

# Well-being, Body Perception and Weight Status in Young Swedes

## The Grow Up Studies

Akademisk avhandling

som för avläggande av medicine doktorexamen vid Sahlgrenska akademien, Göteborgs universitet, kommer att offentligen försvaras i lokal Europa, Medicinaregatan 20A, Göteborg, den 17 mars 2017, kl 9.00

av Ebba Brann

Fakultetsopponent:

Professor Anne Hammarström

Uppsala Universitet, Sverige

### Avhandlingen baseras på följande delarbeten:

- I. Agneta Sjöberg, Marie-Louise Barrenäs, Ebba Brann, John E. Chaplin, Jovanna Dahlgren, Staffan Mårild, Lauren Lissner, Kerstin Albertsson-Wikland. Body size and lifestyle in an urban population entering adulthood: the ‘Grow up Gothenburg’ study. *Acta Paediatrica* 2012; 101(9): 964-72.
- II. Ebba Brann, Agneta Sjöberg, John E. Chaplin, Monica Leu Agelii, Kirsten Mehlig, Kerstin Albertsson-Wikland, Lauren Lissner. Evaluating the predictive ability of childhood body mass index classification systems for overweight and obesity at 18 years. *Scandinavian Journal of Public Health* 2015; 43(8): 802-9.
- III. Sarah Hitz, Ebba Brann, Kerstin Albertsson-Wikland, Zita Schillmöller, John E Chaplin. Development of the Gothenburg Well-Being in Adolescence Scale: the Grow Up Gothenburg Study. *In manuscript*.
- IV. Ebba Brann, John E. Chaplin, Monica Leu Agelii, Agneta Sjöberg, Aimon Niklasson, Kerstin Albertsson-Wikland, Lauren Lissner. Declining Well-Being in Young Swedes Born in 1990 Versus 1974. *Journal of Adolescent Health* 2016, DOI: 10.1016/j.jadohealth.10.009.
- V. Ebba Brann, Agneta Sjöberg, Kerstin Albertsson-Wikland, Monica Leu Agelii, Aimon Niklasson, Lauren Lissner, John E. Chaplin. Anthropometric Measurements, Subjective Body Satisfaction and Lifestyle in Relation to Adolescent Well-being. *In manuscript*.

**SAHLGRENKA AKADEMIN  
INSTITUTIONEN FÖR MEDICIN**



# Well-being, Body Perception and Weight Status in Young Swedes

## The Grow Up Studies

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### Abstract

The overall aim of this thesis was to investigate well-being, body perception and weight status in an adolescent Swedish population growing up in a changing society with increasing obesity prevalence. The major aims were to document secular changes in, and investigate factors related to, well-being. A well-being scale was adopted for use in adolescents and three childhood BMI classification systems for identifying children at risk of overweight and obesity were assessed.

About 5000 Gothenburg-area students in their final year of high-school (mean age 18.6 years) were included in the Grow Up 1990 birth cohort study. Height and weight were measured and information about well-being, body perception and lifestyle were self-reported. Health records from birth to the final school grade were obtained. Well-being in the Grow Up 1974 birth cohort served as comparison.

Overweight, including obesity, was more prevalent in boys (19%) than in girls (13.4%). However, half of the boys, compared to one-third of the girls, were often satisfied with their body size. The well-being scale developed in this thesis, consisting of five dimensions (*mood, self-esteem, physical condition, energy and stress balance*), revealed that boys experienced higher well-being than girls across all dimensions. Objective body measurements accounted for less of the well-being variance than subjective satisfaction with body size. Regular physical activity, resilience and a happy event during the last year were positively related to well-being, whereas reporting little sleep, dissatisfaction with body size and a sad event during the last year were negatively related to well-being. Well-being was lower, and in particular stress levels were higher, in the later-born cohort than in the 1974 birth cohort. These differences were not explained by the shift in weight status. Girls, however, reported higher self-esteem in the later-born cohort, compared to girls born in 1974. The childhood BMI classification systems varied in ability to predict overweight and obesity at age 18, related to weight status at age 10, although they all mainly correctly identified those without overweight or obesity.

This thesis documents interrelations among well-being, body satisfaction and weight status in Swedish adolescents. These studies identified important factors and interrelations to consider when designing interventions to promote well-being and physical health in adolescents.

**Keywords:** adolescent, well-being, body mass index, body image, lifestyle, body size, childhood obesity

ISBN: 978-91-629-0071-7 (Print)

<http://hdl.handle.net/2077/50858>

ISBN: 978-91-629-0072-4 (PDF)