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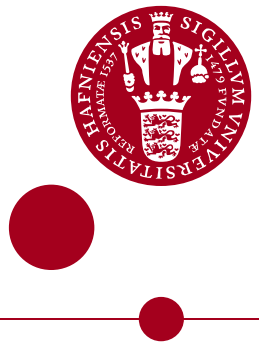

PhD thesis

About right

Body size management among normal weight and moderately overweight people

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This thesis has been submitted to the PhD School of The Faculty of Science, University of Copenhagen

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Preface

This thesis is the result of a PhD project funded by the Faculty of Science, University of Copenhagen. The PhD project was initiated by me in cooperation with Professor Lotte Holm and it has no other affiliations.

The main outcome of the project is presented in three papers submitted for publication in international, peer-reviewed journals. One is published, while the others have been submitted for review. The papers are as follows:

A. Nissen, Nina Konstantin & Holm, Lotte: "Literature review: Perceptions and management of body size among normal weight and moderately overweight people" (published in *Obesity Reviews* (Nissen & Holm, 2015))

B. Nissen, Nina Konstantin; Holm, Lotte & Baarts, Charlotte: "Monitoring the normal body: Ideals and practices among normal weight and moderately overweight people" (submitted to *Obesity Facts*)

C. Nissen, Nina Konstantin; Baarts, Charlotte & Holm, Lotte: "Managing the normal body: Self-initiated attempts to maintain or change body size among normal weight and moderately overweight people" (submitted to *Appetite*).

The first part of the thesis consists of an introduction to the PhD project including its aims, an outline of the scientific field, a presentation of the method and the theory used, a presentation and discussion of the empirical findings, and perspectives. The second part of the thesis consists of the three papers.

I would like to thank the many who have contributed to the research process and to the writing of the thesis:

First and foremost, I would like to thank the people that participated in the empirical study that forms the basis of the thesis. They kindly opened the door to their homes for me, and they took the time to engage in long talks and were brave enough to share thoughts and practices that are not usually shared with anyone, especially not strangers.

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I thank Kristina Aachmann for assisting me in reviewing large amounts of literature during the initial steps of the systematic literature review, which is a part of the thesis, and Lena Boye for her diligent and precise transcriptions of the qualitative interviews. Stuart Wright and Paul Robinson deserve words of thanks for their thorough and patient assistance during the process of correcting the English language and editing the thesis.

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Last, but not least, I thank my other friends and my family tremendously. They have listened to my frustrations and have been patient with me when I was mentally or physically absent. Special loving thanks to my parents: My mother, Hanne, who has offered enormous amounts of time and energy to my family and me, and my father, Kaj, who has been there for us too. They have taken care of my children and loaded them with exiting activities, nice food and lots of love. The vast amount of practical and mental support they have given and their down-to-earth attitude have been invaluable.

And, most of all, my deepest thanks go to my dear husband, Rasmus, and my dear children, Vilbert and Alvira. My road towards the PhD degree has been long and bumpy, and while the three of them have made the heaviest demands on my time, they have also lightened the burden and been the best supporters I could have hoped for. They always remind me about the best things in life, and I am deeply grateful that we have been together through thick and thin.

Abstract

The aim of this PhD thesis is, from an insider's perspective, to understand body size management among normal weight and moderately overweight people. It focuses on body size ideals as wells as practices undertaken to monitor, maintain or change body size.

In a systematic literature review, previous research is scrutinized. In general, the reviewed studies find that normal weight and moderately overweight people are concerned with their weight and shape, and huge discrepancies are found between their ideal size and current size as well as between their own perceptions versus study categorizations of their bodies. Normal weight and moderately overweight people actively engage in managing their weight and shape as dieting and exercise are widespread. Notable socio-demographic variations in perceptions and practices are identified. However, the research field is limited and scattered, and methodological problems are present.

Empirically, the thesis is based on in-depth interviews and some observation of people with a BMI of 18.5-29.9 from various social backgrounds. Inductive coding has been conducted, and governmentality theory has inspired the analysis. It has been found that normal weight and moderately overweight people have clear ideals for their body size, and they construct a variety of practices to monitor their bodies, based on calculations of weight, observations of body shape and senses of bodily firmness. Further, normal weight and moderately overweight people are deeply involved in maintaining or changing the size of their bodies. Feelings of personal responsibility are strong, and they wish to control body size and consider that they have adequate knowledge to do so. Through multiple practices, they make efforts to manage their body size, which is influenced by everyday life challenges as well as major life events. Normal weight and moderately overweight people conform to a high degree with health authority guidelines, but they also creatively undertake concretized and transformed versions of these, and go beyond them. The thesis discusses how regulation influences individuals' self-regulation, and whether the general focus on body size and obesity in society may create a problem for people who, in a medical sense, do not really have one.

