blown facial expressions of emotion in humans. However, facial muscles can sometimes be controlled; humans know when to smile, and when not to. In this talk, I therefore argue for a broader exploration of emotion signals from sources beyond the face or face muscles that are more difficult to control. More specifically, I will show that implicit sources including the whole body and subtle autonomic responses including pupil-dilation are picked up by observers and influence subsequent behavior. In my research, I take a comparative approach and investigate similarities and differences in the perception of emotions between humans and great apes. I will here discuss new, recently collected data and suggest avenues for future research that will hopefully eventually lead to a better comprehension of emotional expressions and how we come to understand each other's emotions.

About Mariska Kret: Professor of Cognitive Psychology at Leiden University, and leads the Comparative Psychology and Affective Neuroscience Lab (CoPAN)

Recent publications:

Prochazkova, E., Sjak-Shie, E., Behrens, F., Lindh, D., & Kret, M. E. (2022). Physiological synchrony is associated with attraction in a blind date setting. *Nature human behaviour*, 6(2), 269-278.

Kret, M. E., Massen, J. J., & de Waal, F. (2022). My Fear Is Not, and Never Will Be, Your Fear: On Emotions and Feelings in Animals. *Affective Science*, 3(1), 182-189.

Kret, M. E., Jaasma, L., Bionda, T., & Wijnen, J. G. (2016). Bonobos (*Pan paniscus*) show an attentional bias toward conspecifics' emotions. *Proceedings of the National Academy of Sciences*, 113(14), 3761-3766.



Detailed program Tuesday 24 May

Time	Activity	Location
9:00 - 9:30	Registration and Coffee (Hang up Posters in Aula)	Aula
9:30 - 9:45	Opening	Aula
9:45 - 10:45	Keynote Maarten Vansteenkiste <i>Nourishing children's engagement and growth? The critical role of basic psychological needs and need-supportive socialization</i>	Aula
10:45 - 11:00	Group Photo	Outside the building entrance
11:00 - 11:45	General Assembly VNOP	Aula
11:45 – 12:45	Lunch	Aula
12:45 – 14:00	Parallel sessions (symposia)	
	S1. J. Runze: Parenting in the spotlight: What makes a “good” parent and why being a good parent might not always matter so much	Aula
	S2. S. Kunnen: Autonomy- and identity development during internships in Dutch (psychology) students	Belle van Zuylenzaal
	S3. S. Bogaerts: Forensic patients and offender sample	Westerdijkkamer
14:00 – 15:00	Poster Session with Coffee & Fruit	Aula
	P1. B. Vrijders: How parents motivate their children through tone of voice	
	P2. H. Leeuwestein: Young refugee students in primary education: Relation between trauma symptoms and second language skills	
	P3. R. Ursinus: Testing within-person variability in neural responses to reward-sensitivity tasks and the relationship with risk-taking behaviour in adolescence	
	P4. S. Scatolin: Within arms' length: caregiving and cognition in 8-month-old infants	
	P5. F. Chereches: Dynamics of personality states in young adulthood: Beyond intra-individual variability	
	P6. A. Hagen: Fighting your fears/Facing your fears: Facilitating exposure in the treatment of children with a specific phobia the development process of the KibA (Kids beat Anxiety) app	
	P7. T. Lorenz: From mind to matter: An investigation of the association between bullying victimisation, daily stress appraisal and cortisol	

- P8. A. Vandembroucke: Integrating cognitive developmental neuroscience in society: Lessons learned from a multidisciplinary research project on education and social safety of youth
- P9. J. Marie: Integrating cognitive developmental neuroscience in society: Lessons learned from a multidisciplinary research project on education and social safety of youth
- P10. S. Altikulac: Motivational effects in reward and effort anticipation in first year secondary school students: A fMRI study
- P11. R. van Rijn: The effect of relative pubertal timing on depression and social anxiety in adolescent boys and girls
- P12. M. Hofstee: Self-regulation and frontal alpha activity during infancy and early childhood: A multilevel meta-analysis.
- P13. T. Pan: ABC training for alcohol use during an abstinence challenge (IkPas/NoThanks!)
- P14. M. Eradus: Parental differential treatment and child mental health: A meta-analysis
- P15. R. van de Weitgraven: Playfulness: Psychometric properties of a new Dutch measure and associations with cognition
- P16. A. Okorn: Maternal postpartum work resumption stress: Questionnaire development and validation
- P17. M. Van de Castele: University students' sleep during an exam period: the role of study motivation and test anxiety
- P18. L. Björg: The longitudinal relationship between child temperament, parenting, and disruptive child behavior: The moderating role of socioeconomic status
- P29. N. Purnama: Children's autistic traits and peer relationships: Do non-verbal IQ and externalizing problems play a role?
- P20. Q. van der Heijden: Is infants' object exploration informed by emotions conveyed in adults' action kinematics?
- P21. M. Donker: Using recurrence quantification analysis (RQA) to characterize parent-adolescent conflict interactions
- P22. M. Xia: Why do young children overestimate their task performance? A cross-cultural experiment

	P23. H. Bozhar: The association between social media use and substance use behaviour among adolescents: The ABCD-Study	
	P24. O. Boer: Brain morphology predictors of alcohol, tobacco, and cannabis use in adolescence: A systematic review	
	P25. M. van der Meulen: Growing up prosocially? Longitudinal trajectories of prosocial behavior from middle childhood into adolescence	
15:00 – 16:15	Parallel sessions (symposia)	
	S4. P. Leijten: How our measures of parenting impact our understanding of how parents shape children's development	Aula
	S5. J. Spitzer, J. van de Wetering: Understanding and promoting adolescents' societal contributions	Belle van Zuylenzaal
	S6. I. Frowijn: Romantic attraction and dark personality traits from early to late adulthood	Westerdijkkamer
16:15 – 16:30	Coffee Break	Aula
16:30 – 17:30	Keynote Marloes Kleinjan <i>What is needed to promote child and adolescent mental health?</i>	Aula
17:45 – 18:30	Walking Tour	Outside the building entrance
18:30	Dinner at Humphrey's Restaurant	Stadhuisbrug 3

Detailed program Wednesday 25 May

Time	Activity	Location
9:00 - 9:30	Registration and Coffee	Aula
9:30 – 10:45	Parallel sessions (symposia)	
	S7. A. Alsem: Interventions for youth: Can we enhance current treatment effects?	Aula
	S8. M. Maes: New perspectives on loneliness: Measurement and risk factors	Belle van Zuylenzaal
	S9. L. Cuijpers: Capturing developmental and learning processes	Westerdijkkamer
10:45 – 11:00	BREAK	
11:00 – 12:00	Parallel sessions (Flash talks & Teaching roundtable)	
	<i>F1. Infancy, anxiety and clinical Interventions</i>	Belle van Zuylenzaal
	1. J. Rutkowska: Fourteen-month-old infants' sensitivity to intention information encoded in grasping movement	
	2. E. Salvadori: Points with smiles from infancy to toddlerhood	
	3. C. Portengen: Why women are expected to smile: The role of gender in the neurophysiological processing of adult emotional faces in 3-year-old children	
	4. L. Mobach: Facing uncertainty: Interpretation of ambiguous emotional faces in childhood social anxiety disorder	
	5. A. Harrewijn: Peer interactions as moderators of the temperament-anxiety association, using data from the Generation R Study	
	<i>Teaching Roundtable</i>	Westerdijkkamer
12:00 – 13:00	LUNCH	Aula
13:00 – 13:45	Parallel sessions (Flash talks)	
	<i>F2. Neurocognitive development, risk, & identity</i>	Aula
	1. J. Schaaf: Impaired learning to dissociate advantageous and disadvantageous risky choices in adolescents	
	2. B. Braams: Information about others' choices selectively alters risk tolerance and medial prefrontal cortex activation across adolescence and young adulthood	
	3. A. Tyborowska: Early adolescence and the neuro-endocrine control of emotional actions	

4. J. Vanderhaegen: Identity formation, generic functioning, and illness-specific functioning in adolescent and emerging adult cancer survivors: A longitudinal investigation into directionality of effects

5. M. van der Gaag: A new and improved identity interview: presenting the GIDS-L2

F3. Prosocial behavior, transitions to school and work

Belle van Zuylenzaal

1. S. Grapsas: Self-focused and unconvinced: Value profiles and climate change skepticism in young adolescents

2. A. Christiaens: The role of the school transition in educational identity development

3. J. Wang: A longitudinal study of autonomy at the secondary school transition: Considering the role of parental psychological control and friend support

4. K. Diwan: An intensive longitudinal study on pride and self-esteem development during the transition to work

5. A. Reitz: Unraveling the complex relationship between work transitions and self-esteem and life satisfaction

F4. Childhood and interventions

Westerdijkkamer

1. J. Boom: Development of the idea of chance in children

2. W. Wolf: The development of the Liking Gap: Children over 5 think that partners evaluate them less positively than they evaluate their partners

3. J. Sierksma: How receiving help affects children's competence beliefs and task motivation

4. C. Klootwijk: Prosocial choices: How do young children evaluate considerate and inconsiderate behavior

5. A. Roest: Are treatments in children with common mental disorders helpful in the long run? An overview of systematic reviews

13:45 – 14:00

BREAK

14:00 – 14:45

Parallel sessions (Flash talks)

F5. Transitions, COVID, and parenting

Aula

1. M. van Scheppingen: Educational mobility and personality development during the transition to university

2. Y. Tang: Development of self-esteem in children with and without behavior problems: The influence of parental psychological control

3. N. van den Broek: Did adolescents' food intake change during the COVID-19 pandemic?
4. S. I. Hogue: Changes in coercive parenting and child externalizing behavior across the onset of the COVID-19 pandemic and the moderating role of the parent-child attachment relationship
5. P. Vrolijk: Within-family linkages between parental monitoring and adolescents externalizing problems with autonomy support as a moderator

F6. Parents and peers

Belle van Zuylenzaal

1. S. Mastrotheodoros: Negative parenting, mental health, and epigenetic age: Examining longitudinal associations in adolescence and young adulthood
2. A. H. Visscher: Unraveling the complex interplay between parental knowledge and children's externalizing behavior over time: Findings from the pairfam study
3. P. Bravo: The effect of maternal childhood maltreatment on adolescence psychological problems: Understanding the cycle of family risk factors
4. E. Bernasco: The role of autonomy, peer resistance, and friend adaptation in adolescent depression socialization
5. M. Hensums: Self-serving behavior in adolescence: An experimental test of the influence of peer norms, agentic goals, and narcissism

F7. Parenting

Westerdijkkamer

1. A. Canário: Implementation and evaluation of Triple P interventions: Insights from the Portuguese experience
2. P. Acet: Perspectives of maternal mindful parenting: Development of the Mindful Parenting Inventories for Parents (MPIP) and Children (MPIC) in the UK and Turkey
3. M. Nieterau: Genetically nurturing disruptive behavior: The role of DNA and the environment parents provide on the development of child disruptive behavior
4. A. Bülow: Uniform, universal, or unique? Family-specific associations between daily need-supportive parenting and adolescent affect
5. S. Boele: Effects of (un)supportive parenting on adolescent emotional well-being: For better, for worse, for both, or neither?

14:45 – 15:00

BREAK

15:00 – 16:00

Keynote Mariska Kret

Aula

VNOP CONFERENCE 2022

Emotion processing in Homo and Pan

16:00 – 16:45

Award ceremony & closing

Aula

Abstracts Tuesday 24 May

Keynote (plenary)

9:45- 10:45

Aula

Keynote title: Nourishing children's engagement and growth? The critical role of basic psychological needs and need-supportive socialization

Speaker: Maarten Vansteenkiste

Keynote abstract: At the heart of Self-Determination Theory is the claim that all people have basic psychological needs for autonomy, competence, and relatedness, the satisfaction of which is beneficial for children's psychological growth and the frustration of which increases risk for ill-being and maladjustment. In the present presentation, the key criteria to characterize basic needs are addressed, together with supportive diary, longitudinal, and experimental research in diverse age groups, some of which was collected as part of a large-scale population study across the pandemic (www.motivationbarometer.com). Although basic needs are presumed to play a universal critical role across different developmental phases and challenges, there is room for contextual variation in the support of basic needs by key socialization figures (i.e., parents, teachers). Indeed, there is not a one-size-fits-all approach to support individuals' psychological needs. Recent work grounded in a circumplex-based approach on need-supportive and need-thwarting contextual conditions, thereby providing a deeper insight in the dynamic interplay between autonomy support (relative to control) and structure (relative to chaos), shows that different (but not all) roads can lead to Rome. Accordingly, the provision of adequate need support becomes a matter of calibration and of tailoring support to individual differences and situational demands. Finally, apart from contextual support of basic needs, individuals can also get their basic needs met through need crafting. This promising line of correlational and intervention research on need crafting testifies to the pro-active and growth-oriented nature of the human organism.

Symposium title: Parenting in the spotlight: What makes a “good” parent and why being a good parent might not always matter so much

Chair: Jana Runze

Symposium abstract: Parenting is a complex construct ranging from sensitive behaviors to harsh and neglecting behaviors which all shape the development of children. Many studies have investigated the associations between parenting and children’s cognitive and socio-emotional development (e.g., Borairi, Fearon, Madigan, Plamondon, & Jenkins, 2021; Valcan, Davis, & Pino-Pasternak, 2018; Verhage et al., 2016; Pinguart, 2017). However, there still remain several substantial gaps in the literature of parenting research. Research on the antecedents of parenting has only been able to explain a modest amount of variation in parenting (Booth, Macdonald & Youssef, 2018). In this symposium, two authors will shed light on this gap: Annemieke Witte will present her findings on relations between parents’ attachment representations, parental sensitive discipline and parental sensitivity. Additionally, Dr. Irene Pappa will introduce a new method of parenting research by investigating whether polygenic risk scores of determinants of parenting can predict positive parenting behaviors as well as negative ones. Although parents play a crucial role in shaping the experiences of their children, children vary in how much they are affected by positive as well as negative parenting (Belsky et al., 2007; Belsky & Pluess, 2009; Ellis et al., 2011). Therefore, the other two presentations will focus on differential susceptibility effects of parenting. Simone Dobbelaar will test whether child temperament moderates the relation between sensitive parenting and the (neural) development of social behavioral control. Jana Runze will investigate the effect of the video-feedback intervention to promote positive parenting and children’s chronic stress.

Speaker and presenters

Heritability of parenting: A polygenic approach

Irene Pappa, Marian J. Bakermans-Kranenburg, Charlotte Cecil, Jana Runze, & Marinus H. Van IJzendoorn

Previous studies have identified various dimensions of parenting behavior as important predictors of cognitive and socioemotional facets of child development. Research on the genetic basis of (determinants of) parenting behavior mostly has focused on candidate genes. However, a recent study (Wertz et al., 2019) in 702 participants of the Dunedin study used a polygenic score approach and found that parents with higher polygenic scores of educational attainment provided more warm, sensitive and stimulating (observed) parenting to 3 year old children. In this study, we aimed to replicate and extend the findings of Wertz et al. (2019) using the Generation R Study (GenR), a large longitudinal cohort study based in the Netherlands, in which genetic, observational and self-reported parenting data are available. Guided by the (adapted) process model of parenting (Belsky, 1984), we investigated the association of polygenic scores of educational attainment, IQ, income, neuroticism, MDD and ADHD with observed and self-reported positive and negative parenting dimensions. We replicated the Wertz et al. (2019) study showing that parents (N = 1530) with higher polygenic scores of educational attainment were observed to be more sensitive in the interaction with their child at 14 and 36 months of age. The PGS explained 2% – 3% of the variance in sensitivity. Also, the PGSs of MDD, ADHD, IQ and income were associated with parenting measures. This replication and extension shows that genes associated with correlates of parenting, such as educational attainment, also predict sensitive parenting. Implications of these findings for future research are discussed.

Gene-environment interplay in externalizing behaviour from childhood through adulthood

Tina Kretschmer

Genetic and environmental influences on externalizing problems are often studied separately. Here, we extended prior work by investigating implications of gene-environment interplay in childhood for early adult externalizing behavior. Genetic nurture would be indicated if parents' genetic predisposition for externalizing behavior operates through the family environment in predicting offspring early adult externalizing behavior. Evocative gene-environment correlation would be indicated if offspring genetic predisposition for externalizing behavior operates through child externalizing behavior in affecting family environment and later early adult externalizing behavior. Longitudinal data from seven waves of the TRacking Adolescents' Individual Lives Survey (TRAILS), a prospective cohort study of Dutch adolescents followed from age 11 to age 29 (n at baseline = 2734) were used. Child externalizing behavior was assessed using self- and parent-reports. Family dysfunction was assessed from parents. Early adult externalizing behavior was assessed using self-reports. Genome-wide polygenic scores for externalizing problems were constructed for mothers, fathers, and offspring. Offspring polygenic score and child behavior each predicted early adult externalizing problems, as did family dysfunction to a small extent. Parents' polygenic scores were not associated with offspring early adult externalizing behavior. Indirect effect tests indicated that offspring polygenic score was associated with greater family dysfunction via child externalizing behavior (evocative gene-environment correlation) but the effect was just significant and the effect size was very small. Parents' polygenic scores did not predict family dysfunction, thus the data do not provide support for genetic nurture. A very small evocative gene-environment correlation was detected but effect sizes were much more pronounced for stability in externalizing behavior from childhood through early adulthood, which highlights the necessity to intervene early to prevent later problems.

Differential susceptibility of associations between parenting and the development of social behavioral control: a longitudinal fMRI design

Simone Dobbelaar, Michelle Achterberg, Anna C.K. van Duijvenvoorde, Marinus H. van IJzendoorn, & Eveline A. Crone

The transition from childhood to adolescence is an important period for the development of social skills, such as the ability to adapt and control behavior in different social contexts. This ability to control behavior is predictive of positive developmental outcomes, such as prosocial behavior and decreased behavioral problems. Therefore, an important question is whether changes in the environment, such as in parenting behavior, can influence the development of social behavioral control and which children might be most receptive to those changes in the social environment. Specifically, temperament might explain differential susceptibility to the association between parental sensitivity and social behavioral control development, such that children with a more reactive temperament will be more strongly affected by changes in parental sensitivity for better and for worse. These questions will be studied in a three-wave longitudinal twin sample, where children were followed from 7-13 years of age (T1: 7-9y, N=512; T2: 9-11y, N=456; T3: 11-13y, N=336). Social behavioral control was measured using the experimental Social Network Aggression Task and parental sensitivity was measured using the parent-child interaction task 'Etch a Sketch'. Bivariate growth curve modeling will be used to 1) test whether individual differences in the development of parental sensitivity are related to individual differences in the (neural) development of social behavioral control and 2) test whether temperament moderates the association between parental sensitivity and social behavioral control. Together, these findings will shed light on which children might benefit most from positive environments in order to thrive throughout their development.

Pre-registration of a RCT of the effect of the video-feedback intervention to promote positive parenting on twins' hair cortisol

Jana Runze, Marian J. Bakermans-Kranenburg, Mirjam Oosterman, Irene Pappa, & Marinus H. Van IJzendoorn

Meta-analytical evidence has shown that the Video-feedback intervention to promote positive parenting (VIPP-SD) is effective in increasing parental sensitivity and parental sensitive discipline (Juffer et al., 2017; Van IJzendoorn et al., 2021). By improving parental sensitivity and discipline, the intervention may also affect the child's development, in particular the child's cortisol levels. Previous research found effects of an attachment-based parenting intervention (Attachment and Biobehavioral Catch-up) on children's neurobiology: 4-6 year-old children who were involved with child protective services showed more typical diurnal salivary cortisol levels when they were in the intervention group compared to the control group (Bernard et al., 2015). As far as we know, only one (small) RCT study on 39 parents and their children (between 4 months and 5 years old) has investigated the effect of a parenting intervention on hair cortisol concentrations (HCC). In the intervention group, children's HCC decreased significantly as compared to children in the control group (Poehmann-Tynan et al., 2020). In the current pre-registered randomized controlled trial, we will apply multilevel structural equation models to examine the effects of VIPP-SD on child hair cortisol concentrations as an indicator of chronic stress in two cohorts of families with twins. The early childhood cohort consists of 202 pre-school-aged twin pairs ($n = 404$ children, $M_{age} = 3.75$, $SD = 6.81$). The middle childhood cohort consists of 257 school-aged twin pairs ($n = 514$ children, $M_{age} = 7.92$, $SD = 0.66$).

