

Fourth Annual Report of the Task Force:

**“Towards Multidimensional Indicators of Child Growth
and Development”**

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**university of
 groningen**

Task Force members:

- Hinke Haisma (chair) - Population Research Centre, University of Groningen, the Netherlands;
- Sepideh Yousefzadeh - same;
- Shirish Darak - Prayas Health Group, Pune, India;
- Sridhar Venkatapuram - King's College, London;
- Enrica Chiappero-Martinetti - University of Pavia, Italy;
- Ko van Wouwe - Child Health Group, TNO, Leiden;
- Gretel Pelto - Cornell University, USA

Background and aim

Child growth monitoring has been introduced in the 1970s, with the aim to reduce child mortality and morbidity. Height and weight have been used as the indicators of child growth, and these have been compared against a universal standard for the identification of both under- and overnutrition. Contextual factors have been missing in the actual growth assessment. We argue, that including these factors in the measurements as additional dimensions of growth could further advance our understanding of the (inequality of) child malnutrition and be used for the development and evaluation of interventions. A capability approach to child growth could give direction to the identification of such dimensions.

The capability approach has its origin in welfare economics, and was first developed by Amartya Sen in the 1980s. It moves away from the focus of resources towards an end; rather it focuses on the concept of capabilities and agency as a means toward an end. It has been employed extensively in the context of human development, for example, by the United Nations Development Programme, as a broader, deeper alternative to narrowly economic metrics such as growth in GDP per capita.

The capability approach has since been applied in the fields of education, disability, and well-being. We aim to expand its use and develop a capability approach to child growth. This implies a moving away from mere anthropometric measurements to include contextual factors as other dimensions into the actual growth measurement with the aim to better be able to target biological, parental, and societal differences and reduce (the inequality of) poor growth outcomes (both under- and overnutrition). We use theories from demography, biology, and social sciences to identify potential additional dimensions of growth. For example, a country's stage in the nutrition transition would be a societal dimension that could be included in the assessment of growth. Or, maternal nutritional status could be an additional biological dimension. Other dimensions could be derived from the Right's of the Child. This could eventually contribute to the development of a multi-dimensional indicator of child growth with implications for counselling, training of professionals, development and evaluation of interventions, and comparisons between countries. Such an approach would require a shift in our biomedical thinking, but could give new direction to addressing child malnutrition.

The largely conceptual work of the past years has started to bear its fruits, and between October 2016 and October 2017, the Task Force's activities have been towards doing empirical work, writing publications, and attending conferences.

Conceptual work

The conceptual work was continued and has resulted in the publication of a paper entitled "Towards a capability approach to child growth: A theoretical framework" in *Maternal and Child Nutrition*. The paper has been recently accepted and will soon be online. Another conceptual paper "How should we define healthy child growth?" has been submitted.

Building on the above paper, an analytical matrix was developed based on a workshop that was held as part of the EXPO in Milan in 2015 and in collaboration with Mario Biggeri. This analytical framework has been described in a manuscript that is currently under revision.

A fourth conceptual paper describing the use of fuzzy set analysis as a tool for multi-dimensional analysis in nutrition research is reaching its final stages.

Empirical work

A systematic review on child growth based on papers published from 1960 is underway. Several researchers are collaborating in this activity: Lybrich Kramer (Hanze University of Applied Sciences), Shirish Darak (Prayas Health Group, Pune), Zaina Mchome (PhD student, PRC, University of Groningen) and Hinke Haisma (chair). The review will start with a quantitative analysis of how the paradigm of child growth has changed over the years, and will be followed by a qualitative analysis of those papers that go beyond a socio-epidemiological perspective of child growth.

A review of the E-HRAF files on child growth has been conducted, and a paper is in development.

Saskia Zadelhoff compared three growth monitoring manuals (from Tanzania, India, and the Netherlands) and analysed them for their reference to context. A paper is in development.

To empirically test the analytical framework, Sepideh Yousefzadeh analysed the Indian DHS with child growth as a multi-dimensional indicator using fuzzy set analysis. The findings showed how a multi-dimensional presentation of child growth provides insights into the distribution of capabilities under different dimensions that remain hidden in socio-epidemiological analyses. A manuscript describing this work is in its final stages.

Zaina Mchome (PhD student, PRC, University of Groningen) finalised the field work for her ethnography in Malangali village, Morogoro, Tanzania. She is currently analysing her findings, and two papers are in its final stages, one on cultural/ local markers of child growth, and another one on realities mediating capabilities related to child growth.

Chumki Chakraborty (PhD student, University of Groningen and BRAC, Bangladesh) has finalised the field work for her qualitative research on the influence of seasonality on caregivers capabilities in Haor regions in Bangladesh. She is currently analysing her findings. The findings from her qualitative work will feed into the further development of a questionnaire that she will use for a survey in the Haor regions in December 2017.

Academic associations and conferences

- 4th International Conference on Nutrition and Growth:

- oral presentation entitled "A capability approach to child growth: A theoretical framework" by Hinke Haisma;
- poster presentation entitled "Context assessment in growth monitoring" by Saskia Zadelhoff (master student "International Health", Royal Tropical Institute, Amsterdam);

- Conference of the Human Development and Capabilities Association "Challenging inequalities: Human Development and Social Change" from 6-8 September 2017:

- oral presentations entitled "A Capability Framework to Child Growth: A New Approach or Repackaging the Same Old?" by Sepideh Yousefzadeh;
- Oral presentation entitled " Going beyond nutrition: Realities underlying capabilities for child growth in rural Tanzania" by Zaina Mchome;
- oral presentation entitled "Child nutritional well-being in *haor* areas of Bangladesh: Parents' stories from capability lens" by Chumki Chakraborty;

- Sepideh Yousefzadeh has become a thematic leader of Horizontal Inequality Intro at the Human Development and Capability Association;
- Hinke Haisma has been invited for a IAEA/WHO/UNICEF workshop held in Vienna, October 3-5 2017, on the double burden of malnutrition to present her work on "Multi-dimensional indicators of child health and nutrition";
- Symposium entitled "Towards a new paradigm for assessing child growth: a capability approach" at the ICN, 14-20 October 2017 in Buenos Aires. Speakers are Hinke Haisma, Sepideh Yousefzadeh, and Sridhar Venkatapuram. Discussant is Gretel Pelto.

Working interdisciplinary

Apart from our progress on the topic of our research, we have learned a lot about working interdisciplinary, about the opportunities and the challenges. About the time it takes to truly understand each other, about how you can only learn a new discipline to a certain extent, about how it is important to have a network in the "discipline of origin", about how much it takes to build a network in a new discipline, etc. But also about what we gain from working interdisciplinary, conceptually, empirically, and ultimately hopefully in policy and practice.