Summary

The subject in focus in this PhD thesis is body size management conducted by people categorized as normal weight or moderately overweight. In contrast to the many studies that focus on people with extreme body size, the aim is to investigate body size management among ordinary people who are not, from a medical point of view, at high risk due to their size. Further, in contrast to other studies about normal and moderately overweight people, which mainly measure body size management and social patterns in this deductively, the aim is to understand, from an insider's perspective, how the normal weight and moderately overweight people, in the context of their everyday lives, think and act with regard to the size of their bodies. More specifically, the thesis focuses on normal weight and moderately overweight people's body size ideals as well as the practices they undertake to monitor, maintain or change their body size. The outset is a systematic literature review which scrutinizes the existing literature, while empirical material is generated from a qualitative study based on interviews combined with some observation during home visits.

Part I of the thesis consists of a general presentation of the study, which presents the motivation for the study and outlines its overall aim and the research questions addressed. The insider's perspective is presented as the approach taken, and the concepts used are clarified. Further, governmentality theory is outlined as a framework for the analysis, and the designs and methods of the literature review and the empirical study are described. The findings from the literature review and the empirical study are presented and discussed, and finally the research is put into perspective by discussing implications for research and the practice of health promotion work.

In the three papers that make up Part II of the thesis, findings from the literature review and the empirical study are analysed in detail:

The first paper is entitled *"Literature review: perceptions and management of body size among normal weight and moderately overweight people"*. It identifies and examines 47 publications reporting on self-initiated body size management among normal weight and moderately overweight people. In the reviewed publications, normal weight and moderately overweight people are found to be concerned with the size of their bodies, and discrepancies are found between self-assessed and study-measured body size, and between current and ideal body size. Thus, a desire to lose weight is widespread. Further, in the reviewed publications, many normal weight and moderately overweight people are found to attempt to change their body size, or secondly to maintain their current size. Dieting and exercise are identified as widespread strategies to endeavour in this respect. Socio-demographic variations, especially gender differences, are found to be significant with regard to both perceptions of body size and the practices undertaken to manage this. The literature review reveals that despite the huge focus on body size in society and in health science today, social science studies considering self-initiated body size management among normal weight and moderately overweight people are few in number, and they investigate different aspects of body size management and use incomparable methods. Some are methodologically biased, for instance because of problematic samplings and low response rates, and a geographical bias towards North American studies has been identified. Most of the studies are quantitative, deductive survey studies

operating with pre-defined categories, whereas qualitative studies with an explorative approach and studies of changes in body size management over time are few in number.

The second paper is entitled *"Monitoring the normal body: Ideals and practices among normal weight and moderately overweight people"*. It outlines body size as evaluated in terms of weight, body shape and physical firmness, and it argues that normal weight and moderately overweight people are very much involved in monitoring their own body size. They have clear ideals regarding body size and make use of multiple practices to monitor their size as they focus on biometric measurements recommended by health authorities, but also have various other ways of calculating weight, evaluating shape and sensing firmness. Their monitoring tools include bathroom scales, mirrors, belts, and clothes, and monitoring also implies making use of sight and embodied feelings. Thus, establishing body size ideals and monitoring size is a complex process, and monitoring the body is present in thoughts and actions in everyday life among normal weight and moderately overweight people.

The third paper is entitled *"Managing the normal body: Self-initiated attempts to maintain or change body size among normal weight and moderately overweight people"*. It outlines how normal weight and moderately overweight people are very much involved in managing the size of their bodies, most often attempting to lose weight and improve their shape and firmness, or attempting to maintain their current size. They feel personally responsible for their body size and, thus, they have a strong desire to manage this in accordance with their ideals for health and appearance, and they consider that they have adequate knowledge to do so. The normal weight and moderately overweight people each have a repertoire of well-established and well-integrated management practices, but they still struggle to involve as much in body size management as they would like to because of obstacles and other considerations in their everyday lives. Also, they experience that major life events in both positive and negative senses influence their opportunities to manage the size of their bodies as well as their degree of in engagement in this. The normal weight and moderately overweight people, to a high degree, conform to the guidelines marked out by health authorities, but they also creatively undertake concretized and transformed versions of these, and go beyond them.