Symposium title: Autonomy- and identity development during internships in Dutch (psychology) students.

Chair: Saskia Kunnen

Discussant: Annematt Collot d'Escury- Koenigs

Symposium abstract: The VNOP conference brings together developmental psychologists from Dutch universities to discuss both their research and their education. This symposium combines both topics: we study how our own students develop during their education from students to autonomous professionals. We focus on the autonomy- and identity development of (psychology) students at Dutch universities during their internships. Our aim is to present not only scientifically relevant information about identity development, but also educational relevant information, about the development of our own students, and the (educational) factors that influence that development.

As a teacher I have seen, for many years, that our students in a few months of their master internship change from students to professionals, and that a small minority did not succeed in that transition. As a developmental psychologist and identity researcher I wondered what exactly developed in that period of internship and decided to study that process. Liselotte den Boer from Tilburg had the same fascination and studied the same process at the same time. In this symposium we bring together both studies, both into identity development during clinical internships in Dutch psychology students. The combination is especially interesting because of the different approaches. Liselotte den Boer studied two large groups of students, and she will present outcomes of the analysis of broad trends and relations between identity development and other factors. Saskia Kunnen used a micro level approach and studied a small group of students by means of weekly diaries during their internship. She will present results about the type of experiences that are related to the increase and decrease of the students' commitments with their profession.

However, autonomy- and identity development not only happen during the last few months of the study. Where den Boer and Kunnen study internships during the master, Oosterwegel developed an internship-like course for bachelor students at Utrecht University. This course was developed to meet the students' wish to have practical experience in the Bachelor years as well and is supported by a training in emotional autonomy. Oosterwegel will discuss why the training in autonomy was developed, the contents of the training, and the first findings.

We were happy that Annematt Collot d'Escury-Koenigs who is responsible for the guidance of clinical internships psychology at the University of Amsterdam, was willing to be discussant in our symposium. In addition a student who finished the internships will reflect upon the findings that were presented in the symposium.

Speaker and presenters

Identity formation during the last years of college education

Liselotte den Boer, T. A. Klimstra, & J. J. A. Denissen

Experiences during the last years of college could stimulate identity formation processes with regard to general future plans and education. A practical internship, in which students develop job-related skills and are encouraged to reflect on their learning process, could moderate identity formation processes. The present study investigated mean-level changes in identity dimensions, associations between dimensions within and across the life domains of future plans and education, and how enrollment in an

internship moderated these processes. We used a longitudinal design with three measurement occasions, distinguishing two different groups. The first group (N=140) consisted of students from the one-year master's program Psychology and Mental Health at Tilburg University. These participants were enrolled in a practical internship. Participants in the second group (N=147) were undergraduate psychology students in their last year of their bachelor program at Tilburg University. We found no evidence for mean-level change, but there were significant associations between identity dimensions within the future plans domain and identity between dimensions across domains. Students generally appeared to be in a moratorium-like identity stage. Whether or not students were in an internship was largely unrelated to identity formation processes, suggesting that merely being in a pre-transition year is sufficient for triggering identity formation processes. However, an internship could be particularly helpful for individuals who are "stuck" in resolving identity crises in the career domain. Moreover, it may be important to test whether the timing of the internship matters. Perhaps an internship in undergraduate education may have a larger effect on identity formation.

Identity development during internship*

Saskia Kunnen

We investigated Master students during their clinical internship. Internships are students' first experience with "the real job", and we assumed that in internships the basis for a professional attitude and identity is formed. We investigated which experiences are related to the growth or decline of students' professional identity. We used an open explorative design in which students could freely report about experiences important to them. Students were asked to describe the most important experience every week during their internship and rate - among others - their actual feelings to fit in, their self-confidence, and their professional commitment to their studies/internship. Based on the outcomes of our comparable studies in novice nurses we added weekly questions concerning their need fulfillment and emotions concerning the experience. We coded the experiences, and analyzed at the level of individual trajectories of the development of identity how the level of commitments changed over the weeks in relation to need fulfillment, emotions, and characteristics of the experience. In preliminary analyses we found that commitment increased following positive experiences, decreased following negative experiences, and that feelings of competence and relatedness were positively related to increase in commitment. Experiences related to feelings of autonomy were too scarce to be used for analysis. We will also present outcomes of the analyses between specific experiences and increases and decreases of commitment.

* This study was supported by a collaborative research grant from the board of psychology at the RuG.

From an internship in the bachelor to an intervention for autonomy development*

Annerieke Oosterwegel, J. Limvers, T. de Kramer, N. Mastenbroek, & M. Zeijen

In the eyes of many students, their internship is the ultimate opportunity to explore the match between their competences, interests and ambitions and their aimed professional identity. As a consequence, bachelor students have been repeatedly asking for internships during their bachelor education as well. In 2013 the psychology department at Utrecht University responded by developing an elective internship-like course in which annually 60 of our senior bachelor students mentor our 600 first year students.

The literature and assignments in this bachelor equivalent of an internship evolved into a training that explicitly targets autonomy development in our 60 mentoring students. In this training, we integrate notions about the self-system, Self-Discrepancy Theory, goal-orientations, Self-Determination Theory, emotion regulation and Dialogical Self Theory. In essence, we teach our students frame-switching between goal-orientations, motivation, and I-positions, in tune with their goals, needs, and affordances.

The self-reflections in the final assignment of the internship indicate high levels of self-understanding. The students appear to recognise their personal patterns and needs, and to understand how to switch and adjust their mindset and motivation according to different situations. We recently implemented online quantitative measures of different aspects of autonomy and self-efficacy prior and following the

training to study its effect and are presently piloting the training with students and trainers from other disciplines.

In this presentation, I will discuss our arguments for a training in autonomy development, explain the training and discuss some preliminary findings from the first round of data-collection.

* This study was supported by several grants from the Faculty of Social Sciences at Utrecht University and by NRO (Comenius Teaching Fellowship 405.20865.322) and developed in interaction with numerous students.

Symposium title: Forensic patients and offender sample

Chair: Manon Kleijn

Symposium abstract: Providing care and treatment for forensic patients is a core tenet of successful reentry into the community and public safety. Therefore, investigating the characteristics of patients in forensic mental health services that are associated with criminal behavior and reoffending is essential for establishing appropriate offender rehabilitation. The first presentation focuses on long-term changes in risk factors of 341 high-security forensic psychiatric patients. Similarly, the second presentation reveals whether these changes during forensic treatment are dependent on psychiatric diagnoses, namely substance use disorders, psychotic disorders, and cluster B personality disorders. The third presentation provides an insight into the pathways to approach minors for sex among people who committed webcam child sex tourism offenses. Finally, in the fourth presentation, grandiose and vulnerable narcissism will be related to criminal behavior and the role of identity integration and self-control in these associations will be discussed.

Speaker and presenters

Sexual offending pathways and chat conversations in an online environment

Manon Kleijn

People from all over the world pay for live streaming video images of minors, also called webcam child sex tourism (WCST). Although there is an increase in research about online sexual offending, relatively few studies have investigated the approaches used by people who have committed WCST offenses (PWCST). In addition, these studies describe these approaches as active-orientated without mentioning an avoidant pathway. The aim of the study was to investigate whether PWCST use similar pathways as the four offending pathways identified by Ward and Hudson. Using qualitative thematic analysis, 195 cases of online chat conversations between PWCST and operators posing as a minor were analyzed. The Ward and Hudson pathways model was partially replicable. Evidence was found for an approach and avoidant pathway. The data also suggest three other sub-pathways and a mixed pathway. Most PWCST in this study used an approach pathway to immediately approach minors for sex, which provides important insight into the diverse nature of sexual grooming.

Longitudinal change of risk factors during treatment in high-security forensic psychiatry in Flanders

Sophie Verschueren, Inge Jeandarme, Ilse Libijn, & Stefan Bogaerts

Empirical studies on the longitudinal change of risk factors during treatment of forensic psychiatric patients are scarce. Therefore, in the current study, changes in risk factors of 341 high-security forensic psychiatric patients in Flanders were investigated using latent growth curve analyses. Annual assessments of the Historical Clinical Future - Revised (HKT-R) at three time points were considered, starting at time of admission. Significant small improvement was found on the future scale and most future factors. However, the clinical scale did not change significantly and only one of the 14 clinical factors, namely problem insight changed significantly over time. Although the forensic treatment seems to be a slow process, the sensitivity of the HKT-R to detect clinically relevant change is being questioned and it is necessary to determine whether there are instruments capable of detecting small significant changes over time.

The long-term changes in dynamic risk and protective factors over time in a nationwide sample of Dutch forensic psychiatric patients

Marija Janković, Geert van Boxtel, Erik Masthoff, Elien De Caluwé, & Stefan Bogaerts

The long-term changes of dynamic risk and protective factors have rarely been studied in forensic psychiatric patients. We utilized a latent growth curve analysis to investigate trajectories of risk and protective factors over time in all 722 male forensic psychiatric patients who were unconditionally released between 2004 and 2014 from any of 12 Dutch forensic psychiatric centers (FPCs). The study covered the period from juridical observation until unconditional release. Moreover, we investigated whether these trajectories differ between patients depending on their psychiatric diagnosis namely substance use disorders (SUD), psychotic disorders, and cluster B personality disorders (PDs). In addition, we also investigated whether SUD may influence changes in risk and protective factors in a group of psychotic and cluster B PDs patients, respectively. Overall, findings suggest that all changes in dynamic risk and protective factors could be depicted by two phases of patients' stay in the FPCs. Specifically, most changes on dynamic risk and protective factors occurred at the beginning of treatment, that is, from the time of juridical assessment up to the time of unguided leave. Moreover, the moment of unguided leave could be considered the 'turning point' in the treatment of offenders. We also found that SUD and psychotic patients changed the most in the first phase of their stay, while cluster B PDs patients changed the most in the second phase. However, SUD did not modify changes in risk and protective factors in psychotic and cluster B PDs patients. These findings may help improve offender treatment and crime prevention strategies.

Grandiose and vulnerable narcissism, identity integration and self-control related to criminal behavior

Stefan Bogaerts, Carlo Garofalo, Elien De Caluwé, & Marija Janković

Background: For several decades, researchers have distinguished between grandiose and vulnerable narcissism in relation to criminal behavior. There are also indication that identity integration and self-control may underlie this association. Therefore, the present study aimed to develop a theory-driven hypothetical model that investigates the complex associations between grandiose and vulnerable narcissism, identity integration, self-control, and criminal behavior using structural equation modeling (SEM). Methods: The total sample (N=222) included 65 (29.3%) individuals convicted of aggression and 157 (70.7%) participants from the community, with a mean age of 37.71 years (SD=13.25). Results: The overall SEM model yielded good fit indices. Grandiose narcissism negatively predicted aggression above and beyond the influence of identity integration and self-control. In contrast, vulnerable narcissism did not have a direct significant effect on aggression, but it was indirectly and positively associated with aggression via identity integration and self-control. Moreover, grandiose narcissism was positively associated with identity integration and vulnerable narcissism negatively. However, identity integration had no direct significant effect on aggression, but it was indirectly and negatively associated with aggression via self-control. Finally, self-control, in turn, was negatively related to aggression. Conclusions: We propose that both subtypes of narcissism should be carefully considered in clinical assessment and current intervention practices.

1. Berdien Vrijders, Silke Paulman, Netta Weinstein, & Maarten Vansteenkiste: How parents motivate their children through tone of voice

According to Self-Determination Theory (SDT), parents can motivate their children in more controlling or more autonomy-supportive ways, thereby, respectively, thwarting and nurturing children's basic need for autonomy or volition. Although the impact of parents' motivational language has received quite some attention, parents' tone of voice has often been overlooked. That is, both what parents say when directing their children and how they express these contents, may have unique effects on children. Therefore, the current study investigated whether controlling and autonomy-supportive speech are characterized by distinct acoustic patterns. To this aim, 107 Dutch parent-child interactions of children (Mean age = 11.19) completing a series of puzzles together with their parent were analyzed. Results of a hierarchical linear modelling analysis showed that autonomy-supportive messages were conveyed using a slower speech rate and a quieter voice than controlling messages, which were uttered with a faster rate and a louder voice. Follow-up correlational analyses exploring whether the tone of voice used by parents could affect children's self-reported motivation states, indicated that only the acoustic parameter intensity yielded significant results. That is, the louder parents talked, the more controlled children felt. The present study indicates new possibilities for cross-fertilization between the research literature on parenting, SDT and prosody, thereby highlighting how parents can affect their children's functioning through different channels.

2. Hanneke Leeuwestein, Elisa Kupers, Marieke Boelhouwer, & Marijn van Dijk: Young refugee students in primary education: Relation between trauma symptoms and second language skills

Worldwide, many refugees seek safety away from their home country, around one third of them being primary school-aged children. The school environment is often the first place where refugee children can safely settle in the new country. However, these children face a double challenge: learning a new language, and coping with the adverse events they experienced prior, during or after their flight. Both host country language skills and well-being are of crucial importance for child development and educational success. Although the effects of traumatic stress on children's mental health are well-investigated among young refugee children (Bronstein & Montgomery, 2011; Davidson et al., 2008; Fazel et al., 2005; Henley & Robinson, 2011; Lustig et al. 2004), no empirical studies have yet investigated how the two main educational challenges for young refugee students – second language learning and trauma related symptoms – are related (Graham et al., 2016; Kaplan et al., 2016). The current study examined the relation between trauma-related symptoms and Dutch country language skills. 132 four- to eight-year old refugee students participated in receptive vocabulary, active vocabulary, and morphological tests in Dutch. Their teachers completed a questionnaire regarding trauma related behaviors of these students (RaPTOSS, Boelhouwer et al., 2019). Additionally, the possible moderating role of trauma protective factors was also explored. Insights on the role of such protective factors in this relation can gain useful insights on support of young refugee students in the classroom. Preliminary findings will be presented at the poster at the VNOP conference.

3. Rosalie Ursinus, R. van Rijn, & B. R. Braams: Testing within-person variability in neural responses to reward-sensitivity tasks and the relationship with risk-taking behaviour in adolescence

Adolescence is a time of increased risk-taking. Previous work has shown a positive relationship between risk-taking behavior and neural activation of reward related areas including the ventral striatum. The field of cognitive neuroscience generally assumes a within-person consistency of neural measures based on consistency of findings across studies. However, important psychometric issues concerning individual differences across measurements and short-term behavioural aspects that could influence neural activity, are often not included in these neuroscientific studies. Therefore, within-person variability in neural activation remains poorly understood. Previous work showed individual differences in ventral striatum neural activity in a longitudinal study across two years (Braams et al, 2015). However, individual variability at the short term is unclear. The current study

used a longitudinal design to test the internal consistency of neural activity in the ventral striatum across two measurements that are separated by a 7 day interval. Participants aged 16 and 17 years old performed a reward-sensitivity card task in which they could win or lose money while undergoing functional MRI. Region-of-interest analyses confirmed activation in the ventral striatum during the reward-sensitivity task. Furthermore, intra-class correlation analyses confirmed intra-individual variability at the short term. Future analyses will test the relationship between this variability at the neural level and variability in behavioral outcomes using linear mixed effect models.

4. Sofia Scatolin, Francesco Poli, Sabine Hunnius, Carolina de Weerth, & Roseriet Beijer: Within arms' length: caregiving and cognition in 8-month-old infants

The cognitive abilities developed in infancy are the foundation for the complex ones required throughout life. Yet, it is unclear how environmental factors influence the development of such abilities. Literature suggests that caregiving is associated with cognition. Traditionally, research on the topic has divided caregiving behaviour into two categories, emotional and cognitive, and investigated them separately. However, a recent framework proposes that children require both emotional and cognitive input from caregivers for healthy cognitive development. Additionally, previous studies on the topic relied on methods that cannot precisely assess cognitive factors separately, such as scales and indices. The current study aims to investigate the associations between caregiving and cognition in 8-month-old infants. Mother-infant interaction observations were used to assess the emotional and cognitive aspects of caregiving. A Bayesian cognitive model informed by eye-tracking data was used to assess several indices of infant cognition, such as their processing speed, curiosity, reaction time, learning efficacy, and baseline attention. It is hypothesized that more enriched caregiving environments are associated with higher cognitive performance. Bayesian linear regressions will test the main effects and interaction of the emotional and cognitive aspects of caregiving on different infant cognitive factors.

5. Flavia Chereches: Dynamics of personality states in young adulthood: Beyond intra-individual variability

Efforts have been put forward to explain long-term changes in personality traits in young adulthood, with theoretical notions proposing short-term dynamics in personality states as explanations of long-term changes in traits. Still, before we link short-term dynamics to long-term change, we need to understand how personality states unfold in daily life of young adults. This research moves beyond the predominant view of states dynamics as merely within-person variability (i.e., amplitude of fluctuations from the mean level) and considers the time-dependency of these fluctuations, or how changes from the mean state level carries over or lingers to subsequent states (i.e., carry-over effects). For this, it makes use of the experience sampling method, and a large sample of young-adults (N= 303; secondary data analysis) assessed over a period of 14-days (three measurement occasions per day). Small to moderate carry-over effects are expected for all personality states (Big Five), with notable individual differences therein.

6. Annelieke Hagen: Fighting your Fears/Facing your Fears: Facilitating exposure in the treatment of children with a specific phobia the development process of the KibA (Kids beat Anxiety) app

Anxiety disorders among children and young people are very common and have a major impact on their social, emotional and academic development. An effective treatment for anxiety disorders is cognitive behavioral therapy with exposure. However, several studies show that exposure in practice is insufficiently used by therapists and that children practice too little at home. To make this more accessible, mobile applications could offer a solution.

This poster shows the development process and the first results of the usability study of the KibA app are explained. A team of researchers and psychologists collaborated with IT company Trifork to develop the KibA app. The app includes personalized exposure exercises and a reward system. Various elements have been included to stimulate motivation and self-efficacy in children. In four stages of the development process, children aged 6-14 and their parents tested the app to ensure it is

suitable for its intended users. The four stages consisted of brainstorming sessions, testing the first version, a week of practice, and patients receiving the app as an addition to treatment for a specific phobia. The feedback from children, parents and therapists has led to adjustments in the app to make it more suitable for the target group. For example, a game element has been added in the form of extra goals, there is more information for parents and the layout of the app has been adjusted. The children have indicated that they find the app fun and user-friendly. Due to the iterative development process in which the app has been tested by all intended users, the KibA app is an app that is easy and pleasant to use by children. It offers therapists and researchers the opportunity to monitor progress and provide families with concrete tools for doing exposure in the home situation. The app is currently being tested for effectiveness in a large-scale RCT study.

