



#### **Cohort**

Cohort size:  $N \sim 2000$  mothers and their first-born chil-

dren

Normative subsample: n = 180At-risk subsample: n = 194

Prenatal diagnosis subsample: n = 120

# **Background and Aim**

The Generations<sup>2</sup> cohort study (2009 - present) aims to study the development of parenting and mental health. Approximately 2000 women, pregnant of their first child, were recruited through midwifery practices in the vicinity of Amsterdam, an annual pregnancy fair and the project's website. Later on, two subsamples were selected from the larger cohort.

Selection of study parameters: parental anxiety, depression, parental self-efficacy, attachment representation, physiological reactivity, parenting stress, self-regulation, parental sensitivity, attachment quality, child temperament, child executive functioning, child motor development.

# **Subsamples**

- At-risk subsample (n = 194): participants with past or current mental health problems (i.e., depression, anxiety); participants recruited from social work institutions or other professional support services
- **Normative subsample** (*n* = 180): low-risk participants not meeting the selection criteria for the at-risk subsample
- **Prenatal diagnosis subsample** (*n* = 120): congenital abnormalities of the infant/intervention study

Women in the at-risk and normative subsamples are invited to participate in more intensive assessments besides questionnaires, such as home and laboratory observations (Figure 1: assessments in boldface).

#### **Research Team**

Principal investigators: Dr Mirjam Oosterman & Dr Carlo Schuengel (Dept. of Clinical Child and Family Studies, Faculty of Behavioral and Movement Sciences, Vrije Universiteit Amsterdam). Further: two senior researchers, one postdoctoral researcher, five PhD students, one data manager, two research assistants, and several bachelor's and master's students.

#### **Collaborations**

Dept. Obstetrics & Gynaecology (VUmc); Dept. Medical Psychology (VUmc); Dept. Clinical Genetics (VUmc/AMC); Dept. Psychiatry (VUmc); Dept. Obstetrics & Gynaecology (UMC St. Radboud Nijmegen); Sint Lucas Andreas hospital; Gelre Hospital Apeldoorn; Dept. Psychology (the New School for Social Research, New York); child care organisations: Altra, FIOM, Triade, LSG-Rentray, AVERA Institute for Human Genetics.

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#### Week 12 of pregnancy

Questionnaire package (e.g., depression symptoms, anxiety symptoms)

# Week 22 of pregnancy

Maternal attachment representation:
Adult Attachment Interview
Parental self-efficacy: Cry Response Task
Autonomic nervous system response

Questionnaire package

# Week 32 of pregnancy

Questionnaire package

#### 3 months old

Infant self-regulation and parent behavior: Still-Face Paradigm

Questionnaire package

#### 1 year old

Strange Situation procedure

Questionnaire package

# 2 years old

Parent-child relationship
Three Boxes task, Attachment Q-sort

Questionnaire package

## 4 years old

Parent behavior (e.g., sensitivity)
Autonomic nervous system response
(parent & child)
Child executive functioning

Questionnaire package

## 4,5 years old

DNA: genotyping Primary school teacher questionnaire Questionnaire package

# 6 - 7,5 years old

Motor development

Questionnaire package

Figure 1. Selection of measurements at different time points throughout the study period

#### **Grants**

- Programmaraad Praktijkgericht Onderzoek (PPO) voor Ouderbetrokkenheid 'Thuis in School: Samen leren begint bij communiceren.' €315.000 (2014, partly Generations² project)
- Stichting tot Steun Nederland: €433.903 (2013) Follow-up Generations² cohort
- Fonds Nutsohra: €234.737 (2010) Title proposal: The effectiveness of an intervention for parents faced with a prenatal diagnosis of a congenital abnormality of their child
- Stichting tot Steun Nederland: €555.318 (2010)

Generations2: the transition to parenthood of women with a background of adverse childhood experiences

- Stichting tot Steun Nederland: €455.853 (2009)

Generations<sup>2</sup>: Cohort-study on the development of parenting and mental health

- NWO Open MaGW Program: €209.513 (2009)

Title proposal: From expecting to experiencing: The role of mental representations of attachment in the transition to parenthood

## **Publications**

#### Dissertations

Juliëtte Cassé (November 9, 2015). Maternal resilience and parenting self-efficacy: A multi-method analysis of mediation and moderation effects.

