

Erasmus University Rotterdam, the Netherlands
CSC PhD 2015 Project Description

School/Department:	Erasmus MC – University Medical Center Rotterdam, Department of Public Health
Project Title:	Determinants of childhood growth and childhood obesity in a child cohort, and effectiveness of E-Health and Child Public Health to prevent obesity in a randomized trial (RCT)
Abstract:	<p>Overweight and obesity can be defined as “abnormal or excessive fat accumulation that may impair health”. Worldwide, about one in ten children at the age have overweight (obesity included). In the last decades there has been a dramatic increase in the prevalence of childhood overweight and obesity in many countries, including the Netherlands and China. Childhood obesity is associated with an increased risk of health problems such as cardiovascular risk factors, type 2 diabetes, asthma and psychosocial problems.</p> <p>This PhD study assesses the social, environmental and child-related determinants of early childhood growth, and the determinants of childhood obesity in a large child cohort. Furthermore, the effectiveness of E-Health and of Child Public Health for parents to prevent obesity in young children will be studied in the data of a large randomized trial (RCT).</p> <p>The theory of the socio-ecological model will be applied. We will use cohort data with repeated measures of child length and weight, and data on environmental, child and family characteristics. The children (n=3.000) are between age 0 and 3 years old. Also, a randomized trial (RCT) was carried out to evaluate the effects of E-Health and of Child Public Health for parents to prevent obesity in young children (n=3.000).</p> <p>The PhD student will be trained to do research and publish in high-impact international peer-reviewed scientific journals.</p> <p>The minimal number scientific publications that is required in a PhD thesis is 4 publications (accepted or published) of which 2 as a first author, and 2 in the ‘first quartile’ regarding ‘impact factor’ in the specific scientific field. However, with the available cohort data, and with proper help and coaching, it will be possible for the CSC scholar to prepare a PhD thesis that consist of six or more scientific papers in the field of social epidemiology and public health.</p>

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	<p>The PhD student can also collaborate in a worldwide research network on inequalities in childhood health, and may use data from other countries as well: http://www.centrearoback.ca/inrich/index.php .</p> <p>The following research questions will be addressed in this PhD trajectory:</p> <ol style="list-style-type: none"> 1. What are the socio-economic and ethnic determinants of early childhood growth and early childhood obesity? 2. What are the family environmental determinants of early childhood growth? 3. What are the family environmental determinants of early childhood obesity? 4. What are the child- related determinants of early childhood growth? 5. What are the child-related determinants of early childhood obesity? 6. What is the effect of E-Health for parents of young children to promote healthy life styles of children and to prevent obesity? 7. What is the effect of face-to-face counseling by medical doctors and nurses for parents of young children to promote healthy life styles of children and to prevent obesity?
Requirements of candidate:	<p>Background: A background in medical/health sciences (for example public health, medicine, epidemiology or psychology) is required. The candidate should have a strong methodological background. Excellent analytical and writing skills are required, as well as a keen interest in the impact of social and environmental circumstances on health.</p> <p>Master degree: Yes IELTS Grade: 7.0 (minimal 6.0 per component) or TOEFL: 100 (minimal 20 per component)</p>
Supervisor information:	<p>Professor Hein Raat, MD, PhD, MBA Email address h.raat@erasmusmc.nl Personal website http://nl.linkedin.com/pub/hein-raat-md-phd-mba/12/92a/625 Some selected publications (a publication list can be mailed upon request):</p>