7. Tamara Lorenz, Nathalie Michels, & Matteo Giletta: From mind to matter: An investigation of the association between bullying victimisation, daily stress appraisal and cortisol

During adolescence, experiences of bullying victimisation can constitute a significant stressor that can threaten an individual's well-being and development. To better understand the underlying biological mechanisms, attention has focused on cortisol as a biomarker of stress, indexing hypothalamic-pituitary-adrenal (HPA) axis activity (Schacter, 2021). Findings regarding the association between bullying victimisation and cortisol are however mixed, with some pointing to elevated, and others to blunted cortisol activity (Chen et al., 2018; Jiang et al., 2018). A major caveat of prior work is their reliance on single time point designs. The current work will therefore use a repeated measures design and examine the extent to which a history of bullying victimisation affects within-person associations between stress appraisal and cortisol patterns. To investigate the association between bullying victimisation, daily stress appraisal and cortisol, we will use data from approximately 200 first-year secondary students, collected as part of a broader, ongoing multi-wave project (Wave 1 completed December 2021). During Wave 1 and 3 (one year apart), bullying victimisation is assessed using an online questionnaire. Using an experience sampling methodology (ESM), participants then report their stress appraisal five times a day for a total of fourteen consecutive days. On four of these days, participants are asked to take passive drool saliva samples five times during the day, which are used to assess cortisol levels as a measure of HPA-axis activity. This poster will present an overview of the larger project, focusing on the study's design and procedure, as well as descriptive analyses from Wave 1.

8. Annelinde Vandenbroucke: Integrating cognitive developmental neuroscience in society: Lessons learned from a multidisciplinary research project on education and social safety of youth

Integrating fundamental science in society, with the goal to translate research findings to daily practice, comes with certain challenges. Successfully integrating research projects into society requires 1) good collaboration between scientists and societal stakeholders, 2) collaboration partners with common expectations and goals, and 3) investment in clear communication. We here describe an integrative research project conducted by a large Dutch consortium that consisted of neuroscientists, psychologists, sociologists, ethicists, teachers, health care professionals and policy makers, focusing on applying cognitive developmental neuroscience for the benefit of youth in education and social safety. We argue that to effectively integrate cognitive developmental neuroscience in society, 1) it is necessary to invest in a well-functioning, diverse and multidisciplinary team involving societal stakeholders and youth themselves from the start of the project. This aids to build a so-called productive interactive network that increases the chances to realize societal impact in the long-term. Additionally, we propose that to integrate knowledge, 2) a different than standard research approach should be taken. When focusing on integration, the ultimate goal of research is not solely to understand the world better, but also to intervene with real-life situations, such as education or (forensic) youth care. To accomplish this goal, we propose an approach in which integration is not only started after the research has been conducted, but taken into account throughout the entire project. This approach helps to create common expectations and goals between different stakeholders. Finally, we argue that 3) dedicating sufficient resources to effective communication, both within the consortium and between

scientists and society, greatly benefits the integration of cognitive developmental neuroscience in society.

9. Janna Marie Bas-Hoogendam, Rachel Bernstein, Brenda E. Benson, Paul M. Thompson, P. Michiel Westenberg, Nic J. A. van der Wee, Nynke A. Groenewold, Dan J. Stein, Anderson M. Winkler, & Daniel S. Pine : Integrating cognitive developmental neuroscience in society: Lessons learned from a multidisciplinary research project on education and social safety of youth

Social anxiety disorder (SAD) is one of the most prevalent and impairing mental disorders in adolescents and is difficult to treat effectively. SAD has moderate heritability and childhood inhibited temperament (cIT) – a stable, heritable and early-observable trait associated with an elevated risk for developing SAD and other anxiety disorders – may mediate the genetic risk for SAD. Brain characteristics may underly cIT and the associated anxiety-vulnerability. Understanding of this ‘neural risk signature’ is still limited, as studies of the neurobiological characteristics associated with cIT are scarce and often focus on particular regions of interest. Moreover, most findings have not been replicated across studies. This project aims to extend prior work by examining the neurobiological characteristics associated with cIT in the largest sample available to date. T1-weighted structural MR-images of the brain, previously acquired at multiple institutes, were assembled within the framework of the ENIGMA (Enhancing NeuroImaging Genetics through Meta-Analysis)-Anxiety Working Group. Data (n=4681, 17 samples) originated from studies where subjects underwent MRI-scanning at various ages (age ≤ 25 years). Regardless of age at scan, participants had undergone a (retrospective) assessment of cIT (age ≤ 12 years). MR-images will be processed using FreeSurfer software, resulting in individual estimates of regional cortical thickness, cortical surface area, and subcortical volumes, and the relationship between cIT and these neuroanatomical metrics will be investigated in mega-analyses. The study is preregistered (revision under review) and analyses will start upon approval of the preregistration. This initiative is the first mega-analysis of the neurobiological characteristics associated with the innate risk for developing SAD, with the potential to detect novel cIT-related brain alterations and to shed light on the mixed findings of prior work. Thereby, we expect this project to increase our understanding of the pathways leading to (social) anxiety, providing new avenues to prevent the development of psychopathology in youth at risk.

10. Sibel Altikulac, B. R. Braams, S. Nieuwenhuis, T. W. P. Janssen, E. Vassena, & N. M. van Atteveldt: Motivational effects in reward and effort anticipation in first year secondary school students: A fMRI study

During adolescence, students are more prone towards rewards compared to children and adults. The value of a potential reward is estimated in relation to the amount of effort that is needed to gain this reward. Additionally, students’ mindset might play an important role in reward and effort anticipation, since students with a growth mindset might value high effort as less threatening for a potential reward compared to students with a fixed mindset. The goal was to test for the motivational effect of reward and effort anticipation in adolescents. Previous adult studies showed that the Cognitive Control Network (CCN) and the striatum are related to both reward and effort anticipation. We used functional Magnetic Resonance Imaging (fMRI) to examine which brain regions are involved in reward and effort anticipation in first year secondary school students (N = 62; Mage = 12.97 years; SDage = 0.35 years; female = 40.30%) when doing an arithmetic task. Additionally, we asked the same students to do an arithmetic task at school (Math Effort Task; MET), which was linked to mindset related variables, to group students with similar motivational strategies when doing an arithmetic task (one growth mindset group (n = 28) and one fixed mindset oriented (n = 23)). Possible differences in neural responses between these groups were then examined. Preliminary results suggest that the CCN and striatum are involved during reward anticipation, but not during effort anticipation. Possible neural differences between groups are not yet analyzed and can be discussed during the VNOP conference.

11. Rebecca van Rijn, Nikki C. Lee, Miriam Hollarek, Hester Sijtsma, Reubs Walsh, Mariet van Buuren, Barbara R. Braams, & Lydia Krabbendam: The effect of relative pubertal timing on depression and social anxiety in adolescent boys and girls

Past research has shown adolescents that mature early compared to their peers can experience more internalizing problems such as depression and social anxiety, especially girls. Previously, relative pubertal timing was determined based on population standards or the mean of an entire sample, instead of based on adolescents' direct peer group. In the current study, pubertal status relative to adolescents' direct peer environment was related to the development of internalizing problems. We hypothesize higher depression and social anxiety scores in relatively early maturing individuals and we expect this effect to be stronger in relatively early maturing girls compared to boys. To assess relative pubertal development, we assessed the level of pubertal development of each individual student in first year high school classes. We calculated standardized z-scores for pubertal development compared to same-sex students in the same class to determine an individuals' relative pubertal timing. We found a positive relationship between relative pubertal timing and depression. This effect was specific to girls. We did not find evidence for a relationship between relative early pubertal maturation and social anxiety. We used a novel approach in which the pubertal status information from direct peers was used to investigate the effects of relative pubertal timing on internalizing problems. Our results suggest that relatively early maturing girls have higher depression scores than their relatively late or average-timed developing peers. For boys, we did not find this effect. In this research, we did not confirm earlier found effects of early pubertal development on social anxiety complaints.

12. Marissa Hofstee, Jorg Huijding, Kimberly Cuevas, & Maja Dekovic: Self-regulation and frontal alpha activity during infancy and early childhood: A Multilevel meta-analysis

Integrating behavioral and neurophysiological measures has created new and advanced ways to understand the development of self-regulation. For instance, electroencephalography (EEG) has been used to examine the association between self-regulation and frontal alpha power during infancy and early childhood. However, findings across previous studies have been inconsistent. To address this issue, the current meta-analysis synthesized all prior literature that examined the associations between individual differences in self-regulation (i.e., emotion regulation, effortful control, executive functioning) and frontal alpha power (i.e., baseline, task, baseline and task). In total, 23 studies consisting of 1,275 participants between 1 month and 6 years of age were included, which yielded 149 effect sizes. Findings of the three-level meta-analytic model demonstrated a non-significant overall association between self-regulation and frontal alpha power. Yet, significant moderating effects were found for the self-regulation construct, the type of measurement, as well as for children's mean age. Self-regulation was only significantly correlated with frontal alpha power when studies focused on the construct executive functioning. Moreover, the use of behavioral tasks or questionnaires to assess self-regulation and a higher mean age of the children resulted in small but significant effect size estimates. The findings of the current meta-analysis highlight the importance of longitudinal analyses and multimethod approaches in future work to reach a more comprehensive understanding of the association between self-regulation and frontal alpha power, as well as their development over time.

13. Ting Pan, Veronica Szpak, Judith Laverman, Reinout W. Wiers, & Helle Larsen: ABC training for alcohol use during an abstinence challenge (IkPas/NoThanks!)

Background: A consistent small add-on effect was found in cognitive bias modification (CBM) when added to clinical treatment, no effects were found as stand-alone intervention, and the associative underpinning has been doubted. ABC-training, a novel inferential cognitive training was therefore proposed. This study tested the effectiveness of ABC-training during abstinence challenges. Methods: The data were collected in two rounds (2021: 6 weeks from Easter, N = 723, 2022: 4 weeks in Dry January, N = 732). Participants were randomized over three conditions (2021: N-ABC = 61, N-CBM = 58, N-sham = 86; N-ABC = 106, N-CBM = 111, N-sham = 105). The ABC-training participants did a

virtual training task where an avatar was situated in their chosen context (A), chose between alcohol-related or alternative behaviours (B), followed by the consequence (C). The CBM (alternative behaviour = 100%) and Sham (alternative/alcohol = 50%/50%) were similar but without the consequence or free choices. Results: The post-test results showed that participants in the ABC condition did not drink less alcohol, but they did have a higher chance to stay abstinent during the challenge compared to the CBM and Sham conditions (2021: $\chi^2(2, 133)=7.09, p=0.028$; 2022: $\chi^2(2, 161)=12.12, p=0.002$). Conclusion: This is the first study testing the effectiveness of ABC training in alcohol abstinence. The preliminary results showed a stronger positive effect on staying abstinent compared with CBM and sham training, but no effects on later drinking. The results of this study can be valuable for future research on alcohol abstinence.

14. Marije Eradus, Patty Leijten, & Bonamy R. Oliver: Parental differential treatment and child mental health: A meta-analysis

Based on social comparison theory (Festinger, 1954), children within the same family tend to compare themselves to each other in order to develop a sense of self. Parental differential treatment (PDT), for example different levels of parental warmth or harshness that siblings receive from their parents, can therefore contribute to children's mental health. PDT can affect children negatively, especially for the disfavored child (e.g., the one receiving less warmth, or more harshness and hostility), resulting in more mental health problems than their sibling. This meta-analysis examines the association between parental differential warmth, harshness and hostility and children's externalizing and internalizing behavior problems. We will focus on relative differences (i.e., including information on direction, as opposed to absolute differences, including information only on magnitude), allowing us to test whether it is indeed the case that receiving less warmth, or more harshness and hostility, results in more child mental health problems. We will (1) estimate the overall association between PDT and children's mental health problems; (2) compare the association between differential warmth versus differential harshness and hostility and mental health problems; and (3) compare the association between PDT and children's externalizing versus internalizing behavior problems. The systematic literature search took place in September 2021 (PsycINFO and Web of Science), yielding 3,394 hits and 39 eligible studies on children aged 0-18 years old. Results are expected in May 2022. This meta-analysis aims to provide a better understanding of what children may be most at risk for developing mental health problems.

15. Rianne van de Weitgraven, Brenda R. J. Jansen, Arne Popma, Kim J. Oostrom, & Tycho J. Dekkers: Playfulness: Psychometric properties of a new Dutch measure and associations with cognition

Play is necessary for optimal child development (Ginsburg, 2007), and cannot exist without its underlying trait playfulness (Akhtar, 2011), which is defined as a disposition to play (Proyer & Brauer, 2019). Playfulness has important mental health benefits such as adaptability and the use of adaptive coping strategies (Barnett, 1991; Shen et al., 2017). More indirectly, playfulness may also contribute to mental health by stimulating cognition. Playfulness is associated with divergent thinking, intelligence and academic success (Barnett & Kleiber, 1982; Proyer, 2011). A great deal of research has been conducted on children's playfulness, but few experiments have used a multi method and multi informant approach incorporating the voice of the children themselves. The aim of the Study 1 was to investigate the psychometric properties of the Dutch version of the Child Self Report Playfulness (CSRP) scale. We included 224 children (M age = 5.3 years, SD = .77, 118 boys) who all completed the CSRP, which was presented via a "puppet-show". Preliminary results showed that the items of the CSRP loaded onto two factors: One representing a sense of humour and self-confidence and the other taking initiative and cognitive spontaneity. Internal consistency was suboptimal ($\alpha = .61$). In Study 2 (in progress) children performed a cognitive test after completion of the CSRP. Their parents filled out questionnaires measuring playfulness and cognition. Data of 85 children are currently collected (90%), data collection is likely finished at the time of the conference. Results will provide insight into the association between playfulness and cognition.

16. Ana Okorn, M. L. M. van Hoeff, A. H. N. Cillessen, & R. Beijers: Maternal postpartum work resumption stress: Questionnaire development and validation

After giving birth, many mothers pass through yet another important transition; returning to work after maternity leave. While differences exist, for many mothers this transition represents a challenge and might lead them to experience stress. However, currently no definition and measure characterizing the stress mothers experience in response to returning to work after maternity leave exist. Therefore, the current study aims to define the concept and develop and validate a self-report measure of maternal postpartum work resumption stress. The development and validation of the questionnaire followed three distinct phases: item development, scale development, and scale evaluation. First, the item pool and face and content validity of the questionnaire were established. Next, two independent samples of mothers returning to work postpartum were recruited to a) identify factor structure and reduce the number of items ($N = 298$), and b) assess the dimensionality and psychometric properties of the questionnaire ($N = 291$). Based on the exploratory and confirmatory factor analyses, a questionnaire with 30 items across 3 factors was established. The factors represent maternal postpartum work resumption stress related to work-life imbalance, child-related concerns, and lack of enrichment. Furthermore, the questionnaire has shown to be a reliable and valid measure of maternal postpartum stress. As such, while further validation is needed, this newly developed questionnaire can be used to further study the nature, course, and consequences of maternal postpartum work resumption stress for mothers, as well as their families, and by doing so, provide support for advancing family policies for working parents.

17. Marlies van de Castelee: University students' sleep during an exam period: the role of study motivation and test anxiety

Sleep of emerging adults was previously found to be especially compromised during exam periods, making it a critical period to study sleep. Yet, only a few studies have investigated which psychological factors and/or learning attitudes potentially contribute to disturbed sleep of students during stressful, demanding periods such as exams. Therefore, the current study aims to investigate how different types of motivation, as outlined within Self-Determination Theory, relate to university students' sleep when preparing for and during an actual exam period. Additionally, a second aim of the present study was to examine test anxiety as a potential explanatory mechanism in the relationship between study motivation and sleep outcomes. In the present study, 121 students ($M_{age} = 21.69$, 78% female) were surveyed twice via an online questionnaire addressing their study motivation, test anxiety, various sleep outcomes, and functioning in terms of energy and sleepiness. The first measurement time took part in the month prior to exams and the second one in the week in which students faced the highest number of exams. To verify our hypotheses, several cross-sectional path models were tested. This study mainly confirmed the unfavorable indirect effect of controlled motivation on sleep via increased test anxiety (i.e., fully mediated). In addition, autonomous motivation, partly via lower test anxiety, seemed to exhibit a buffering role in the emergence of dysregulated, insufficient sleep during exam periods (i.e., partly mediated). No evidence was found for an indirect effect of amotivation on sleep through test anxiety, yet, amotivation seemed to be directly associated with longer sleep duration and to a lesser extent with better sleep quality. Results and practical implications are discussed.

18. Liina Björg, Laas Sigurardttir, Loes van Rijn-van Gelderen, & Geertjan Overbeek: The longitudinal relationship between child temperament, parenting, and disruptive child behavior: The moderating role of socioeconomic status

Child temperament and parenting behavior have both consistently been shown to predict disruptive behavior in children. However, the relation between these two factors in the development of disruptive child behavior remains unclear. Moreover, inconsistencies in previous findings indicate that the effects of child and parenting characteristics on child maladjustment may depend on the broader sociodemographic context in which parent-child interactions occur. This study tested a longitudinal model in which parenting behavior mediates the relation between child temperament and disruptive behavior. Furthermore, we examined whether this developmental cascade varies by family socioeconomic status. The model was assessed using questionnaire and observational measures from a three-wave longitudinal, multi-informant study including 387 Dutch parent-child dyads with children

aged 4 to 8 years. Results will be presented from moderated mediation analyses conducted in R. We hypothesized that (1) difficult child temperament (i.e., negative affectivity and low effortful control) at T1 predicts less positive and more negative parenting behavior at T2, which in turn predicts elevated levels of disruptive child behavior at T3; and (2) this relation is stronger in families of low socioeconomic status. The study aims to provide a better understanding of the complex developmental pathways of disruptive behavior in children and may help inform intervention efforts by identifying the families most at risk.

19. Novika Purnama Sari, Maartje P. C. M. Luijk, Peter Prinzie, Marinus H. van IJzendoorn, & Pauline W. Jansen: Children's autistic traits and peer relationships: Do non-verbal IQ and externalizing problems play a role?

Children with autism have difficulties in understanding relationships, yet little is known about the levels of autistic traits with regard to peer relationships. This study examined the association between autistic traits and peer relationships. Additionally, we examined whether the expected negative association is more pronounced in children with a lower non-verbal IQ and in those who exhibit more externalizing problems. Data were collected in a large prospective birth cohort of the Generation R Study (Rotterdam, the Netherlands) for which nearly 10,000 pregnant mothers were recruited between 2002 and 2006. Follow up data collection is still currently ongoing. Information on peer relationships was collected with PEERS application, an interactive computerized task (M = 7.8 years). Autistic traits were assessed among general primary school children by using the Social Responsiveness Scale (M = 6.1 years). Information was available for 1,580 children. Higher levels of autistic traits predicted lower peer acceptance and higher peer rejection. The interaction of autistic traits with externalizing problems (but not with non-verbal IQ or sex) was significant: only among children with low externalizing problems, a higher level of autistic traits predicted less peer acceptance and more peer rejection. Among children exhibiting high externalizing problems, a poor peer acceptance and high level of rejection is seen independently of the level of autistic traits. We conclude that autistic traits – including traits that do not classify as severe enough for a clinical diagnosis – as well as externalizing problems negatively impact young children's peer relationships. This suggests that children with these traits may benefit from careful monitoring and interventions focused at improving peer relationships.

20. Quinty van der Heijden, Joanna Rutkowska, Julia Mermier, Marlene Meyer, Chiara Turati, Hermann Bulf, & Sabine Hunnius: Is infants' object exploration informed by emotions conveyed in adults' action kinematics?