Floortje Kunseler (June 19, 2015). A longitudinal and experimental analysis of the transition to parenthood: Explaining parenting self-efficacy, anxiety symptoms, and depressive symptoms.

Marije Verhage (December 6, 2013). From expecting to experiencing: The role of parenting self-efficacy in the transition to parenthood.

## International (peer-reviewed) publications:

- Cassé, J.F.H., Oosterman, M., Volling, B.L., & Schuengel, C. (2016) First-Time Motherhood Experiences and the Decision to Have a Second Child. Journal of Family Issues. http://dx.doi.org/10.1177%2F0192513X16662100
- Cassé, J.F.H., Oosterman, M., Finkenauer, C., Geest, V.R. van der & Schuengel, C. (2016). Family conflict and resilience in parenting self-efficacy among high-risk mothers. Journal of Interpersonal Violence. doi: 10.1177/0886260515614280
- Kunseler, F.C., Oosterman, M., De Moor, M.H.M., Verhage, M.L., & Schuengel, C. (2016). Weakened resilience in parenting self-efficacy in pregnant women who were abused in childhood: An experimental test. Plos One, 11. DOI: 0.1371/journal.pone.0141801
- Cassé, J.F.H., Oosterman, M. & Schuengel, C. (2015). Verbal persuasion and resilience of parenting self-efficacy: Preliminary findings of an experimental approach. Family Science, 6, 23-30. IF: NA doi: 10.1080/19424620.2015.1009933
- Verhage, M.L., Oosterman, M. & Schuengel, C. (2015). The Linkage Between Infant Negative Temperament and Parenting Self-Efficacy: The Role of Resilience Against Negative Performance Feedback. British Journal of Developmental Psychology, 33, 506-518.
- Kunseler, F.C., Willemen, A.M., Oosterman, M. & Schuengel, C. (2014). Changes in Parenting Self-Efficacy and Mood Symptoms in the Transition to Parenthood: A Bidirectional Association. Parenting Science & Practice, 14, 215-24. DOI: 10.1080/15295192.2014.972758.
- Huizink, A.C., Menting, B., Oosterman, M., Verhage, M.L., Kunseler, F.C., & Schuengel, C. (2014). The interrelationship between pregnancy specific anxiety and general anxiety across pregnancy. Journal of Psychosomatic Obstetrics & Gynecology, 35, 92-100. DOI: 10.3109/0167482X.2014.944498.
- Wernand, J.J., Kunseler, F.C., Oosterman, M., Beekman, A.T.F. & Schuengel, C. (2014). Prenatal changes in parenting self-efficacy: Linkages with anxiety and depressive symptoms in primiparous women. Infant Mental Health Journal, 35, 42-50. DOI: 10.1002/imhj.21425
- Verhage, M.L., Oosterman, M. & Schuengel, C. (2013). Parenting Self-Efficacy is Associated with Cry Perception, Not Autonomic Responses, during a Cry Response Task. Parenting: Science and Practice, 13(4), 253-265.
- Verhage, M.L., Oosterman, M., & Schuengel, C. (2013). Parenting self-efficacy predicts perceptions of infant negative temperament characteristics, not vice versa. Journal of Family Psychology, 27(5), 844 849. doi: 10.1037/a0034263.

## Other:

Oosterman, M., Schuengel, C. & Bonnet, M. (2011). Jong & Ouder. Tien portretten van moeders onder de twintig. Houten: Uitgeverij Unieboek/Het Spectrum.