Taken together, the thesis finds that the subject of body size management among normal weight and moderately overweight people has not received much attention in the literature, but is, nevertheless, a subject where a lot is at stake. The normal weight and moderately overweight people appear to be regulated and to regulate themselves – to some extent in accordance with the official guidelines, but also in their own ways in line with what is meaningful in their lived lives. Thus, people not categorised as extreme in size, put a lot of into attempts to be *about right*. To investigate the subject further in future research would be advantageous, and health promotion work should acknowledge that motivation, knowledge and responsibility are already present and should, therefore, provide more specific initiatives that take everyday practices and obstacles as well as life events into account.

Sammenfatning på dansk

Emnet for denne ph.d.-afhandling er håndtering af kropsstørrelse blandt mennesker kategoriseret som normalvægtige eller moderat overvægtige. I modsætning til de mange studier, der fokuserer på mennesker med ekstrem kropsstørrelse, er målet at undersøge håndtering af kropsstørrelse blandt mennesker, hvis størrelse netop ikke er forbundet med markant øgede sundhedsrisici. Endvidere, i modsætning til studier, der ganske vist fokuserer på normalvægtige og moderat overvægtige mennesker, men hovedsagligt undersøger håndtering af kropsstørrelse deduktivt, er målet ud fra et insider-perspektiv at forstå hvordan disse mennesker, i deres levede liv, tænker og handler i forhold til størrelsen af deres kroppe. Nærmere bestemt stiller afhandlingen skarpt på normalvægtige og moderat overvægtige menneskers idealer for kropsstørrelse samt deres praksisser i forhold til at overvåge kropsstørrelsen og praksisser i forhold til at fastholde eller forandre denne. Afhandlingen er baseret på dels en systematisk gennemgang af den eksisterende videnskabelige litteratur på området og dels et kvalitativt empirisk studie med dybdeinterviews og observation.

Første del af afhandlingen består af en generel præsentation af PhD-projektet. Her motiveres projektet, og dets overordnede mål og forskningsspørgsmål introduceres. Insider-perspektivet præsenteres som den valgte tilgang, og governmentality-teori som inspirerende værktøjskasse for analysen. Desuden præsenteres de centrale begreber i projektet samt design og metode for det empiriske studie. Fund fra litteraturstudiet og det empiriske studie præsenteres og diskuteres, og afslutningsvis sættes konklusionerne i perspektiv i forhold til fremtidig forskning og sundhedsfremmearbejde.

De tre artikler, som udgør anden del af afhandlingen, indeholder detaljerede analyser af litteraturstudiet og det empiriske studie:

Den første artikel, *"Literature review: Perceptions and management of body size among normal weight and moderately overweight people"*, identificerer og gennemgår 47 videnskabelige artikler, der beskæftiger sig med opfattelser af kropsstørrelse og med praksisser til at overvåge, fastholde og forandre kropstørrelsen blandt normalvægtige og moderat overvægtige. De identificerede studier finder forskelle i selvvurderet og studiemålt kropsstørrelse, og forskelle mellem aktuel og ønsket kropsstørrelse, og der er således udbredte ønsker om at tabe sig. Desuden viser studierne, at mange normalvægtige og moderat overvægtige mennesker forsøger at forandre, eller alternativt at fastholde, deres kropsstørrelse, og kostændringer og motion er udbredte strategtier til at opnå dette. Der viser sig markante socio-demografiske forskelle i opfattelserne og håndteringen af egen kropsstørrelse. Den systematiske litteraturgennemgang påpeger, at trods stor interesse for kropsstørrelse i nutidens samfund generelt og især inden for sundhedsvidenskab, er det samfundsvidenskabelige felt omkring ikke-ekstreme menneskers korpsstørrelse lille og fragmenteret. Der findes kun få studier, og disse undersøger meget forskellige aspekter af kropsstørrelse, og de anvender usammenlignelige metoder. Nogle studier er metodisk set problematiske, blandet andet er der skævheder i rekrutteringen og lave svarprocenter, og feltet er præget af en geografisk skævhed i form af flest nordamerikanske studier. Desuden omhandler langt de fleste af artiklerne kvantitative

studier, der opererer med forhåndsdefinerede kategorier, hvorimod kvalitative studier og studier over tid er fåtallige.