Being able to identify and react to others' emotional states is necessary for establishing, engaging in, and maintaining social interactions (Oatley & Johnson-Laird, 2011). Addabbo and colleagues (2020) provided first evidence that 11-month-old infants are able to detect emotions from action kinematics, but it remains unknown whether infants can act upon this information. This study investigates whether emotional information conveyed in adults' action kinematics informs infants' object exploration. 11.5- to 13.5-month-old infants were shown videos of actors putting different toys in a box. This action was performed with two different kinematic profiles displaying the emotional state of the actor: positive emotional kinematics (happy) versus negative emotional kinematics (disgust/fear). Importantly, the actor's face was not visible in the videos. After presenting the stimuli, infants were given the opportunity to explore the same toys. We predicted that they would touch first, and look at and play more with the toy previously associated with positive kinematics, compared to the one associated with negative kinematics. This would demonstrate that infants are sensitive to the emotional information encoded in movement kinematics, like picking up and putting down toys, consistent with previous research (Addabbo, et al., 2020). In addition, it would show that infants use this information to inform their own actions. Data collection is still in progress. The final sample will consist of 50 participants, determined by power analysis, of which we have currently tested 41. We will present the final results at the conference.

21. Monika Donker, Fred Hasselman, & Susan Branje: Using Recurrence Quantification Analysis (RQA) to characterize parent-adolescent conflict interactions

Adolescence is often a period with many conflicts in the transition to a more equal relationship between parent and adolescent (Branje, 2018; Laursen & Collins, 2009). However, families differ in how such conflicts are handled. This poster presentation illustrates what interpersonal behavior parents and adolescents show during conflict interactions and what communication patterns might foster relationship quality.

Interpersonal behaviors were conceptualized as agency and communion (Horowitz & Strack, 2011). Agency stands for taking the lead in the interaction. Communion describes collaboration and friendliness in the interaction. The current study employed continuous coding of interpersonal behavior from videos of conflict interactions in real-life settings (Lizdek et al., 2012; Sadler et al., 2009). We expect that decreased parental agency and high communion will evoke agentic and communal behaviors in the adolescent, and thus will foster more equal relationships (Van Vemde et al., submitted).

In order to do justice to the dynamic and non-linear nature of interactions, we used Recurrence Quantification Analysis (RQA; Coco & Dale, 2014; Main et al., 2016; Webber & Zbilut, 2005). RQA is a relatively new statistical method that enables researchers to examine concurrent and time-lagged synchrony in behaviors. Concurrent synchrony gives information on covariation of parent and adolescent behavior. Time-lagged synchrony adds to this by providing insight in who is "driving" the interaction. The RQA indicators will be correlated with adolescent-reported relationship quality using the Network of Relations Inventory (Furman & Baumeister, 1985), as well as experienced psychological control (Barber, 1996) and autonomy granting (Silk et al., 2003).

22. Mengtian Xia, Astrid Poorthuis, & Sander Thomaes: Why do young children overestimate their task performance? A cross-cultural experiment

Young children are generally overconfident in their abilities, understanding, and knowledge, and tend to overestimate their performance on various tasks and activities. While this phenomenon has been well-established, the precise reasons why young children tend to overestimate themselves are not well understood. The present cross-cultural experiment addresses this issue and tests the possibility that children's self-overestimation is motivated, rather than merely due to cognitive immaturity. In the present between-subjects experiment we addressed the overarching question of whether young children's self-overestimation is motivated. We tested whether children estimate their task performance more accurately when they are promised a reward for accuracy. If they do, this would help explain previous evidence that even when children are able to accurately monitor their performance, they do not reliably incorporate this information in the estimations of their future performance—it may be more appealing or rewarding for them to be overly optimistic about their performance. We invited Chinese and Dutch children to work on both a cognitive and a motor task, and we tracked their estimated and actual performance across trials. We tested 104 children from the Netherlands (50% girls) and 89 children from Mainland China (49% girls). Participants were ages 4 and 5. All participants performed the motor task first, and then performed the memory task later the same day, with at least one hour between the two tasks. Participants were randomly assigned to the experimental group or the control group. The incentive lowered children's performance overestimation on the motor task ($p = .030$), especially among Chinese children ($p = .008$). Surprisingly, and different from previous findings with a similar task, children did not overestimate their performance on the memory task ($p = .366$). Our research provides the first empirical demonstration that young children's self-overestimation is, at least in part, motivated.

23. Hanan Bozhar, Susanne R. de Rooij, Anja Lok, Tanja Vrijkkotte, & Helle Larsen: The association between social media use and substance use behaviour among adolescents: The ABCD-Study

It has been hypothesized that more time spend on social media is related to a higher likelihood of high levels of substance use. It is expected that this association is moderated by parental rules

regarding screen time and substance use, leading to a less strong relationship between social media use and substance use behaviour when parental rules are present.

We used data from the Amsterdam Born Children and Development study measured at age 15-16 years (N=1787). We specifically investigated whether both frequent and problematic social media use (SMU) predicted the frequency and intensity of tobacco, alcohol, hashish/marijuana, and laughing gas intake, by using ordinal logistic regression models. Additionally, we examined whether parental rules on screen time and substances (smoking/alcohol/drugs), moderated the relationships between frequent and problematic use of social media, and substance use.

More frequent SMU, and problematic SMU behaviour were associated with tobacco intake at both higher frequency (OR=1.17; OR=1.20), and intensity level (OR=1.22; OR=1.16). Adolescents with more frequent SMU (OR=1.24; OR=1.21) and problematic SMU (OR=1.11; OR=1.10) were more likely to engage in frequent binge drinking, and consume more alcohol units per week (OR=1.11; OR=1.10). Also, increased frequency of daily SMU (OR=1.18; OR=1.15), and problematic SMU score (OR=1.10; OR=1.15) were associated with hashish/marijuana and laughing gas intake at higher frequency levels. Finally, parental rules on drugs and alcohol seem to be less effective in preventing frequent hashish/marijuana use ($p=0.001$), and binge drinking ($p=0.013$) among adolescents with higher problematic social media engagement. Parental use regarding screen time use did not moderate the associations.

This study confirmed the relationships between both the frequent and disordered use of social network sites, and more frequent and intense use of a broad spectrum of substances that adolescents are exposed to nowadays. Parental control in an early stage, however, might still play an important role in protecting adolescents from developing both disordered social media and substance use behaviour.

24. Olga Boer, Hanan El Marroun, & Ingmar H. A. Franken: Brain morphology predictors of alcohol, tobacco, and cannabis use in adolescence: A systematic review

In the last decade, extensive research has emerged on the predictive value of brain morphology for substance use initiation and related problems during adolescence. This systematic review provides an overview of longitudinal studies on potential pre-existing brain variations and later initiation of alcohol, tobacco, and cannabis use (N = 18). As this review focuses on the general population, participants were not specifically recruited as a member of a high-risk group e.g., those who were prenatally exposed to substances or had a family history of SUD. Adolescent structural neuroimaging studies that started before the substance use initiation suggest that a smaller anterior cingulate cortex (ACC) volume, thicker or smaller superior frontal gyrus, and larger Nucleus Accumbens (NAcc) volume are associated with future alcohol use. Also, both smaller and larger volumes of the orbitofrontal cortex (OFC) were associated with future cannabis use and combined alcohol/cannabis use. Smaller amygdala volumes were related to future daily tobacco smoking. These findings could point to specific vulnerabilities for adolescent substance use, as these brain areas are involved in cognitive control (i.e., the ACC), reward (i.e., the NAcc), motivation (i.e., the OFC), and emotional memory (i.e., the amygdala). The reported findings were inconsistent in directionality and laterality, and the largest study reported null findings. Therefore, future longitudinal large population-based cohort studies should investigate the robustness and mechanisms of these associations. We suggested future research directions regarding sample selection, timing of baseline and follow-up measurements, and a harmonization approach of study methods.

25. Mara van der Meulen, Simone Dobbelaar, Lina van Drunen, Stephan Heunis, Neeltje Blankenstein, & Eveline A. Crone: Growing up prosocially? Longitudinal trajectories of prosocial behavior from middle childhood into adolescence

Prosocial behavior is an important foundation for positive and reciprocal relationships. Various studies have demonstrated that prosocial behavior rapidly develops during early childhood, concurrent with development of socio-cognitive and –affective skills such as perspective taking and empathic reasoning.

However, findings on the development of prosocial behavior beyond early childhood are inconsistent, with research showing different developmental patterns for various forms of prosocial behavior. Since prosocial behavior is thought to be of particular importance of adolescents, we aim to examine development of prosocial behavior at three time points in the longitudinal L-CID study, spanning middle childhood to early adolescence (ages 7-13 years; NT1 = 512; NT2 = 456; NT3 = 336). We used the Prosocial Cyberball Game as a measure of prosocial compensating behavior. In this paradigm participants were asked to toss the ball to three other players, before and during a period of observed social exclusion of another player. Results in middle childhood suggest that children engage in prosocial compensating behavior. As a next step we will use a mixed-models approach to investigate longitudinal trajectories of prosocial behavior, to shed a light on whether socially competent children develop into socially competent adolescents.

Symposium title: How our measures of parenting impact our understanding of how parents shape children's development

Chair: Patty Leijten

Discussant: Stefanos Mastrotheodoros

Symposium abstract: Because children's psychological development is in part driven by their parents behavior, accurate assessments of parenting are key for our understanding of the role that parenting plays in children's development. This symposium brings together a group of researchers committed to discerning and improving our measures of parenting as a means to better understand how parents shape children's psychological development.

Specifically, we address the extent to which measures of seemingly distinct parenting constructs actually measure distinct (versus largely similar) parenting behaviors (Presentation 1); the extent to which parenting can be captured with one-time assessments requiring parents to reflect on their behavior (versus repeated assessments of actual behavior) (Presentation 2); and the extent to which our reliance on primarily linear associations in theory and intervention development is problematic (Presentation 3).

Together, these presentations use novel methodological and statistical techniques to improve our understanding of how seemingly subtle but meaningfully different ways of measuring parenting leads to different conclusions about how parents shape their children's development.

Speaker and presenters

Different instrument, same content? A systematic comparison of child maltreatment and harsh parenting instruments

Sophia Backhaus, Patty Leijten, Franziska Meinck, & Frances Gardner

Objectives: Child maltreatment and harsh parenting both include harmful actions by parents towards children that are physical (e.g., spanking) or emotional (e.g., threatening). The distinction between these two constructs, in meaning and measurement, is often unclear. Yet, how we define and operationalise harsh parenting and child maltreatment has profound implications for how we understand it, synthesise evidence, and inform policy. The goal of the present study was therefore to analyse and quantify overlap and distinction in content within and between parent self-report instruments of harsh parenting and child maltreatment.

Methods: In our systematic comparison, we included a) child maltreatment instruments identified in a recent systematic review on parent-reported child maltreatment measurements (Yoon et al. 2020), and b) harsh parenting instruments identified in a recent systematic review of 278 parenting intervention evaluation studies. We qualitatively assessed the content of the instruments and quantified the overlap between child maltreatment and harsh parenting instruments.

Results: We identified 25 measures, distinguishing between 22 harmful behaviours. The overlap in parenting behaviours was 73%. All physical behaviours measured in harsh parenting instruments (e.g., spanking, beating up) were also measured in child maltreatment instruments. Unique physical behaviours measured in child maltreatment instruments included twisting body parts and choking. All emotional behaviours in maltreatment instruments were included in harsh parenting instruments, and vice versa.

Conclusions: Our findings suggest similar, but not identical, operationalisations of child maltreatment and harsh parenting. Our findings can help guide discussions on definitions, operationalisations, and their consequences for research on violence against children.

Using daily diary assessments to better understand the role of parental consistency in the development of externalizing child behavior

Alithe van den Akker, Patty Leijten, Peter Hoffenaar, & Frances Gardner

Objectives. Social learning theories emphasize inconsistent discipline as playing a key role in intensifying behavior problems (Patterson, 1982). Most research operationalizes consistency by asking parents whether they think they are consistent (e.g., Frick et al., 1999). In this study, we examine parental consistency derived from parents' daily reports of how they respond to episodes of disruptive child behavior. We differentiate consistent responding within a single episode of misbehavior from consistent responding across multiple episodes.

Methods. In two samples, we compute the Index of Qualitative Variation (Frankfort-Nachmias & Leon-Guerrero, 2018) to assess across-episode consistency, and the mean number of different reactions within externalizing behavior episodes to assess within-episode consistency. Sample 1 consists of 134 mothers of 1–5 year old children ($M = 30$ months, 44.3% girls), who reported on responses to their child's temper tantrums for 7 days; Sample 2 includes 156 parents (94% mothers) of 3-8 year old children ($M = 5.88$; 47% girls) oversampled for disruptive behavior, who reported on their responses for 14 days.

Results. Preliminary results indicate divergent validity of within- and across episode consistency ($r_{\text{within-across}} = .63, p < .001$), and a small association between these measures derived from diary data and based on parents reports of how they generally respond ($r_{\text{acrossDiary-acrossGeneral}} = .28, p < .001$). Final results are expected in April and include associations between the severity of externalizing behavior and the inconsistency measures, both concurrently (Samples 1 and 2) and prospectively (for Sample 1).

Hypotheses and analytic plan will be registered on the Open Science Framework.

Individual family differences (and lack thereof) in parental cognitions and behaviors indicating disruptive child behavior

Patty Leijten, G. J. Melendez-Torres, Peter Hoffenaar, & Alithe van den Akker

Objectives. Most empirical support for our developmental psychological theories on how parents contribute to the development of disruptive child behavior is derived from associations of parenting and child behavior based on differences between families. These associations do not necessarily reflect the patterns that shape parenting and child behavior within families—the patterns our theories intend to explain. Moreover, the heterogeneous and difficult to predict effects of interventions to help parents manage disruptive child behavior imply that the parenting behaviors targeted in these therapies are not equally relevant for all families. This study identifies how parent cognitions and behaviors from dominant theories indicate daily incidences of disruptive child behavior.

Methods. One hundred fifty-six parents (child age 3-8 year; 69% (sub)clinical conduct problems) completed 14 daily assessments ($N_{\text{assessments}} = 2,075$) of disruptive child behavior, parent cognitions (self-efficacy) and behaviors (positive involvement, positive reinforcement, and harsh, lax and non-violent discipline). We performed multilevel modeling with days (Level 1) nested within families (Level 2).

Results. Across families, parents' daily positive involvement with the child showed a consistent non-linear negative relation with daily disruptive child behavior. All other patterns differed significantly between families and suggest that inter-relatedness of parent cognitions and behavior and child disruptive behavior is stronger in families with more mental health problems (for parental self-efficacy and harsh discipline) and in older children (for harsh discipline).

Discussion. The identified nonlinear patterns and individual family differences refine classical theories on parenting and disruptive child behavior.

Symposium title: Understanding and promoting adolescents' societal contributions

Chairs: Judith van de Wetering and Jenna Spitzer

Symposium abstract: Adolescents desire to make contributions to society, and they can do so in a meaningful way (Crone & Fuligni, 2019; Fuligni, 2019). At the same time, their opportunities to contribute can be limited, which sometimes keeps them from translating their desires into action. Moreover, traditional policies to promote societal contributions often do not reach their potential, especially when they are insufficiently geared to adolescents' needs for establishing autonomy and relatedness (Thomaes et al., 2021; Yeager et al., 2018). This symposium brings together a group of scholars who seek to understand and promote adolescents' societal contributions. Among others, their research explores the ways in which policies may capitalize on adolescents' developmental needs to support them in contributing – in the form of civic engagement more generally, and pro-environmental behavior specifically.

The first presentation cross-sectionally examines the mismatch between adolescents' and young adults' need to contribute and their perceived opportunities to do so. The second presentation outlines the design for a study that scrutinizes the links between adolescents' perceived autonomy support (from school, parents, and peers) and their civic attitudes. The third presentation experimentally tests, as proof of concept, whether presenting pro-environmental behavior as relevant to adolescents' need for autonomy can motivate them to behave pro-environmentally. The fourth presentation experimentally tests how psychological needs-satisfying and needs-frustrating messaging affect adolescents' emotional reactions while learning about climate change. We hope this symposium will encourage researchers to identify further opportunities to harness and activate adolescents' potential to become active citizens from a young age.

Speaker and presenters

Needs and opportunities for societal contribution in adolescence and early adulthood
Lysanne te Brink, Renske van der Cruijssen, Kayla H. Green, & Eveline A. Crone

Adolescence is not only characterized as a period of heightened sensation seeking and risk vulnerability, but also as a period in which individuals have a high need to contribute to society. Research during the initial phase of the Covid-19 crisis shows that the need of adolescents for societal contribution did not change in comparison to pre-pandemic levels, but this may have changed with the longer duration of the pandemic. In this study, we therefore examined the associations between sensation seeking and the experienced need and opportunities for societal contribution during the Covid 19-pandemic in a sample of adolescents and early adults (N = 660, Mage = 22.91, SD = 3.14). Results showed that sensation seeking was positively associated with the experienced need to contribute to society. We also found that the experienced need for societal contribution was significantly higher than the perceived opportunities. This indicates that there may be a disbalance between the need that adolescents have to raise their voice and help community members, and the degree to which they feel that they can actually contribute.

Examining (in)congruency within adolescents' civic context: How are civic attitudes and perceived autonomy-support of parents, peers and school related to adolescents' civic attitudes?

Esther Karkdijk, Remmert J. M. Daas, Geert T. M. ten Dam, & Anne Bert Dijkstra

Adolescence is considered to be an important developmental period for developing civic attitudes, as reflected in an increasing societal and scientific interest in citizenship education. Broadening our view to other important socializing agents is important to increase understanding of how adolescents' civic context is related to their civic attitudes. Following Bronfenbrenners' ecological system theory

(Bronfenbrenner, 1979), the home, peer and school context are expected to be interrelated. In this study, we aim to examine how civic attitudes and perceived autonomy-support of three socializing agents (school, parents and peers) are related to adolescents' civic self-efficacy, social trust and attitude towards immigrants. We expect that perceived autonomy-support – feeling encouraged to express opinions, wishes and needs (Ryan & Deci, 2000) –, will be positively related to civic attitudes. In an autonomy-supportive context, adolescents may get opportunities to practice and learn democratic values, for example by joint decision making and making compromises (Miklikoswka & Hurme, 2011).

In our study, Dutch secondary school students (N 500, 14 years old) who participate in the International Civic and Citizenship Education Study (ICCS) 2022 will fill out an online questionnaire. ICCS scales will be used for measuring civic attitudes and perceived class climate. The additional questionnaire will assess (a) perceived autonomy support of parents and peers, (b) perceived responsiveness of parents, (c) perceived friendship quality, and (d) perceived civic attitudes of parents and peers. Data collection will take place between March and June 2022. The design of this study will be presented at the VNOP Conference 2022.

Can we promote adolescents' pro-environmental behavior by harnessing their autonomy motive? A controlled experiment

Judith van de Wetering, Stathis Grapsas, Astrid Poorthuis, & Sander Thomaes

Adolescents can take the lead in mitigating the current environmental crisis. Still, they do not always act upon their environmental concerns (Marcinkowski & Reid, 2019; United Nations, 2015). To engage adolescents in sustainable change, it is important to understand pro-environmental behavior from the viewpoint of adolescent psychology. Therefore, we propose and experimentally test, for the first time, the motive alignment hypothesis. This hypothesis states that adolescents will be especially driven to engage in pro-environmental behavior if they construe such behavior as directly relevant to motives for autonomy and status, which are salient during adolescence (Crone & Dahl, 2012; Yeager et al., 2018). In our study, Dutch secondary school students (N 400, aged 13 to 18) are randomly assigned to one of four experimental conditions, wherein they watch a video on deforestation. In autonomy motive alignment conditions, the video presents pro-environmental behavior as an (a) autonomous expression of personal values or (b) opportunity to rebel against authority. In autonomy motive misalignment conditions, the video (c) presents pro-environmental behavior as mandatory, using prescriptive language, or (d) does not encourage pro-environmental behavior at all. Afterwards, participants can donate part of their financial reimbursement to environmental charities and sign a petition addressed to a company that enables deforestation. We expect that participants in motive alignment conditions, compared to those in misalignment conditions, will donate higher amounts of money and will be more likely to sign the petition. Data collection is concluded in March 2022 and results will be presented at the VNOP Conference 2022.

