



# BODY WEIGHT, BODY COMPOSITION AND ENERGY BALANCE RELATED BEHAVIOUR DURING THE TRANSITION TO PARENTHOOD

**VICKÀ VERSELE**

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**PROMOTIEZAAL D2.01, CAMPUS ETTERBEEK**

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# ABSTRACT OF THE RESEARCH

Becoming a parent represents a lifechanging period for women and men. Both parents are at risk to change their body weight, body composition and energy balance related behavior (EBRB), i.e., diet, physical activity (PA) and sedentary behavior (SB) during the pregnancy and the postpartum period. Understanding this critical period and the changes parents(-to-be) experience can facilitate the development of health promotion programs. Although the transition to parenthood is often associated with pregnancy-related weight gain and retention in women, evidence on the effect of having a first child on men's body weight is lacking. Data on (changes in) men's weight and EBRB prior to and following the birth of a child are needed in order to provide a more comprehensive understanding of the impact of fatherhood on men's lifestyle and health. It is also unclear whether pregnancy-related weight gain and retention cohere with unfavorable changes in body composition and EBRB in both women and men transitioning to parenthood, considering a couple-perspective.

Using a mixed-methods design, the overall aim of the present doctoral thesis was to provide insight into this critical transition phase. To this end, an observational follow-up study was used to investigate changes in body weight, body composition and EBRB among couples during the transition to parenthood. A qualitative study using focus group discussions was used to identify determinants of changes in EBRB during pregnancy and in the early postpartum period, and to provide knowledge on how future intervention strategies targeting excessive weight gain should be developed.

The body of the doctoral thesis consists of four chapters including eight studies with the following specific objectives:

## Chapter 1: Methodology

- Description of the study protocol "Body weight, body composition and EBRB during the transition to parenthood: study protocol of a multi-center observational follow-up study (TRANSPARENTS)".

## Chapter 2: Needs assessment

- Assessment of changes in maternal and paternal body weight and body composition during the transition to parenthood in Flemish couples (STUDY 1).
- Assessment of changes in maternal and paternal EBRB during the transition to parenthood in Flemish couples (STUDY 2a).
- Study on associations between changes in body composition and changes in EBRB during the transition to parenthood (STUDY 2b).
- Study on the association between parental body composition and PA/SB behavior, and offspring growth trajectories (STUDY 3).

## Chapter 3: Determinant analysis

- Investigation on the determinants of changes in EBRB (STUDY 4 & 5).
- Assessment of the association between partner support and EBRB during pregnancy (STUDY 6).

## Chapter 4: Context of future interventions

- Study on the importance of determinants of changes in eating behavior, and defining priorities for future research and interventions (STUDY 7).
- Assessment of the needs and wishes of expectant and first-time mothers and fathers for interventions aiming to prevent unhealthy changes in EBRB during the pregnancy and the early postpartum period (STUDY 8).

Altogether, the findings from this PhD research project indicate that both parents experience significant changes in body weight, body composition and EBRB during the transition to parenthood. These changes are influenced by several individual, interpersonal, environmental and policy-related determinants. In this respect, it is important to adequately support couples to obtain or maintain a healthy body weight and lifestyle by using a multilevel couple- or family-based approach. The developed frameworks and checklist can be used as such by other researchers, healthcare providers, or policy makers involved in the development of lifestyle interventions during the pregnancy and the postpartum period.

# CURRICULUM VITAE

Vickà Versele (°23/01/1989) obtained a master degree in Biomedical Sciences (Ghent University, 2012) and a bachelor degree in Nutrition and Dietetics (Odisee, 2014). In 2014, she encountered the field of health sciences during an internship at the International Agency for Research on Cancer (IARC), the specialised cancer agency of the World Health Organisation. Afterwards, she did a traineeship at European Commission Directorate General Health and Food Safety (2015), worked as a research associate at the European Food Information Resource (EuroFIR) (2015) and as a project assistant on the project for the revision of the Flemish Food Triangle at Vlaams Instituut Gezond Leven (2016 – 2017).

She started her academic career in 2016 as a teaching assistant under supervision of Prof. dr. Peter Clarys, and began a joint PhD in 2018 on a research project granted by the Research Foundation Flanders (FWO, G033418 N). Vickà carried out her research activities under supervision of Prof. dr. Dirk Aerenhouts and Prof. dr. Tom Deliëns from the Vrije Universiteit Brussel (Department of Movement and Sport Sciences, Move research group) and under supervision of Prof. dr. Roland Devlieger and Prof. dr. Annick Bogaerts at KU Leuven (Department of Development and Regeneration, Realife research group).