	<p>Hein Raat, Mirjam K Struijk, Teun Remmers, Eline Vlasblom, Amy van Grieken, Suzanne ML Broeren, Saskia J te Velde, Maaike Beltman, Magda M Boere-Boonekamp and Monique P L'Hoir, Primary prevention of overweight in preschool children, the BeeBOFT study (breastfeeding, breakfast daily, outside playing, few sweet drinks, less TV viewing): design of a cluster randomized controlled trial. BMC Public Health 2013 13:974. DOI: 10.1186/1471-2458-13-974 URL: http://www.biomedcentral.com/1471-2458/13/974</p> <p>Selma H. Bouthoorn, Frank J. van Lenthe, Romy Gaillard, Albert Hofman, Eric A. P. Steegers, Vincent W. V. Jaddoe, Hein Raat, Socioeconomic inequalities in placental vascular resistance: a prospective cohort study. Fertil Steril 2014 May 14;101(5):1367-74. Epub 2014 Mar 14.</p> <p>Bannink R, Broeren S, Joosten-van Zwanenburg E, van As E, van de Looij-Jansen P, Raat H, Effectiveness of a Web-Based Tailored Intervention (E-health4Uth) and Consultation to Promote Adolescents' Health: Randomized Controlled Trial. J Med Internet Res 2014;16(5):e143 URL: http://www.jmir.org/2014/5/e143/ doi: 10.2196/jmir.3163 PMID: 24878521</p> <p>Busra Durmus, Denise Heppe, Hendrik Taal, Rashindra Manniesing, Hein Raat, Albert Hofman, Eric Steegers, Romy Gaillard, and Vincent Jaddoe, Parental smoking during pregnancy and total and abdominal fat distribution in school-age children. The Generation R Study. International Journal of Obesity (22 January 2014) doi:10.1038/ijo.2014.9</p> <p>van Beelen MEJ, Beirens TMJ, den Hertog P, van Beeck EF, Raat H, Effectiveness of Web-based, Tailored Advice on Parents' Child Safety Behaviors: A Randomized Controlled Trial. J Med Internet Res 2014;16(1):e17 doi:10.2196/jmir.2521</p> <p>Pauline Jansen, Marina Verlinden, Anke Dommisse-van Berkel, Cathelijne Mieloo, Hein Raat, Albert Hofman, Vincent Jaddoe, Frank Verhulst, Wilma Jansen, & Henning Tiemeier, 'Teacher and Peer Reports of Overweight and Bullying Among Young Primary School Children. Pediatrics 2014; www.pediatrics.org/cgi/doi/10.1542/peds.2013-3274 doi:10.1542/peds.2013-3274</p> <p>Kruizinga I, Visser JC, van Batenburg-Eddes T, Carter AS, Jansen</p>
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	<p>W, et al. (2014) Screening for Autism Spectrum Disorders with the Brief Infant-Toddler Social and Emotional Assessment. PLoS ONE 9(5): e97630. doi:10.1371/journal.pone.0097630</p> <p>J. Lock, H. Raat, N. Duncan, A. Shapiro, M. Beijlvelt, M. Peters, R.Y.J. Tamminga, F.W.G. Leebeek, H.A. Moll, M.H. Cnossen, Adherence to treatment in a Western European paediatric population with haemophilia: Reliability and validity of the VERITAS-Pro scale. Haemophilia Haemophilia (2014), 1–8. DOI: 10.1111/hae.12463</p> <p>Teun Remmers, Suzanne ML Broeren, Carry M Renders, Remy A Hirasing, Amy van Grieken and Hein Raat, A longitudinal study of children's OP using family environment and perceived physical environment as predictors. International Journal of Behavioral Nutrition and Physical Activity.2014, 11:76 DOI: 10.1186/1479-5868-11-76 URL: http://www.ijbnpa.org/content/11/1/76</p> <p>Lenie van Rossem, Esther Hafkamp-de Groen, Vincent WV Jaddoe, Albert Hofman, Johan P Mackenbach and Hein Raat Title : The Role of Early Life Factors in The Development of Ethnic Differences in Growth and Overweight in Preschool children: A Prospective Birth Cohort. BMC Public Health 2014, 14:722 doi:10.1186/1471-2458-14-722</p> <p>Bouthoorn SH, Wijtzes AI, Jaddoe VW, Hofman A, Raat H, van Lenthe FJ, Understanding the development of socioeconomic inequalities in obesity among Dutch pre-school and school-aged children. Obesity (Silver Spring). 2014 Oct;22(10):2230-7. doi: 10.1002/oby.20843. Epub 2014 Jul 10.</p> <p>Anne I Wijtzes, Selma H Bouthoorn, Wilma Jansen, Oscar H Franco, Albert Hofman, Vincent WV Jaddoe and Hein Raat, Sedentary behaviors, physical activity behaviors, and body fat in 6-year-old children: The Generation R Study. International Journal of Behavioral Nutrition and Physical Activity 2014, 11:96 doi:10.1186/s12966-014-0096-x</p> <p>Selma Bouthoorn, Frank van Lenthe, Jessica Kieffe-de Jong, H. Rob Taal, Anne Wijtzes, Albert Hofman, Vincent jaddoe, Maria Glymour, Fernando Rivadeneira, and Hein Raat, Genetic taste blindness to bitter and body composition in childhood: a Mendelian Randomization Design. International Journal of Obesity 2013. Advance online</p>
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	<p>publication, 27 August 2013; doi:10.1038/ijo.2013.141 .</p> <p>Selma H. Bouthoorn, Frank J. Van Lenthe, Layla L. De Jonge, Albert Hofman, Lennie Van Osch-Gevers, Vincent W.V. Jaddoe, and Hein Raat, Maternal Educational Level and Blood Pressure, Aortic Stiffness, Cardiovascular Structure and Functioning in Childhood: The Generation R Study. American Journal of Hypertension. 2013 doi:10.1093/ajh/hpt180 .</p> <p>Hein Raat, Anne Wiltjes, Vincent W.V. Jaddoe, Henriëtte A. Moll, Albert Hofman, Johan P. Mackenbach, The health impact of social disadvantage in early childhood; the Generation R study, Early Hum Dev 87 (2011) 729–733, doi:10.1016/j.earlhumdev.2011.08.022 .</p> <p>Dennis O. Mook-Kanamori, Eric A. P. Steegers, Paul H. Eilers, Hein Raat, Albert Hofman, Vincent W. V. Jaddoe, Risk Factors and Outcomes Associated With First-Trimester Fetal Growth Restriction. JAMA. 2010;303(6):527-534</p> <p>Raat H, van Rossem L, Jaddoe VW, Landgraf JM, Feeny D, Moll HA, Hofman A, Mackenbach JP. The Generation R study: a candidate gene study and genome-wide association study (GWAS) on health-related quality of life (HRQOL) of mothers and young children Qual Life Res. 2010 Dec;19(10):1439-46. Epub 2010 Oct 28. (DOI 10.1007/s11136-010-9773-7)</p> <p>Raat, H., et al., Feasibility and reliability of a mailed questionnaire to obtain visual analogue scale valuations for health states defined by the Health Utilities Index Mark 3. Med Care, 2004. 42(1):p.13-8.</p> <p>Raat, H., et al., Reliability and validity of comprehensive health status measures in children: The Child Health Questionnaire in relation to the Health Utilities Index. J Clin Epidemiol, 2002. 55(1): p. 67-76.</p>
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