What drives adolescents' emotional reactions while learning about climate change? A Self-Determination Theory perspective

Jenna Spitzer, Stathis Grapsas, Astrid Poorthuis, & Sander Thomaes

The emotions adolescents experience in response to climate change are central to their climate-related mental wellbeing and their engagement in pro-environmental behavior (Crandon et al., 2022; Ojala, 2016). To understand what drives these emotional reactions, two exploratory experiments investigated the effects of psychological needs-satisfying and needs-frustrating messaging on adolescents' emotions as they read about climate change. In Experiment 1 (N = 138; 45.7% female), American 15–19-year-olds read information about climate change followed by needs-satisfying, needs-frustrating, or no (control) messaging and subsequently reported their emotional states. Needs-satisfying messaging led adolescents to experience less anxiety, fear, and sadness compared to needs-frustrating messaging (partial $\eta^2 = .07, .05, \text{ and } .05$, respectively). In Experiment 2 (N = 261; 55.9% female), American 15–19-year-olds read information about climate change embedded with needs-satisfying, needs-frustrating, or no (control) messaging and subsequently reported their emotional states. Compared to no messaging, needs-satisfying messaging led adolescents to experience less anxiety (partial $\eta^2 = .03$), and needs-frustrating messaging led adolescents to report more emotions suggesting disengagement (i.e.,

enjoyment, pride, and relief; partial $\eta^2 = .04, .04, .02$). Consistent with Self-Determination Theory, these studies suggest that needs-satisfying messaging can alleviate adolescents' climate change anxiety (Experiments 1 and 2). Furthermore, they suggest that psychological need frustration can exacerbate adolescents' negative emotions (Experiment 1) and emotional disengagement (Experiment 2). These findings indicate the importance of tending to adolescents' basic psychological needs to promote their wellbeing and, potentially, their proactive responses to the environmental crisis.

Symposium title: Romantic attraction and dark personality traits from early to late adulthood

Chair: Iris Frowijn

Symposium abstract: The search for a romantic relationship is of all times, but the ways in which we find romantic partners has changed. What predicts romantic attraction to another person, but more specifically to another person with dark personality traits? The first presentation focuses on this romantic attraction to villains and heroes by using a picture-based research design to investigate whether and why women are romantically attracted to dark personalities. The second presentation corroborates on this by focusing on narcissistic traits subdivided in admiration and rivalry. In the third presentation, dark personality traits will be connected to recent mobile dating apps and the potential consequences regarding sexual offending. Finally, the fourth presentation reveals specific pathways from sexual motives to sexual behavior on the mobile dating app Tinder.

Speaker and presenters

We don't choose whom we love: Predictors for romantic attraction to villains

Iris Frowijn, Lisa M. W. Vos, Erik Masthoff, & Stefan Bogaerts

Introduction: Why are women (not) romantically attracted to dark personalities or villains, which might be a risk factor for intimate partner violence (IPV) victimization? In the current study, it is opted to investigate how adult attachment, maladaptive personality, and acceptance of couple violence in women predict romantic attraction to heroic/villainous characters using structural equation modeling (SEM). Method: First, a pilot study was conducted in 122 heterosexual women (aged 16–25) to select male TV characters. This resulted in the selection of six villains and 10 heroes for the main study, in which 194 other heterosexual women (aged 16–25) were asked to rate the pictures of TV characters through an online questionnaire. This was combined with self-report measures of maladaptive personality traits, acceptance of couple violence, and adult attachment. These variables were entered into a SEM model to assess model fit. Results: Overall, women rated heroes higher on physical appearance (pilot study) and romantic attraction (main study) compared to villains. We found different direct effects of avoidant (negative) and anxious (positive) attachment styles on romantic attraction to heroes. Moreover, maladaptive personality traits fully mediated the positive effect of avoidant attachment style on romantic attraction to villains. Discussion: Despite the limitations of the study design (e.g., low N, low notoriety of the TV characters), this study emphasizes that women are generally more romantically attracted to heroes (vs. villains). Besides, there are different predictors of romantic attraction to heroes and villains, which requires further investigation, especially in the context of IPV.

Who falls in love with a narcissist? Testing women's romantic attraction towards fictional male characters

Lisa Vos, Iris Frowijn, & Manon A. van Scheppingen

The present research examined whether women's adult attachment style, thrill-seeking, impulsivity, and narcissistic traits are associated with their level of attraction towards narcissistic men. To obtain a complete understanding of the impact of narcissism on romantic attraction, two trait dimensions of grandiose narcissism need to be distinguished: narcissistic admiration (i.e., promoting oneself to gain admiration) and narcissistic rivalry (i.e., devaluing others to protect one's self-view). Participants (195 heterosexual women, $M_{age} = 20.78$, $SD = 2.40$) were asked to rate 25 pictures of fictional male characters who score relatively high or low on narcissism on how romantically attracted they are to the character. Using multilevel modelling, we found that women were more attracted to men with high levels of narcissistic admiration compared to low levels of admiration. By contrast, women were less attracted towards men with high scores on narcissistic rivalry compared to low scores. The response surface analysis revealed that women who scored high on impulsivity or avoidant attachment (vs. low)

were (to a small extent) more attracted towards men with high scores on narcissistic rivalry. Additionally, we discovered that women who scored high on thrill-seeking (vs. low) were more attracted to narcissistic admiration, and to a lesser extent to narcissistic rivalry. Finally, we found no evidence that women who scored high on narcissism were more attracted to narcissistic men. Identifying women who are attracted to narcissistic men can help in the prevention or treatment of the negative consequences related to narcissism in romantic relationships.

From mobile dating apps to sexual offending: The effect of dark personality traits, motives and gender differences

Elieen De Caluwé, Elisabeth Timmermans, & Carlo Garofalo

Background: While a recent study already showed interesting associations between general personality traits and mobile dating app motives, not much is known about the association with maladaptive traits. Especially the most pathological traits (i.e., psychopathy, narcissism, machiavellianism and the antisocial and narcissistic personality traits) are intriguing in this regard. Indeed, these traits might be linked to egocentric motives, as opposed to relational ones, such as higher interest in casual sex, more sexual partners and potential dangerous online and offline behavior (manipulation, assault, sexual violence), which is often seen in sexual offending. This study will investigate the association between maladaptive personality traits and mobile dating app motives, and the moderation effect of gender.

Method: Three studies were conducted. In Study 1, 439 Tinder users (18-49 years old, $M = 22.75$; 71.5% women; 82% singles) completed the Short Dark Triad and the Tinder Motives Scale (TMS). In Study 2, 860 Tinder users (18-73 years old, $M = 27.28$; 60.7% women; 70.3% singles) completed the 120-item NEO Personality Inventory 3 First Half and the TMS. Study 3 is being conducted and represents a replication and extension of Studies 1-2.

Results: Men scored significantly higher on all dark traits and the Tinder motives of casual sex, relationship seeking and improving flirting skills. Regression analyses showed that those with dark personalities are less interested in relationship seeking but mainly use Tinder for casual sex and entertainment, what might result in potentially dangerous situations such as sexual offending.

Tinder and the Dark Triad: From sexual motive to sexual behavior

Lotte Bant & Elieen De Caluwé

This study investigated whether Dark Triad traits (narcissism, psychopathy and machiavellianism) moderate the relationship between the sexual Tinder motive and casual sexual behavior with other Tinder users. It was expected that individuals who score higher on the sexual Tinder motive engage in casual sexual behavior more often (i.e., main effect), and that this would be especially the case for those scoring higher on the Dark Triad (i.e., moderation effect), as these traits are often related to more sexual behavior with the strongest moderation effect for machiavellianism. Further, we hypothesized that this moderation effect would be the strongest for machiavellianism. In total, 422 current Tinder users (73.7% females; 85.5% heterosexuals; 18-49 years old, $M_{age} = 22.72$ years old, $SD_{age} = 3.85$) completed the Tinder Motives Scale and Short Dark Triad. Logistic regression analyses were performed to examine this relationship. Logistic moderation analyses revealed no significant interaction effects; however, three significant main effects emerged: higher scores on the sexual Tinder motive, psychopathy and machiavellianism were associated with increased casual sexual behavior. In conclusion, higher scores on psychopathy and machiavellianism ensure that individuals switch easier to casual sexual behavior via Tinder. Future research could include samples with more equal gender distributions and reveal patterns of sexual behavior related to dating apps.

Keynote (plenary)

16:30 – 17:30

Aula

Keynote title: What is needed to promote child and adolescent mental health?

Speaker: Marloes Kleinjan

Keynote abstract: The significance of child and adolescent mental health on conditions across the life course has become clear in the past few decades. Also, because of covid-19 the attention for mental health has increased and more resources are becoming available to invest in mental health promotion. For example, in the Netherlands, 'well-being and social-emotional development' have become a subject within the National Education Investment Programme and a National Prevention Deal on Mental Health is currently in the making. This is good news, because investing in mental health and the prevention of psychological problems can contribute to experiencing a good quality of life and strengthen the feeling of belonging, as well as the feeling of being able to participate in society. Moreover, it could lead to lower healthcare costs and lower risks of developing psychological disorders later in life. However, the question is whether we currently have the right building blocks and infrastructure in the Netherlands and internationally to be able to effectively focus on strengthening mental health and the prevention of psychological problems in youth. I believe there is still much to be gained here: the range of preventive interventions is fragmented; we still know too little about their effectiveness; interventions are often not well embedded; and there is no good infrastructure for sustainable implementation. In my talk I will discuss what I believe is necessary to improve prevention in the field of mental health.

Abstracts Wednesday 24 May

Symposium (parallel session)	9:30 – 10:45	Aula
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Symposium title: Interventions for youth: Can we enhance current treatment effects?

Chair: Sophie Alsem

Symposium abstract: Children and adolescents who have psychological problems, are at serious risk for adverse outcomes later in life. Therefore, it is of great importance to intervene and in this way decrease youth's problems. This symposium addresses several interventions developed to enhance treatment effects. Specifically, the researchers investigate whether interventions work. First, Eline Wagemaker will present her two pilot studies, examining whether a new training can increase resistance to peer influence in adolescents with mild-to-borderline intellectual disability. The second talk, by Janna Keulen, is on Acceptance and Commitment Therapy (ACT), specially developed for transitional-age youth (age 15 to 25). She will present the design of a randomized controlled trial to examine the (cost-)effectiveness of ACT your way in youth with various psychopathologies. The third talk, by Iza Scherpbier, will focus on the additive value of virtual reality in parent-child interaction therapy for young children with behavioral problems and their parents. She will present preliminary results for a few cases within a multiple baseline single-case experimental design with 15 families. Fourth, Sophie Alsem will present the results of a randomized controlled trial examining whether virtual reality can enhance treatment effects for children's aggressive behavior problems.

Speaker and presenters

'Dealing with peer influence' - Pilot studies on the effectiveness of a training to increase resistance to peer influence in adolescents with mild-to-borderline intellectual disability

Eline Wagemaker

Adolescents with mild-to-borderline intellectual disability (MBID) show more risk taking under peer influence than adolescents without MBID. To increase their resistance to peer influence, the training 'Dealing with peer influence' has been developed. In 2021, a first pilot study was conducted with 5 adolescents with MBID (13-14 years) at their vocational school. The training consisted of 8 group sessions of 1.5 hours. Before and after the training, self- parent and teacher reports were administered about resistance to peer influence, prosocial behavior, problems with peers and risk taking. Moreover, adolescents filled out an online daily diary about their experiences with peer influence one week before and one week after the training. Results showed that resistance to peer influence was not higher after the training as compared to before the training. Also, adolescents did not report any experiences with peer influence in their daily diaries. Nevertheless, some promising results were found on their prosocial behavior, problems with peers and risk taking. Additionally, it was observed that adolescents had low motivation to follow the training and that sessions could be too long. Based on these results, the training is improved. For example, the training now starts with motivational interviewing and exists of 12 shorter, more frequent sessions. Also, the daily diary has been improved and teachers also observe peer influence at school. Currently, a second pilot following a N=1 design is conducted. If possible, preliminary results will be presented. Feedback from both scientific as well as clinical angles is appreciated.

ACT your way - A transdiagnostic intervention for transitional-age youth: Protocol of a randomized controlled trial

Janna Keulen

Studies show that transitional-age youth (TAY; age 15 to 25) experience more psychological problems than other age groups. An effective intervention for this specific age group seems warranted.

However, there is a lack of interventions specifically developed for this age group. We propose ACT your way, a transdiagnostic intervention specially developed for TAY. ACT your way is based on the principles of Acceptance and Commitment Therapy (ACT). The main purpose of ACT is to promote psychological flexibility, a transdiagnostic mechanism which can be defined as an individual's acceptance of negative feelings, thoughts and physical sensations and the ability to choose an adaptive (and more effective) response. Meta-analyses including adults show that ACT is an effective intervention for individuals with depression, anxiety and other types of psychopathology. Additionally, the few studies that investigated the effects of ACT in youth (including a pilot study examining the effects of ACT your way in TAY with recurrent depression) show promising effects. However, most of these studies lack an adequate sample size, do not use control groups, or are case studies. Furthermore, no research has been done in TAY with a wide range of psychological disorders. Considering this, the goal of this study is to examine the (cost-)effectiveness of ACT your way, by comparing ACT your way with treatment as usual (TAU) in 134 TAY with various psychopathologies (including chronic, comorbid and recurrent diagnoses). Furthermore, we will examine several moderators and mediators to study for whom the intervention is effective and how the intervention works.

The added value of virtual reality to the Parent-Child Interaction Therapy: Preliminary results for a Single-Case Experimental Design

Iza Scherpbier

Parent-Child Interaction Therapy (PCIT) is an evidence-based behaviour parent training treatment aimed at young children (2-7 years old) with behavioural problems. PCIT aims at improving the quality of parent-child relationships and changing parent-child interaction patterns. PCIT is divided into two phases. The first phase focuses on strengthening the parent-child relationship, increasing positive parenting skills, and creating a foundation for children to regulate behaviour and emotions. In the second phase, parents are taught to set consistent boundaries, whilst still practicing with positive parenting skills. Current study further promotes a key element of PCIT – live coaching –, by adding Virtual Reality (VR) as an additional homework-element to help parents enhance positive parenting skills. Parents are encouraged to practice taught parenting skills with VR out loud in the comfort of their own home. These virtual scenario's display a child playing with PCIT appropriate toys, and include feedback moments, simulating therapists' in-session coaching. With a multiple baseline Single-Case Experimental Design (SCED) with 15 families, the effectiveness of PCIT-VR is measured through visual analysis, quantitative individual and group analyses, as well as qualitatively. All families receive VR-modules, at randomly assigned moments in first phase of treatment. We hypothesise that attrition based on lack of improvement of positive parenting skills could be minimised, and that less sessions are needed to complete the treatment due to the addition of VR. Data collection is ongoing until 2023 and preliminary results for first quantitative individual analyses will be presented. The VR-addition to PCIT seems promising and well applicable.

Treating children's aggressive behavior problems using cognitive behavioral therapy with virtual reality: A multicenter randomized controlled trial

Sophie Alsem

The effects of current evidence-based cognitive behavioral treatments (CBT) on children's aggressive behavior problems are modest. Interactive virtual reality may provide more realistic training opportunities to practice social problem solving skills, enhancing CBT effectiveness. We conducted a multicenter randomized controlled trial to test this hypothesis in 115 boys with aggressive behavior problems (Mage = 10.58, SD = 1.48) recruited in clinical centers. They were randomized into three groups: CBT with virtual reality, CBT with roleplays, or care-as-usual. We examined treatment effects on children's aggressive behavior problems and potential benefits of virtual reality for emotional engagement, practice immersion, and treatment appreciation. We adopted a multi-informant approach (parents, teachers, children) and used Bayesian analyses to examine which treatment was more likely to be effective. CBT with virtual reality was more likely to reduce aggressive behavior compared to care-as-usual for six out of seven outcomes (range ds .19–.95), and compared to CBT with roleplays for four out of seven outcomes (range ds .14–.68). Moreover, compared to roleplays,

virtual reality was more likely to enhance children's emotional engagement, practice immersion, and treatment appreciation. Thus, virtual reality may be a promising tool to enhance CBT effectiveness for children with aggressive behavior problems.

Symposium title: New perspectives on loneliness: Measurement and risk factors

Chair: Marlies Maes

Discussant: Luc Goossens

Symposium abstract: Loneliness is a common experience, not only for elderly or adults, but also for children and adolescents. However, for some people, loneliness has pervasive consequences for mental and physical health. It is, therefore, of utmost importance to understand what may put individuals at risk for experiencing loneliness. As loneliness is a subjective experience, in most research it has been measured using self-reports. To this end, several loneliness questionnaires have been developed. However, it is not yet clear how those different measures relate to each other, challenging the integration of research findings. The first presentation will offer a conceptual framework linking all different measures together. Moreover, psychometric properties of the different measures, developed for and/or used with children and adolescents, will be discussed. The second and third presentations will offer important insights into risk factors of loneliness. In the second presentation, an expansive range of risk factors will be presented, including demographics, frequency of social contact, and societal participation. Focusing on a broad age range, from adolescence throughout adulthood, age-specific risk factors will be discussed. In the third presentation, a newly developed framework will be presented, based on the important role social norms may play in the development of loneliness, especially among adolescents. In this model, it is proposed that individuals who deviate from social norms are at an increased risk for feeling lonely. The discussant of the symposium is a well-known expert on loneliness, who will integrate the different presentations, provide new insights, and suggest avenues for future research.

Speaker and presenters

The measurement of loneliness: A Review of commonly used loneliness questionnaires

Marlies Maes, Gerine M. A. Lodder, Marcus Mund, & Pamela Qualter

When people perceive their relationships to be deficient either regarding the quantity or the quality, they experience a sense of loneliness. Several questionnaires have been developed to assess loneliness, both from a unidimensional and a multidimensional perspective. Researchers adhering to the multidimensional perspective, assume that different types of loneliness exist. In the loneliness literature, different classification schemes have been proposed, using different terminology. Hence, it is often unclear how the different existing loneliness measures relate to each other. The current review introduces a comprehensive conceptual framework of loneliness, which integrates the different types and classification schemes of loneliness that have been suggested in the literature. Moreover, we discuss the psychometric properties of commonly used loneliness questionnaires, focusing on score and test-retest reliability, factor structure, and measurement invariance. Evidence on those psychometric properties is obtained using the MASLO (Meta-Analytic Study of Loneliness) database, which currently includes over 2,000 studies using one of the commonly used loneliness questionnaires ($k = 2,615$). Strikingly, the content of some items in most measures shows a poor fit with the definition of loneliness. Regarding the psychometric properties, reliability was generally high across the loneliness measures. Factor structure was well-established for some measures, but not for others. Evidence on measurement invariance was lacking for most questionnaires.

Risk factors of loneliness across the life span

Elody Hutten, Ellen M. M. Jongen, KlaasJan Hajema, Robert A. C. Ruiter, Femke Hamers, & Arjan E. R. Bos

Although loneliness is typically associated with adolescence and old age, research has revealed that it is prevalent across the life span. The present study contributes to the loneliness literature by investigating a broad range of risk factors in a Dutch sample (N = 52,341) ranging from late adolescence to old age using a cross-sectional survey administered by the regional public health services in the province of Limburg in the Netherlands. Risk factors associated with higher levels of self-reported loneliness across the life span were being male, lower education levels, inadequacy of financial resources, mental health, informal caregiving that is experienced as burdensome, and limited social contact or network type. In addition, in early adulthood, having a non-western migration background and having a physical disability were associated with higher levels of loneliness, whereas living alone, having a non-western migration background, and not having a paid job were risk factors of loneliness in middle adulthood. In late adulthood, living alone and having a physical disability were associated with loneliness. The present study demonstrates that different stages of life are associated with different vulnerability factors of loneliness. Hence, the prevention of loneliness might require different interventions in different age groups.

The loneliness of the not fitting in: How deviations from social norms can help explain loneliness among youth (across cultures)

Luzia Heu

Loneliness is an important health risk, which is why it is important to understand what can cause persistent or severe loneliness. Previous research has identified numerous personal or relational risk factors for loneliness. Cultural predictors, however, have been considered less. The new model of Norm Deviations and Loneliness (NoDeL) proposes that social norms, which are defining features of culture, can help explain loneliness within and across cultural contexts. Specifically, people who deviate from social norms are suggested to be at an increased risk for feeling lonely because they are more likely to experience relationship dissatisfaction, unfulfilled relational needs, feelings of alienation, and/or social rejection. Norm deviations may be particularly relevant to explain loneliness among adolescents and young adults because youth seem to be more sensitive to social norms and rejection than other age groups, while reporting stronger loneliness. Given that social norms furthermore vary by social, geographical, and temporal context, they can be considered cultural moderators between individual-level risk factors and loneliness: Personal or relational characteristics such as shyness or being single may increase the risk for loneliness particularly if they do not fit social norms in a specific environment. Integrating previous quantitative and qualitative findings, the NoDeL hence offers a framework to predict both loneliness and cultural differences in risk factors for it.

Symposium title: Capturing developmental and learning processes

Chair: Laura Cuijpers, Lisette de Jonge-Hoekstra, Merlijn Olthof and Steffie van der Steen

Symposium abstract: Capturing processes of learning and development is a methodological challenge. Moreover, when studying learning and development, we often emphasize one aspect of the process at the cost of another. For example, we may focus on either qualitative or quantitative data, or on either experiential or behavioural data. Complex dynamical systems methodology, such as time series analyses, offer valuable tools to capture these versatile processes. In this symposium, we provide examples using these tools to integrate different types of timeseries data to understand learning and development.

Speaker and presenters

Agency and social unity in joint action and its breakdown

Laura Cuijpers, Namkje Koudenburg, & Kerry Marsh

Joint action can take many forms: whereas rowers synchronise their movements, dancers often engage in closely coordinated complementary action. Even in martial arts, fighters closely coordinate their movements in an effort to understand and control their opponent's movements. In joint actions such as these, affordances emerge from the coordination between the agents in the social system. This poses an interesting tension: how is an agent's experience of agency and social unity affected, when the agent's possibilities for action are dependent on the actions of their partner/opponent?

Studying the relation between psychological experience and movement behavior in ecologically valid experimental setting poses a methodological challenge. We investigate this using an ecologically valid and dynamical systems approach, measuring perceptions and behaviour rigorously in naturalistic tasks that are 'free' enough to allow for natural behavior to emerge.

In this research, we connect methods from psychology (semi-structured interviews and questionnaires) with human movement sciences (kinematic and kinetic time series). Using empirical examples from rowing, dance and martial arts, we discuss how determining the link between psychological states during coordination and accidental or intentional breakdowns (in cooperative failure or combative success, respectively) provides insights into fundamental debates about the nature of joint action.

Two make a whole – How is children's multimodal and multiscale coordination during dyadic problem solving related to their collaboration and level of performance?

Lisette de Jonge-Hoekstra

When children solve cognitive problems together, they coordinate their speech, hand movements and head movements. Previous studies with adults have shown that such multimodal coordination is related to better collaboration. We do not know whether this is also true for children, however. In this study, dyads of children (age: 6-10 years) discussed and solved a series of balance scale problems together. To investigate children's multimodal and multiscale coordination, we measured their speech, hand movements and head movements throughout their bouts of discussion, and applied cross wavelet analysis on these timeseries. Furthermore, we coded the type of collaboration the children engaged in during these bouts of discussion. In addition, we measured their level of performance with regard to predicting to which side the balance scale would tilt. We will analyse how children's multimodal and multiscale coordination is related to the type of collaboration they engage in and to their level of performance on the balance scale problems. Our results will provide important insight into how successful collaboration between children emerges from their multimodal and

multiscale coordination over time. Person-relevant development transitions in psychotherapy: individual differences and relation with treatment outcome.

The best of both worlds? *General* developmental principles in *personalized* intensive longitudinal data

Merlijn Olthof

Examining longitudinal patterns of therapeutic change offers a window into developmental processes. The question of how day-to-day experiences relate to emergent and lasting structures of behavior (i.e., psychopathology and mental health) is at the heart of developmental science. Based on a complex systems framework we examine developmental transitions and instabilities in fully personalized daily self-ratings of patients receiving psychotherapy for mood disorders. First, we extract features of such transitions and instabilities from the individual time series data. Then, we cluster patients based on these features using a hierarchical clustering analysis. Last, we compare the different clusters in terms of therapy outcome. We hypothesize that patients who appear to have experienced a developmental transition have a better therapy outcome than patients who appear to not have experienced a developmental transition. For more ambiguous clusters that may result from the analysis, we have no specific hypothesis regarding outcome. Overall, this research is aimed to shed light on the different kinds of developmental processes that take place in psychotherapy and how they can be understood from complex systems principles. As these complex systems principles have a certain universality, the present study may also inspire research on developmental processes in different contexts and on different timescales.

The relationship between parent-child synchrony and social behavior of children with Autism Spectrum Disorder and children with Down Syndrome

Steffie van der Steen

Dyadic synchrony - an observable interaction pattern that is co-regulated and temporally coordinated - is positively associated with social competence (Harrist & Waugh, 2002). Children with Autism Spectrum Disorder (ASD) and children with Down Syndrome (DS) both have trouble to synchronize their behavior with others. Yet, the origin of their social challenges seems fundamentally different: While children with ASD have trouble to understand others and read their behaviors, children with DS often experience motor and cognitive challenges (Sigman et al., 1999).

In a mixed method study, we investigated differences in dyadic synchrony and social behavior between children with ASD and DS. Twenty-seven children with ASD (10 females; Mage = 10.98; SD = 2.21) and twenty-five children with DS (11 females; Mage = 11.91; SD = 2.27) performed a collaborative drawing task with a parent in which they had to coordinate their drawing movements. We continuously measured the coordinates of the parent's and child's dominant hand using wearable accelerometers (Mbientlab, 2017), and performed a Cross Recurrence Quantification Analysis on the resulting time series to extract synchrony measures. In addition, we compared the social behavior of children with ASD and DS using quantitative and qualitative parent questionnaire data.

Using MANOVA, we found that parent-child synchrony measures were significantly higher for children with ASD. Yet, parents were significantly more positive about the social behaviors of children with DS. No significant correlation between the synchrony and questionnaire data was found. In this talk, we will discuss possible reasons for this discrepancy.

Flash talks
(parallel session)

11:00 – 12:00

Belle van Zuylenzaal

F1. Topic(s): Infancy, anxiety and clinical Interventions**1. Joanna Rutkowska, Marlene Meyer, Andrea Cavallo, Cristina Becchio, & Sabine Hunnius: Fourteen-month-old infants' sensitivity to intention information encoded in grasping movement**

Action prediction is an essential skill for social interactions (Sebanz & Knoblich, 2009). Movement kinematics have been proposed as an important cue to recognise others' intentions and predict their next action (Becchio et al., 2018). For instance, the way one grasps a bottle differs based on whether the intention is to drink or pour from it, and adult observers are able to predict which of the actions occur next from the grasp alone (Cavallo et al., 2018). Yet, how this ability develops in young children is still unknown. This pre-registered study investigates this ability's first prerequisite, namely infants' ability to perceptually discriminate between movements performed with different intentions. Fourteen-month-olds were tested in a habituation paradigm. During the habituation phase, they saw videos of grasping actions with one of two intentions: grasp-to-drink or grasp-to-pour. When the infants habituated, they were presented with the test phase, where they saw two videos of grasps carried out with either the same or a different intention than before (between-subjects). We predict that infants presented with a different intention grasp than in the habituation phase will show a different (increased or decreased) looking time during the test phase compared to infants presented with grasps with the same intention. The final sample is determined using a Sequential Bayes Factor design (Mani et al., 2021). The data collection is still in progress (current N=113), and the current Bayes factor (BF10=0.31) indicates moderate evidence for a lack of infants' sensitivity to the intention information encoded in grasping movement kinematics.

2. Eliala Salvadori, Cristina Colonesi, Linnea Elsammak, Frans J. Oort, & Daniel S. Messinger: Points with smiles from infancy to toddlerhood

Emotional and referential communication are the two main manifestations of social engagement from infancy onwards. Prior research has described infant temporal coordination of pointing gestures with gaze and/or vocalizations, while less is known about its co-occurrence with smiling behaviors. Furthermore, little is known about the developmental associations between emotional and referential communication. We investigated infant declarative pointing gesture production as a function of modality (point with vs. without smiling), age (12 vs. 15 months), context (positive vs. neutral or negative stimuli), and early emotional communication patterns. A sample of 51 infants participated in this longitudinal study. Emotional communication (gaze, smile, vocalizations) was observed during home-based face-to-face interactions at 4 and 8 months while referential communication (declarative pointing) was measured during structured lab-based observations at 12 and 15 months. Communication behaviors were coded second by second. Poisson multilevel regression analyses indicated that, across ages and contexts, infants produced fewer points with (vs. without) smiles. Yet there was a significant increase of points with (vs. without) smiles from 12 to 15 months (an age by modality interaction effect). Across ages and modalities, infants tended to point more often in positive (vs. neutral) contexts. Infant vocalization frequency at 8 months, but neither gaze nor smile frequency, positively predicted points frequency, regardless of modality, age, or context. Results suggest that infants temporally coordinate emotional and referential communication already in infancy, an ability that gradually increases with age, and that early vocal patterns of communication are crucial in pointing gesture development.

3. Christel Portengen, Caroline M. M. Junge, Anneloes L. van Baar, & Joyce J. Endendijk: Why women are expected to smile: The role of gender in the neurophysiological processing of adult emotional faces in 3-year-old children

Children form gender stereotyped associations from their first year of life, based on social cues from their environments. Although ample research has examined the development of gender stereotypes in

young children, little is known about the neural responses that underlie the processing of gender stereotyped information in young children. Therefore, the current study examined whether 3-year-olds differ in the neural processing of emotional stimuli that either violate gender stereotypes (i.e., male faces with fearful or happy expressions) or confirm gender stereotypes (i.e., female faces with fearful or happy expressions), and whether boys and girls differ in their neural processing of gender stereotyped information. Data from 72 3-year-old children (+/- 6 months, 43% boys) were used from the YOUth Baby & Child cohort study. Electroencephalography data were recorded while children passively viewed male and female faces displaying a neutral, happy, and fearful facial expression. Results revealed that children differed in their attentional processing of men and women with a happy facial expression, demonstrated by elevated P1 amplitudes towards happy men (stereotype-violating) when compared to happy women (stereotype-confirming). Moreover, girls showed larger Nc amplitudes towards female happy faces than male happy faces, whereas boys showed larger Nc amplitudes towards male happy faces than female happy faces. No gender differences were found in the processing of neutral and fearful facial expressions. Our results show that EEG measurements can provide insights in processes underlying preschoolers' gender stereotypes about emotions, specifically by looking at the early occipital and late fronto-central temporal responses.

4. Lynn Mobach, Mike Rinck, Eni S. Becker, Talia Carl, Anke M. Klein, Ronald M. Rapee, & Jennifer L. Hudson: Facing uncertainty: Interpretation of ambiguous emotional faces in childhood social anxiety disorder

Objective: The current study examined whether children with a social anxiety disorder (SAD) demonstrate divergent facial emotion processing and a disorder-specific negative interpretation bias in the processing of facial emotional expressions. This study aimed to overcome previous study limitations by including both a non-socially anxious control group and a healthy control group to examine whether childhood SAD is characterized by a general emotion labeling deficit, and/or by a negative interpretation bias, indicated by systematic misclassifications, or a lower threshold for recognizing threatening emotions.

Method: Participants were 132 children aged 7-12 years ($M_{age} = 9.15$; 45.5% female). Children with SAD ($n = 42$) were compared to children with other, non-social, anxiety disorders ($n = 40$) and healthy control children ($n = 50$) on a novel facial emotion recognition task. Children judged ambiguous happy/neutral, angry/neutral and fear/neutral faces that were morphed at different intensities (10%, 30%, 50%, 70%).

Results: Children with SAD did not differ from other groups in their accuracy of identifying emotions. They did not show systematic misclassifications or a heightened sensitivity to negative, threatening faces either. Rather, children with non-social anxiety disorders showed a generally heightened sensitivity to emotional faces.

Conclusions: The current study does not provide evidence for a general deficit in labeling of emotional faces in childhood SAD. Childhood SAD was not characterized by an interpretation bias in processing emotional faces. Children with non-social anxiety disorders may benefit from assistance in accurately interpreting the degree of emotionality in interpersonal situations.

5. Anita Harrewijn: Peer interactions as moderators of the temperament-anxiety association, using data from the Generation R Study

One strong predictor for pediatric anxiety disorders is early-life inhibited temperament. However, not all children with an inhibited temperament develop an anxiety disorder. Identifying risk factors for anxiety in children with an inhibited temperament could improve early detection and prevention of anxiety disorders. Anxiety disorders typically develop during early adolescence, a developmental period during which peers become increasingly important. Therefore, we will focus on peer interactions as potential moderators of the relation between early childhood temperament and adolescent anxiety.

We will use data from the Generation R Study, a prospective cohort study following 9749 children since

birth. Fearful temperament was assessed at 9 months with the Infant Behavior Questionnaire. Peer interactions were measured as victimization (mother-report at 7 years), friendship quality (self-report at 9 years), and negative feelings and facial expressions in response to social exclusion in the Cyberball task (at 9 years). Anxiety was assessed with the DSM-oriented anxiety scale from the Child Behavior Checklist (self-report at 13 years).

2730 children (1393 girls) have data on both temperament and anxiety. A preliminary analysis including only temperament and sex as predictors of anxiety shows that children with a fearful temperament show more anxiety at 13 years. Follow-up analyses will test the potential moderators. Age, pubertal status, maternal age, and maternal education will be included as covariates. Alpha will be set at 0.05, inverse probability weights will be included to account for selection bias, and missing independent variables will be imputed using the mice package in R.

Teaching roundtable (parallel session)	11:00 – 12:00	Westerdijkkamer
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Round table: Teaching students to reflect on their clinical skills

Chairs: Brenda Jansen, Anika Bexkens, & Helen Bakker

Round table abstract: Many students in developmental psychology programmes have the ambition to work in clinical practice. Although the educational programme offers them basic knowledge and skills, it also emphasises that working in clinical practice requires students to continue their education after graduation. Self-reflection is essential here.

Self-reflection implies a critical attitude towards one's own knowledge, skills, decisions, implementation of decisions and effects of one's actions, but also requires a critical attitude towards developments in the field. It involves being open to feedback and to provide feedback to peers as well. Self-reflection results in goals to improve one's actions, plans to achieve them and evaluation of the implementation of these plans. Hence, self-reflection is a complex skill, which requires development and training.

In this round table discussion we would like to share and increase our knowledge about training self-reflection in developmental psychology programmes with the participants. We would like to discuss possible existing curricula, programmes and methods and brainstorm on how to improve the training of self-reflection. Central questions are: How do we address self-reflection in our training programmes? Do learning lines (“leerlijnen”) exist, from bachelor to master, in the various developmental psychology programmes? How do we ideally shape trainings and assessment in self-reflection?

Flash talks
(parallel session)

13:00 – 13:45

Aula

F2. Topic(s): Neurocognitive development, risk, & identity

1. Jessica Schaaf: Impaired learning to dissociate advantageous and disadvantageous risky choices in adolescents

Adolescents display more risk-taking behavior compared to adults. How this relates to developmental changes in experience-based learning remains largely unknown. In this preregistered study, we administered a novel task in which the advantageousness of risk-taking needed to be learned by experience. Results showed that adolescents dissociated advantageous and disadvantageous risky choices less well compared to adults. Computational-modeling results revealed that adolescents' suboptimal performance was due to them using a simpler, suboptimal, expectation-updating process, and a more stochastic choice policy compared to adults. Moreover, results showed that adolescents, but not adults, overvalued the best outcome. Together, these results suggest adolescent risk-taking can be explained by inefficient learning and choice processes.

2. Barbara Braams: Information about others' choices selectively alters risk tolerance and medial prefrontal cortex activation across adolescence and young adulthood

Information about others' choices selectively alters risk tolerance and medial prefrontal cortex activation across adolescence and young adulthood

Recent studies have found increased risk taking under peer influence in adolescence. However, it is unclear what aspects in the social context influence adolescent decision-making. In this study we take a decision science approach to investigate 1) how information about others' choices influences decision making, 2) how peers differentially influence risky and ambiguous choices and 3) which neural mechanisms underly changes in risky decision making

Participants (N=65, age range 14-22) completed an economic choice task while undergoing fMRI scanning. Choice options were systematically varied on levels of risk and ambiguity. On each trial a safer choice (low variability in outcome) and a riskier choice (high variability in outcome) were presented. Participants made choices in two different conditions: a social information condition in which they saw choices of peers and a solo condition in which they did not see any social information. A computational modeling framework was utilized to test whether altered decision making within the social context was related to changes in risk tolerance, ambiguity tolerance or both. Whole brain regressions were performed to test which neural regions respond to changes in risk and/or ambiguity tolerance.

Results showed that participants' choices conform to the choices made by the peers. We did not find evidence for age related differences in risk and ambiguity tolerance in the solo condition. Information about others' choices selectively altered risk tolerance and not ambiguity tolerance. Changes in risk tolerance were positively correlated to changes in medial prefrontal cortex activation. These results show that peer influence on decision-making can both increase risky choices as well as increase safe choices and social influence processes alter the risk perception of the choices.

3. Anna Tyborowska, Fleur van Ruller, Roseriet Beijers, Simone Kuhn, Karin Roelofs, & Carolina de Weerth: Early adolescence and the neuro-endocrine control of emotional actions

Adolescence is a critical developmental period involving intense developmental changes in neuro-endocrine and social-emotional systems. Previous studies have shown that during mid-adolescence, there is a maturational shift from prefrontal to subcortical emotion control, modulated by testosterone levels. Namely, high testosterone levels are associated with increased anterior prefrontal (aPFC) involvement when controlling emotional actions, reflecting adult-like functioning.

On the other hand, lower testosterone levels are related to greater pulvinar and amygdala activity during emotion control. Across early adolescence, rising testosterone levels are thought to facilitate neural reorganizational processes, particularly in prefrontal structures. However, it remains unclear whether this prefrontal-subcortical shift is already present at the onset of puberty, when neuro-hormonal reorganization is initiated. Using an fMRI-based Approach Avoidance task, this study identifies how neural control of emotion actions changes as a function of human pubertal development (indexed by testosterone) in 12-year-old children ($n=89$). Higher testosterone levels were related to increased pulvinar activity, but also less efficient behavioral control of emotional actions. The aPFC and amygdala were also engaged in controlling emotional actions, but activity in these regions was not related to testosterone levels. These findings tentatively suggest that the pulvinar may be engaged in emotion control at a time when the aPFC is undergoing an initial period of restructuring.

4. Janne Vanderhaegen, Sofie Prikken, Jurgen Lemiere, Laurence Claes, Philip Moons, Elise Van Laere, Anne Uyttebroeck, Sandra Jacobs, & Koen Luyckx: Identity formation, generic functioning, and illness-specific functioning in adolescent and emerging adult cancer survivors: A longitudinal investigation into directionality of effects.

Introduction. The increase in survival rates for childhood cancer has inspired a growing literature on the impact of childhood cancer and its treatment on survivors' lives. Earlier findings suggest that most survivors adjust well psychologically and achieve important developmental milestones throughout life. Nevertheless, some survivors are at greater risk for developing psychological and physical problems. To shed light on individual differences in the functioning of youth who survived childhood cancer, identity formation (i.e., a core developmental task in adolescence and emerging adulthood) and its interplay with psychosocial functioning need to be examined in survivors. The aim of the present study was to examine the longitudinal associations linking personal identity formation – as operationalized using an Eriksonian perspective – and generic and illness-specific functioning in adolescent and emerging adult childhood cancer survivors using three-wave data over a 2-year period.

Methods. The present study used data of the first, second, and third annual measurement points of the LInC-study (Longitudinal Identity Study of Childhood Cancer Survivors). Baseline data were collected from October 2018 to April 2019. Dutch-speaking childhood cancer survivors between 14 and 25 years old who were treated at the pediatric oncology department of the University Hospitals Leuven (Belgium) completed self-report questionnaires addressing identity formation, depressive symptoms, life satisfaction, physical functioning, cancer-related worries, posttraumatic stress symptoms, and benefit finding. A total of 125 participated at baseline (3% female; $M_{age} = 19.55$; $SD_{age} = 2.70$; response rate = 29%), 100 survivors at T2 (54% female; $M_{age} = 20.77$; $SD_{age} = 2.64$; retention rate = 80%), and 93 survivors at T3 (56% female; $M_{age} = 21.74$; $SD_{age} = 2.65$; retention rate = 74%). Directionality of effects was examined using cross-lagged structural equation modeling in Mplus 8.7. The study was approved by the ethics committee research UZ / KU Leuven.

Findings. Results generally indicated clinically meaningful pathways linking identity formation to psychosocial functioning over time. With regard to generic functioning, bidirectional effects occurred. Better physical functioning predicted relative decreases in identity confusion, and, in turn, identity confusion predicted relative decreases in physical functioning over time. Life satisfaction predicted relative decreases in identity confusion and relative increases in identity synthesis over time. Identity synthesis, in turn, predicted relative increases in life satisfaction over time. Concerning illness-specific functioning, mainly unidirectional effects occurred from illness-specific functioning to identity formation. Results indicated that posttraumatic stress symptoms predicted relative increases in identity confusion and relative decreases in identity synthesis, whereas benefit finding predicted relative decreases in identity confusion and relative increases in identity synthesis over time.

Discussion. The current study focused on clarifying the longitudinal associations linking identity synthesis and confusion to both generic and illness-specific functioning in youth who survived

childhood cancer. Several significant pathways emerged that can substantially inform both clinical practice and future research.

5. Mandy van der Gaag: A new and improved identity interview: presenting the GIDS-L2

How can we measure both qualitative and quantitative aspects of identity? In this flashtalk I will present a new version of an old instrument that can do just this: the GIDS-L2 (van der Gaag et al., 2022). The strengths of the GIDS-L2 lie first of all in its ability to generate a unique combination of qualitative data (with interviews) and quantitative data (with questionnaires). The quantitative data allows us to both compare individuals to each other, but still uses the unique qualitative content of the individuals identity as its basis. Second, it provides a thorough overview of macro-level identity features, that is, patterns of identity actions, experiences and self-representations (De Ruiter & Gmelin, 2021) in different life-domains. Moreover, it is uniquely suited to measure various forms of integration that have been hard to capture empirically (Syed & McLean, 2016). Specifically, the GIDS allows us to capture both temporal integration (measured within each domain-specific interview) and contextual integration (measured as overarching commitments that integrate domain-specific commitments into one coherent whole). Finally, the instrument is firmly rooted in both classic and more recent theory on identity development (Bosma & Kunnen, 2001; Erikson, 1956; Marcia, 1966; Van der Gaag et al., 2020) and incorporates commonly used quantitative measurements of identity (Bosma, 1985; Crocetti et al., 2008; Luyckx et al., 2006; van der Gaag et al., 2016). In this talk I will briefly present the basic idea of the GIDS-L2, some initial results (including its internal consistency), and where to find the instrument.

Flash talks
(parallel session)

13:00 – 13:45

Belle van Zuylenzaal

F3. Topic(s): Prosocial behavior, transitions to school and work**1. Stathis Grapsas, Andrik I. Becht, & Sander Thomaes: Self-focused and unconvinced: Value profiles and climate change skepticism in young adolescents**

Climate change skepticism hampers the sustainable change of individuals and societies. Unfortunately, little is known about its developmental origins and early psychological underpinnings. To address these issues, the present study examined the links between basic values and climate change skepticism in adolescents from three culturally, socially, and politically diverse countries. In an online survey, adolescents (N = 5244, ages 12–14) from the Netherlands, China, and Colombia reported their basic values and levels of climate change skepticism. Correlation analyses showed that, in each country, adolescents who reported elevated levels of climate change skepticism prioritized self-enhancement values (and, to a lesser degree, openness-to-change values), but not self-transcendence values. Latent Profile Analyses of adolescents' value priorities identified 5 value priority profiles, and similarly showed that adolescents with self-focused value priority systems reported higher levels of climate change skepticism than adolescents with other-focused value priority systems. Together, these findings show that, across countries, early emerging climate change skepticism is linked to value systems that promote self-interest over collective welfare. These findings also suggest the potential for implementing intervention at an early age, when adolescents' budding values and views on polarized topics such as climate change may be most malleable.

2. Annabelle Christiaens, Stefanie Nelemans, Elisabeth L. de Moor, Rimantas Vosylis, Rasa Erentaite, & Susan Branje: The role of the school transition in educational identity development

Educational identity, an important identity domain during adolescence, reflects finding out who one is and which direction one wants to go regarding one's school and academic track. Although adolescents might reflect on these issues during various periods, these questions become particularly salient during school transition phases, which can influence the meaning and relevance of specific processes. To encourage and facilitate context-specific identity research in the educational domain that is connected to the real-life challenges of adolescents, we developed a new questionnaire with two versions to capture the specific identity processes that occur before and after a school transition: The Educational Identity Processes Scale (EIPS). In the present study, we examined the factor structure and reliability of the questionnaire, and tested whether the EIPS dimensions were meaningfully related to each other and with other constructs of the self, well-being, parental reflected doubt, and academic motivation. The pre-transition questionnaire was tested among Dutch adolescents (N = 242, 50% female, Mage = 10.5) who are preparing for the transition from primary to secondary education. The post-transition questionnaire was tested among Lithuanian adolescents (N = 1,268, 52.1% female, Mage = 14.9) who just started upper secondary education. Findings of the present study indicated that the EIPS was a reliable and valid measure to assess specific identity processes before and after the school transition. We will discuss how further findings on the convergent and internal validity highlight the influence of the school transition and the importance of taking the school context into account.

3. Jingyun Wang: A longitudinal study of autonomy at the secondary school transition: Considering the role of parental psychological control and friend support

School transitions, with multiple concurrent changes such as a new school and peer environment, can be major turning points in adolescent development. Whether or not adolescents successfully cope with these challenges and develop autonomy might depend on their relationships with parents and friends. Prior studies predominantly examined changes at the between-person level, focused exclusively on the role of either parents or friends on autonomy and tended to ignore bidirectional associations. Based on Self-Determination Theory, this longitudinal study focused on how relationships with parents and friends are bidirectionally related to adolescent autonomy across the school transition and whether

friend support can buffer the negative effect of parental psychological control on autonomy at the within-person level. 280 adolescents participated in four waves across the transition to secondary school (Mage = 11.60, SD = 0.50 at T1; 46.5% boys). Results from random intercept cross-lagged panel models showed the predictive effect of autonomy on parental psychological control over time, but not of parental psychological control on adolescents' autonomy. In addition, friend support moderated the relation between parental psychological control and adolescent autonomy before and during the school transition, but not after the transition. Furthermore, friend support was not related to adolescents' autonomy over time. This study provides new insights into the within-person process for understanding the development of adolescent autonomy in the relationships with parents and friends.

4. Ketaki Diwan, Christina Meyers, Lotte van Doeselaar, Joanne M. Chung, & Anne Reitz: An intensive longitudinal study on pride and self-esteem development during the transition to work

Individuals differ in their self-esteem change during the transition to work. The short- and long-term processes leading to this variability in change are not yet fully understood. We examined the daily experiences of pride as a source of self-esteem change during the transition to work. We used dynamic and multilevel structural equation models to analyze three waves of 14-day experience sampling data from N=238 master students across 12 months during which participants transitioned to working life. Daily pride and self-esteem predicted each other during the second wave. Individuals substantially differed in the magnitude and direction of the bidirectional associations between pride and self-esteem in all three waves. Long-term changes in daily experiences of pride across the three waves were positively correlated with changes in daily experiences of self-esteem.

5. Anne Reitz: Unraveling the complex relationship between work transitions and self-esteem and life satisfaction

Transitions in and out of work are common experiences with major repercussions for people's lives. The complex link between work transitions and psychological adjustment is not well understood, however. In this preregistered study, we analyzed 11 waves of longitudinal data from a representative sample of 13,671 Dutch participants to examine the transactional effects between repeated work transitions (employment and unemployment) and psychological adjustment (self-esteem and life satisfaction). We investigated change trajectories before and after the transitions and tested whether event-related characteristics moderated transition effects. Participants with lower levels of self-esteem and life satisfaction were more likely to experience unemployment and less likely to experience employment transitions, indicating selection effects. Participants decreased in their self-esteem and life satisfaction before the beginning of the unemployment transition, indicating anticipatory effects, with larger decreases in self-esteem for participants who ended up experiencing longer unemployment. We found no consistent effects of employment on changes in life satisfaction or self-esteem, but participants entering more satisfying jobs showed larger increases in life satisfaction. Results were mostly robust when accounting for gender, age, socioeconomic status, and the Big Five traits, and when using propensity-score matching. Effects did not differ among multiple experiences of the same transition. Together, these findings point to dynamic transactions between employment / unemployment and self-esteem / life satisfaction. Findings highlight the importance of closely assessing the specific timing of pre- and post-transition changes and the existence of large individual differences in reactions to work transitions that seem to be partly explained by event-related characteristics.

Flash talks
(parallel session)

13:00 – 13:45

Westerdijkkamer

F4. Topic(s): Childhood and interventions**1. Jan Boom: Development of the idea of chance in children**

Following up on my flash talk on the last VNOP conference, I want to go deeper into the development of thinking about randomness and probability.

I have proposed a series of stages that represent development in thinking about chance (and probability, likelihood, odds, randomness, etc.). The fundamental insight, attained in stage 1, revolves around appreciating equal chances. This idea goes against the common approach in most countries that have made chance part of the elementary school curriculum.

A problem is where to start in teaching children about chance (or where to start following their development in this topic). Curricula often start with teaching children to use words like large and small chances properly. This requires normal daily life examples. But such examples are not helpful and often downright detrimental.

In real life situations an expectation could be e.g., that I should take my umbrella when I go out tomorrow. Perhaps I believe the chance for rain (a.k.a. the need for bringing my umbrella) would be .75. This likelihood estimation might be built on number of considerations like weather forecast, today's weather, time of year, experience, etc. All of these require world knowledge, causal thinking (or operational thinking as Piaget would have it), logical reasoning, empirical knowledge, trust in sources of information, and only a bit of accepting the un-foreseen and un-determined nature of the future. Or circumstances might be such that no prediction is possible (50%-50%), or 100% sure rain, etc. The more and better information you have and the smarter you are in terms of being able to think in terms of causal processes the surer the estimate can be. The more we deviate from 50-50 the more causal it becomes. Now compare this to a spinner with 4 equal sectors, with 3 of them red and 1 green: what is the chance of spinning to red? Yes also 0.75. This however requires no causal thinking. Or picking one red ball, while being blindfolded, out of urn with 3 red and 1 green balls. This is just probabilistic thing, perhaps logical even combinatorics may play a role in such cases. But the core remains the equal chances for each elementary outcome (a sector or a ball).

The key issue for understanding chance is unpredictability and indeterminacy: precisely because there is no reason to prefer head to tails the coin can be used in games of tossing.

2. Wouter Wolf: The development of the Liking Gap: Children over 5 think that partners evaluate them less positively than they evaluate their partners

Humans' concern for the impression they make on others contributes to much unhappiness, and not a few clinical diagnoses. Recently, researchers reported a striking demonstration of the persistent nature of these worries: After two adults have briefly interacted with one another, both believe that they like their partner more than their partner likes them. If this 'Liking Gap' is indeed driven by individuals' worrying about the impression they make on others, one would expect this phenomenon to emerge in childhood at around age 5, when reputational concerns emerge in childhood, and to intensify between 5 and 11, when children's understanding of these issues becomes more sophisticated. In a study with 241 US children (4 to 11 years) pairs of children briefly played together and were subsequently asked how positively they evaluated their partner and how positively they thought their partner had evaluated them. As hypothesized, we found a Liking Gap emerging at age 5, and this gap becoming increasingly pronounced in older children. A closer inspection of the data revealed that the emergence of the Liking Gap between 4 and 5 was driven by 5 year olds evaluating their partner more positively than 4 year olds (while perceptions of how partners evaluated them did not change), whereas the widening of the Liking Gap between 5 and 11 was driven by older children becoming increasingly

skeptical about their partners evaluating them. These results bear important implications for the emergence of children's reputational concerns and the impression they make on others.

3. Jellie Sierksma: How receiving help affects children's competence beliefs and task motivation

Children receive a tremendous amount of help in their daily lives. Surprisingly, we know very little about how receiving help affects young children – even though the help that children receive is often foundational to their academic and social development.

In the current preregistered study (N = 128 5-to-7-years) we aimed to understand how the receipt of help (vs. no help) influences children's self-perceived competence and task motivation. To assess the effect of receiving help, we used a novel and somewhat challenging activity that involved drawing circles inside a series of small empty shapes during a set time (Cimpian et al., 2012). All children first did a test without help. At the start of the second test the experimenter either provided help to children by drawing some circles for them or did not provide help; then, all children completed the rest of the test on their own. Results showed that children who received help worked more slowly on the second test than children who did not receive help ($p < .001$) and these children also indicated that the shape test was more difficult ($p = .01$). Receiving help or no help did not affect how much children enjoyed the shape-test or influence their self-perceived abilities.

This research thus shows that receiving help can have an adverse effect on task perception and motivation in children as young as 5 years of age. Receiving help might signal to young children that others think they are not competent and as a consequence decreases their motivation to work on that task.

4. Christel Klootwijk: Prosocial choices: How do young children evaluate considerate and inconsiderate behavior

Adults often act considerately towards others by, for example, leaving the last cookie on a plate or stepping aside on a busy sidewalk. What do young children infer from such considerate behavior? In three preregistered studies, we assessed how young children evaluate considerate and inconsiderate behavior by showing them animated videos in which targets make decisions that either leave or limit choice options for others. Study 1 (N = 372 6-to-12 year old children, 170 girls, 187 boys (15 not reported), 84.4% native Dutch) showed that older children, but not younger children, evaluated considerate others (i.e., who leave a choice for others) as nicer and were more willing to lend their toys to them compared with inconsiderate others. Moreover, children's evaluations were specific to the social domain, as children of all ages evaluated both targets as equally smart. Study 2 (N = 99; 57 boys, 42 girls, 78.8% native Dutch) and 3 (N = 43; 20 boys, 23 girls, 92.5% native Dutch) focused on younger children (5-to-7-year-olds) and showed that when videos were presented in a simpler manner they also evaluated considerate people as nicer. These studies extend developmental research on prosocial behavior and suggest that considerate behavior conveys a clear social signal early in life.

5. Annelieke Roest, Y. A. de Vries, A. W. Wienen, & P. de Jonge: Are treatments in children with common mental disorders helpful in the long run? An overview of systematic reviews

Background. Mental disorders may have severe consequences for individuals across their entire lifespan. In the current overview, we address the available evidence for the long-term effectiveness and safety of treatments for common childhood mental disorders.

Methods. A systematic literature search was performed from 2011 up to March 9, 2022, for systematic reviews on the long-term (2 years) effectiveness and safety of treatments for ADHD, behavior, anxiety, and depressive disorders in children between 6-12 years old. In the case of overlapping reviews, the most recent review was included.

Results. Five systematic reviews were included (3 on ADHD, 2 on behavior disorders). Reviews on the pharmacological treatment of ADHD showed continued control of symptoms, but diminished benefits in

the long-term compared to the short-term, while continuous use of stimulants may be associated with growth reduction. Evidence on the long-term effectiveness of psychosocial treatment of ADHD is sparse and therefore inconclusive, which was also the case for the pharmacological treatment of behavior disorders. Pharmacological treatment of behavior disorders was associated with adverse effects, especially metabolic changes. Psychosocial treatment of behavior disorders showed some positive long-term effects, yet primary studies did not report on potential harms.

Discussion. Long-term benefits of psychosocial and pharmacological treatments of common childhood mental disorders appear to be small at best, while there is a lack of accurate data on the potential long-term adverse effects. The paucity of long-term studies on treatment of mental disorders, especially anxiety and depressive disorders, is a major gap in the scientific literature.

Flash talks
(parallel session)

14:00 – 14:45

Aula

F5. Topic(s): Transitions, COVID, and parenting**1. Manon A. van Scheppingen, & Anatolia Batruch: Educational mobility and personality development during the transition to university**

A growing body of evidence has observed an association between socioeconomic status and personality traits. Yet, it remains unclear which causal mechanisms might explain this association. Theories on the psychology of social class posit that changes in social class environment might trigger changes in certain personality traits. We tested this hypothesis in the context of educational mobility, using data from the German Socio-Economic Panel study (N = 1,834). Specifically, we compared changes in Big Five traits, locus of control, and risk aversion in first-generation students during the transition to university (upward mobility sample) to changes in individuals with a similar background, who did not enter university during the study period (stable low sample). Low risk-taking and high openness at age 17 were predictors of upward educational mobility. Yet, after using propensity-score matching to control for confounders (e.g., parental income), we found no differences in personality change between the two samples. Discussion focuses on the implications for theories on social class and personality development.

2. Yixin Tang, Sheida Novin, Eddie Brummelman, & Sander Thomaes: Development of self-esteem in children with and without behavior problems: The influence of parental psychological control

Self-esteem is considered to be an important indicator of psychological functioning in child development, which is especially important in the transition from the middle childhood to adolescence, as children mature in their cognitive abilities, struggle with puberty and become more concerned with their peers. Notably, most previous studies have focused on typically developing children, while children who struggle with behavioral problems have been proved to have lower level of self-esteem compared to their typically developing peers. Moreover, prior work has shown that parental psychological control negatively predicts self-esteem over time, yet whether parental psychological control predicts changes in children's self-esteem, and whether such influence varies across children with and without behavior problems is unclear. Parental psychological control might have less negative effects on children with behavior problems, as it help supervise children's behavior so that children's can live up to societal standards and behave well. Therefore, this longitudinal study explored the development of self-esteem in typically developing children (N=262, 47.2% females; Mage = 9.14 years) and ODD children (N=255, 27.4% females; Mage = 9.60 years) over the course of 2 years (3 waves), and tested the predictive effects of parental psychological control. Latent growth models revealed that typically developing children had a higher initial level of self-esteem compared to ODD children, while ODD children's self-esteem increased over time, but such pattern was not found in typically developing children. Both paternal and maternal psychological control did not predict the baseline (intercept) and change (slope) of children's self-esteem, which was consistent across groups. In general, ODD children showed 'catch up' effect in the self-esteem development over the primary school years in Chinese context, and parental psychological control does not dampen this development.

3. Nina van den Broek: Did adolescents' food intake change during the COVID-19 pandemic?

Across the world, the COVID-19 pandemic and the measures aimed at containing the virus have profoundly affected individual's daily lives. Insight in how the pandemic has affected adolescents' food intake specifically is still limited, while this knowledge is of utmost importance for public and individual health and well-being. In this longitudinal study (N = 691, Mage = 14.30, SDage = 0.62; 52.5% female), we investigated changes in adolescents' unhealthy (sugar-sweetened beverages, sweet snacks, savory snacks) and healthy (fruit and vegetables) food intake from pre-pandemic (Spring 2019) to the first lockdown (Spring 2020) and to six months later (Fall 2020). Total food intake and intake in different contexts (i.e., obtained from home and obtained from outside the home) was examined. Moreover,

several moderating factors were assessed. Results showed that the intake of unhealthy and healthy food decreased during the lockdown, both in total and obtained from outside the home. Six months later, when measures were (temporarily) relaxed, unhealthy food intake returned to pre-pandemic levels, while healthy food intake remained lower across all contexts. COVID-19 stressful life events and maternal food intake further qualified these longer-term changes in the intake of sugar-sweetened beverages and fruit and vegetables, respectively. Future work is warranted to elucidate longer-term COVID-19 effects on adolescents' food intake.

4. Sara I. Hogye, Nicole Lucassen, Katrien O. W. Helmerhorst, & Renske Keizer: Changes in coercive parenting and child externalizing behavior across the onset of the COVID-19 pandemic and the moderating role of the parent-child attachment relationship

During COVID-19, a variety of changes occurred in the family environment, which were associated with increases in less effective disciplining approaches, such as coercive parenting of young children (e.g., Sari et al., 2020). Researchers also noted increases in child externalizing behavior during COVID-19 as compared to the pre-pandemic period. In the present study, we use longitudinal data from the pre-pandemic period and the onset of the first COVID-19 lockdown to investigate whether and to what extent changes in coercive parenting are linked to changes in child externalizing behavior. First, we scrutinize both mothers' and fathers' parenting, allowing us to assess the relative salience and independence of changes in mothers' and fathers' parenting in relation to changes in child externalizing behavior over time (RQ1). Second, we consider how differences in the level of one parent's coercive parenting shape associations (i.e., moderate) between the other parent's coercive parenting and child externalizing behavior (RQ2). Third, we hypothesize that high-quality mother-child and father-child attachment relationships moderate (i.e., buffer) the relation between changes in coercive parenting and changes in child externalizing behavior (RQ3). Embedded in an interdisciplinary research project (<https://www.driehoekonderzoek.nl/>), the current study investigates these three research questions within a sample of 100 families, using mother and father reports on coercive parenting and child externalizing behavior, and observations of mother-child and father-child attachment relationship quality. Results of path and moderation analyses using structural equation modeling will be presented during the VNOP 2022 meeting.

5. Paula Vrolijk: Within-family linkages between parental monitoring and adolescents externalizing problems with autonomy support as a moderator

Parents' monitoring efforts are thought to be effective in reducing children's future externalizing problems. Empirical evidence for this claim, however, is limited, as only few studies have unraveled the temporal ordering of these constructs. The present study contributed to the existing literature by examining within-family linkages between monitoring efforts (behavioral control and solicitation) and children's externalizing behaviors whilst controlling for between-family differences. In addition, it was assessed whether these associations differed when using child versus parent reports, differed between less versus more autonomy-supportive parents, and differed when looking at fathers' versus mothers' monitoring efforts. Longitudinal data of 497 adolescents (56.9% boys, Mage at T1 = 13.03, SD = 0.46), their mothers (N = 495, Mage at T1 = 44.41, SD = 4.45), and their fathers (N = 446, Mage at T1 = 46.74, SD = 5.10) of the Dutch study Research on Adolescent Development And Relationships (RADAR) were used. Results showed no evidence for the claim that parents' monitoring efforts predict future externalizing problems. In contrast, we found some evidence for the idea that parents' monitoring efforts change in reaction to changes in children's externalizing problems; when children reported higher levels of externalizing problems than usual in one year, this predicted less behavioral control from mothers in the next year. Linkages between monitoring efforts and externalizing problems did not differ between less or more autonomy-supportive parents. Overall, our findings suggest that monitoring efforts are not effective, but also not damaging, in relation to children's externalizing problems.

Flash talks
(parallel session)

14:00 – 14:45

Belle van Zuylenzaal

F6. Topic(s): Parents and peers**1. Stefanos Mastrotheodoros: Negative parenting, mental health, and epigenetic age: Examining longitudinal associations in adolescence and young adulthood**

Methylation of the DNA (DNAm) is an epigenetic mechanism of transcriptional regulation and is influenced by stress and psychosocial adjustment. Composite scores of DNAm across several genomic loci are used as indices of biological ageing – the “epigenetic clocks”. Negative interpersonal experiences or mental health difficulties, are assumed to forge faster ageing, fostering a difference between chronological age and epigenetic age (Epigenetic Age Acceleration, EAA). Empirical studies indicate that those who experience more stress, develop in more adverse environments, or experience worse mental health tend to also show epigenetic clock acceleration. However, most existing research has used cross-sectional or retrospective designs, or has combined longitudinal stress or mental health data with only a single-timepoint measure of epigenetic age. Thus, we understand little regarding whether epigenetic clocks change following changes in the psychosocial environment, and whether epigenetic clocks reflect or precede changes in mental health. In the current pre-registered and longitudinal study (ages 13 to 25), negative parenting and adolescent mental health throughout adolescence will be used to predict late adolescence epigenetic age, and changes in epigenetic age from late adolescence to young adulthood. Acceleration of epigenetic age will be tested as a predictor of changes in mental health from adolescence to young adulthood. Data collection is complete, analyses have been preregistered and are underway. Epigenetic clocks will be estimated using DNA derived from saliva and new algorithms. Results will be discussed in light of the rapidly emerging interdisciplinary evidence for the biological embedding of inter- and intra-personal experiences.

2. Anke H. Visscher, Savannah Boele, & Jaap J. A. Denissen: Unraveling the complex interplay between parental knowledge and children’s externalizing behavior over Time: Findings from the pairfam study

This study examined the bidirectional associations between parental knowledge and children’s externalizing behavior within and between German families across one-year intervals between children’s ages 8-15 (N = 3,611, 50.6% boys, 34.5% fathers). Pre-registered autoregressive latent trajectory models with structured residuals (ALT-SR) replicated between-family associations found in prior research, such that more parental knowledge was related to less externalizing behavior of the child. Within-family age-specific fluctuations of parental knowledge and externalizing behavior did not predict each other at the next time point. However, we did find that linear slopes of parental knowledge and externalizing behavior were correlated across families. Children’s gender differences were largely absent in the bidirectional associations. However, father-driven but not mother-driven effects of increased parental knowledge predicting decreased externalizing behavior were found. Findings illustrate the importance of fathers’ knowledge and new directions for within-family studies regarding parent-child interactions.

3. Patricia Bravo, Yugyun Kim, Yllza Xerxa, Rodrigo Cárcamo, M. Elisabeth Koopman – Verhoeff, Albertine Oldehinkel, Manon Hillegers, & Pauline Jansen: The effect of maternal childhood maltreatment on adolescence psychological problems: Understanding the cycle of family risk factors

A history of childhood maltreatment often has a long-lasting impact and increases the risk for negative outcomes across different domains in life. A childhood maltreatment experience in parents may even affect the next generation. Specifically, mental health problems in the offspring may arise due to multiple familial risk factors, but a better understanding of these factors is needed to enable earlier identification and intervention within the family context. Using a sample of a large population-based study, including both mother and child self-reports, we determined whether a maternal childhood maltreatment history is associated with increased mental health problems in offspring and the role of

family factors in this association. Participants were 3,423 adolescents (aged 13 years) and their mothers from ethnically diverse backgrounds recruited in the Generation R Study. Mothers reported childhood maltreatment experiences using the Childhood Trauma Questionnaire (CTQ), and adolescents reported their mental health using the Youth Self Report (YSR). Structural equation modeling (SEM) indicated that maternal history of maltreatment had a direct effect by predicting greater internalizing ($\beta = .063, p < .01$) and externalizing symptoms ($\beta = .064, p < .001$) in late adolescence. Moreover, we found an indirect effect via cumulative effect of family functioning over time (pregnancy, 5 and 10 years) and harsh parenting at 3 and 8 years which mediated this association. We tentatively conclude an intergenerational effect of maternal childhood maltreatment on adolescents internalizing and externalizing problems and the important role of the cumulative effect of family risk factors.

4. Esther Bernasco: The role of autonomy, peer resistance, and friend adaptation in adolescent depression socialization

Close friends tend to have similar levels of depressive symptoms, and this can in part be attributed to socialization: Adolescents who have higher levels of symptoms may reinforce depressogenic interaction styles, and increase the level of depressive symptoms in their close friends as well. However, not all studies reported socialization, and some adolescents may be more susceptible to depression socialization than others. We argue that depression socialization may be moderated by baseline depression as well as several dimensions of social susceptibility: General autonomy, peer resistance, and overt and internal friend adaptation. Approximately 200 Dutch adolescents and their close friend (aged 12) completed questionnaires in two waves and participated in a conversation task together. We plan to fit longitudinal actor-partner interdependence models to test our hypotheses. Findings and implications will be discussed.

5. Maud Hensums, Helle Larsen, Eddie Brummelman, Wouter van den Bos, & Geertjan Overbeek: Self-serving behavior in adolescence: An experimental test of the influence of peer norms, agentic goals, and narcissism

Self-serving behavior, that comes at a cost of the interests of others, is often argued to be an outing of maladaptive self-regulation. However, we argue that some self-serving behavior comes from good self-regulating adolescents who adjust their behavior in specific contexts in order to achieve their desired goals, even if that means that they have to harm another. To investigate this further, we experimentally test whether adolescents adapt their social behavior in order to gain more popularity, an important developmental goal in adolescence, in a specific context. Furthermore, we investigated whether adolescents with higher agentic goal orientation or higher narcissism levels were more likely to adapt their behavior to gain popularity since popularity is an even higher valued goal for these adolescents. Dutch adolescents ($N = 519$) aged 10–19 ($M = 13.47, SD = 1.35$) took part in our behavioral experiment for which they were completely randomly assigned to a norm-condition that either approved or disapproved of self-serving behavior. Adolescents were asked to distribute real lottery tickets between themselves and one of their classmates either equally or unequally (i.e., self-serving behavior) once before and once after they were exposed to the norm-condition. Logistic regression models indicated that adolescents were more likely to keep most tickets to themselves when they were exposed to a norm that approved (vs. disapproved) such self-serving behavior. Furthermore, this effect was stronger for adolescents with higher levels of narcissism, but not for adolescents with higher agentic-goal orientation. Overall, our findings indicate that adolescents are likely to adapt their behavior to what provides them with popularity in specific contexts. This holds especially true for adolescents with higher narcissism levels who have an inflated desire to achieve agency. Our findings illustrate that in contexts where one wants to discourage harmful and self-serving behaviors, this should not merely be done by improving self-regulatory skills but rather by increasing communal concerns in adolescents—especially for adolescents with higher levels of narcissism—or by changing norms in contexts that award self-serving behaviors with popularity.

Flash talks
(parallel session)

14:00 – 14:45

Belle van Zuylenzaal

F7. Topic(s): Parenting

1. Ana Canário: Implementation and evaluation of Triple P interventions: Insights from the Portuguese experience

Focusing on translational research on the implementation and evaluation of evidence-based parenting programs a research team at the Faculty of Psychology and Education Sciences at the University of Porto (Portugal) has developed three research projects, each focusing on a program of the Triple P System.

In the first project, the effects of Group Triple P were analysed through a randomised controlled trial with a sample of 134 mothers of school-aged and socially disadvantaged children. The results showed positive effects of the program immediately and 12-months after the end of the program.

The second ongoing project intends to evaluate the effects of Group Lifestyle Triple P, aimed at parents of school-age obese children. To date, preliminary outcomes have been analysed. The feasibility of delivering the intervention through digital practice without compromising the fidelity to the program’s core components was also ascertained.

The third ongoing project is a quasi-experimental trial on the effectiveness of Standard Triple P (STP) with families at-risk for child placement/re-entry in out-of-home care, delivered to parents of 6-to-11-year-old children at risk for family breakdown by professionals in community-based services who, in the scope of this project, were trained and became accredited STP providers. STP is being delivered under real-world conditions and, as such, the implementation conditions are diversified.

Considering the influence of the delivery quality on the program’s outcomes, the implementation and sustainability of Triple P interventions in real-world settings are also focus of attention, as well as cost-effectiveness evaluations.

2. Pinar Acet: Perspectives of maternal mindful parenting: Development of the Mindful Parenting Inventories for Parents (MPIP) and Children (MPIC) in the UK and Turkey

Mindful parenting and its association with children’s socio-emotional development have garnered increasing research interest, but child perspectives and cross-cultural differences are little understood. Here, we introduce the development and validation of the Mindful Parenting Inventories for Parents (MPIP) and Children (MPIC) in the UK and Turkiye. Following initial pilot work, 134 British mothers (Mage = 44.50 years, SDage = 5.51 years) and 229 Turkish mothers (Mage = 42.41 years, SDage = 5.25 years) and their typically-developing children (n = 90, Mage = 13.09 years, SDage = 1.47 years; n = 153, Mage= 13.18 years, SDage = 1.65 years, respectively) formed a validation samples. The final inventories consisted of 18 items comprising four mindful-parenting subscales (Self-Regulation in Parenting, Non-Judgemental Acceptance and Compassion toward Child, Being in the Moment with Child, and Awareness of Child). There were medium to large correlations between MPIP/MPIC total scores and subscales, and both demonstrated good convergent (associations with mothers’ dispositional mindfulness and traditional parenting dimensions) and concurrent (associations with children’s adjustment) validity. In addition, incremental validity — predictions from MPIP/MPIC to children’s adjustment over and above maternal dispositional mindfulness and traditional parenting — was apparent. Partial measurement invariance was supported for the MPIP/MPIC across the British and Turkish samples, with Turkish mothers reporting somehow higher mindful parenting. The parallel MPIP/MPIC showed promise for assessing mindful parenting from both parent and child perspectives in the two cultures. We discussed the findings in the context of existing literature.

3. Merlin Nieterau, Geertjan Overbeek, Nicole Creasey, & Jorien Treur: Genetically nurturing disruptive behavior: The role of DNA and the environment parents provide on the development of child disruptive behavior

The onset of disruptive behavior in childhood amplifies the risk of several problems later in life. Parenting plays a key role in the development of disruptive behavior. However, there is still limited understanding of the specific pathways and magnitude of this influence. Although there has been a growing recognition that parenting is not purely an environmental factor, but in part, also genetic, traditional designs fail to identify whether parents affect their children due to nature, nurture, or a mixture. Recently, genomic studies have uncovered genetic nurture effects, whereby parental genotypes influence children via the environment (Kong et al., 2018). Our study was the first to examine a specific example of genetic nurture, in which we combined disruptive behavior-associated genetic variants, summarized in genome-wide polygenic scores, of 296 parent-child dyads with children aged 4-8 years, with parenting practices. We expected that parents with a higher genetic propensity for disruptive behavior were more likely to (1) manifest harsh and less warm parenting and (2) positively affect children's disruptive behavior both via genetically transmitted and genetically non-transmitted pathways. Results are presented from two-wave longitudinal analyses using SEM, in which we controlled for genetic confounding (i.e., the part that is genetically transmitted). This enabled us to investigate whether parents' genetics were associated with children's disruptive behavior over and above children's own genetics; an environmentally mediated effect. This study emphasizes the need to include both genetic and environmental data to provide a complete understanding of underlying pathways shaping complex traits such as child disruptive behavior.

4. Anne Bülow, Andreas B. Neubauer, Bart Soenens, Savannah Boele, Jaap J. A. Denissen, & Loes Keijsers: Uniform, universal, or unique? Family-specific associations between daily need-supportive parenting and adolescent affect

A Self-Determination (SDT) perspective on parenting assumes universally beneficial effects of parental warmth and autonomy support on child well-being. The current study tests this universality claim by applying a family-specific approach including 159 parent-child dyads. That is, for each family their idiographic association between parenting and affect was assessed. Parents (Mage = 45.34, 79% mothers, 87% Dutch origin) and children (Mage = 13.31, 62% female, 89% Dutch origin) reported for 100 consecutive days on their daily parental warmth and autonomy support. Children also reported on their daily positive and negative affect. Dynamic Structural Equation Models (DSEM) with 14,546 observations (ca. 91 per family) confirmed that warmth and autonomy support predicted higher well-being and that these effects differed in strength, but not in the direction of effects. This confirms the universalism without uniformity principle.

5. Savannah Boele, Anne Bülow, Amaranta de Haan, Jaap J. Denissen, & Loes Keijsers: Effects of (un)supportive parenting on adolescent emotional well-being: For better, for worse, for both, or neither?

We hypothesized that different environmental sensitivity models (diathesis stress, vantage sensitivity and differential susceptibility) coexist in the population and apply to different individuals. To test this, we examined heterogeneity in within-family effects of unsupportive (i.e., psychological control) and supportive parenting (i.e., emotional support) on several indicators of well-being among 256 Dutch adolescents (Mage = 14.8, 72% female). We conducted pre-registered Dynamic Structural Equation Modelling (DSEM) with 4,803 observations derived from bi-weekly surveys (tmax = 26). The results revealed, on average, a negative within-family effect of unsupportive parenting on adolescent emotional well-being but not of supportive parenting. Yet, as predicted, all parenting effects differed between adolescents. Indeed, 6% of adolescents were affected in expected direction by unsupportive parenting only (adverse sensitive pattern), 3% by supportive parenting only (vantage sensitive pattern), and 27% by both (differential susceptible pattern). One adolescent was not susceptible to both. However, opposing to parenting theories, 37% reported lower well-being after unsupportive parenting decreased and/or supportive parenting increased. Furthermore, 27% experienced no over-

time fluctuations in parenting. These 'low-perceptive' adolescents scored lower than other adolescents on the trait environmental sensitivity ($p = .001$, $d = -.52$). These findings suggest that the three environmental sensitivity models apply to different individuals and highlight unexpected effect patterns of parenting on adolescent well-being that warrant attention in future research.

Keynote (plenary)

15:00- 16:00

Aula

Keynote title: Emotion processing in *Homo* and *Pan*

Speaker: Mariska Kret

Keynote abstract: Evolution prepared group-living species, (non)human primates included, to quickly recognize and adequately respond to conspecifics' emotional expressions. Different theories propose that mimicry of emotional expressions facilitates these swift adaptive reactions. When species unconsciously mimic their companions' expressions of emotion, they feel reflections of their emotions which informs social decisions. The majority of emotion research has focused on full-blown facial expressions of emotion in humans. However, facial muscles can sometimes be controlled; humans know when to smile, and when not to. In this talk, I therefore argue for a broader exploration of emotion signals from sources beyond the face or face muscles that are more difficult to control. More specifically, I will show that implicit sources including the whole body and subtle autonomic responses including pupil-dilation are picked up by observers and influence subsequent behavior. In my research, I take a comparative approach and investigate similarities and differences in the perception of emotions between humans and great apes. I will here discuss new, recently collected data and suggest avenues for future research that will hopefully eventually lead to a better comprehension of emotional expressions and how we come to understand each other's emotions.

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