Den anden artikel, *"Monitoring the normal body: Ideals and practices among normal weight and moderately overweight people"* viser på baggrund af det empiriske studie, at normalvægtige og moderat overvægtige mennesker forholder sig til deres kropsstørrelse gennem begreberne vægt, form og fasthed, og at kroppen overvåges og håndteres i forhold til disse. Selvom deres kroppe ikke har en størrelse, der er forbundet med markant forøgede sundhedsrisici, er disse mennesker meget engagerede i at overvåge deres størrelser. De har klare idealer for kropsstørrelsen og tager en række praksisser i anvendelse for at overvåge denne. De anvender biometriske målinger anbefalet af sundhedsmyndigheder, men har også andre måder at beregne vægt på, og de overvåger og vurderer også kropsstørrelsen ved at se på dens form og mærke dens grad af fasthed. I arbejdet med at overvåge kroppens størrelse anvender de badevægte, spejle, bælter, tøj, samt synet og følesansen. Fastsættelsen af idealer for kropsstørrelsen og overvågningen af denne fremstår derved som en kompleks proces, og kropsstørrelsen fylder meget i tanker og handlinger i de normalvægtige og moderat overvægtiges hverdagsliv.

Den tredje artikel, *"Managing the normal body: Self-initiated attempts to maintain or change body size among normal weight and moderately overweight people"*, viser på baggrund af det empiriske studie, at normalvægtige og moderat overvægtige mennesker er meget engagerede i at håndtere deres kropsstørrelse. Oftest forsøger de at tabe sig og forbedre kroppens form og fasthed, eller i det mindste at fastholde kroppens aktuelle størrelse. De føler personligt ansvar for og ønsker i høj grad at kontrollere deres størrelse, samtidig med at de oplever at have tilstrækkelig viden til at være i stand til dette. De normalvægtige og moderat overvægtige mennesker har hver især et repertoire af veletablerede praksisser, som er integreret i deres hverdagsliv – men ikke desto mindre oplever de jævnligt, at det er svært at engagere sig i så meget i deres kropsstørrelse, som de gerne vil, fordi der også er barrierer og andre hensyn at tage i deres hverdagsliv. Desuden oplever de i både positiv og negativ forstand, at store livsbegivenheder har betydning for deres muligheder for at håndtere kroppen og for deres engagement i dette. De normalvægtige og moderat overvægtige mennesker søger i høj grad at håndtere kroppen i overensstemmelse med sundhedsmyndighedernes anbefalinger, men de finder også kreative måder at konkretisere og ændre disse, og nogle gange rækker deres praksisser ud over anbefalingerne.

Alt i alt tegner afhandlingen et billede af håndtering af kropsstørrelse blandt normalvægtige og moderat overvægtige mennesker som et overset og fragmenteret forskningsfelt, men ikke desto mindre et emne, hvor der er meget på spil. De normalvægtige og moderat overvægtige mennesker viser sig at være regulerede og regulerer sig selv, i nogen grad i overensstemmelse med de officielle retningslinjer, men også på deres egne måder, i overensstemmelse med hvad der er meningsfuldt i deres levede liv. Sundhedsfremmearbejde kan med fordel tage udgangspunkt i, at engagement, motivation og viden allerede er til stede hos normalvægtige og moderat overvægtige mennesker, og kampagner og andre indsatser bør tilrettelægges, så de i højere grad tager højde for deres kreative måder at håndtere kropsstørrelsen på samt for de vilkår og forhindringer for håndtering af kropsstørrelse, som deres levede liv indebærer.

Part I: Introduction

Chapter 1

Body size on the agenda

A dinner party is on. I am sitting at a table together with strangers and friends, and a lot of food is within easy reach. I have wine in my glass and the atmosphere is convivial. However, I do not really feel like participating in the discussions about last night's TV-programs or the weather. Instead, I notice some of the other phrases that now and then cross the table:

"No thanks"

"Come on, have some more, please. Eat it today – wear it tomorrow!"

"I have made this salad dressing with curd to make sure that we get lots of proteins"

"I haven't drunk any beer at all this summer, and now you can actually see the result on my stomach"

"How do you find the time for exercise? I think it is really difficult"

"It's a party, so let's celebrate!"

These phrases could have been uttered at almost any dinner party; they are purely examples of matters talked about in many social contexts in our world today. But what do they mean? Why do people talk so much about what they eat and do not eat, and the exercise they do, or do not do? And which practices do their phrases refer to?

Motivated by such questions, this thesis focuses on ordinary peoples' perceptions of the size of their own bodies, and on the practices they undertake to manage their body size.

Body size – a dominant discursive field

My interest in the topic of ordinary people's relation to the size of their own bodies initially emerged out of observations from everyday life, but has been intensified by my readings of academic literature and broader observations made when looking into various areas of social life:

To begin with, I have come across historical analyses which suggest that humans' relation to the size of their bodies was not much of an issue back in time. Of course, humans have always paid some degree of attention to their bodies, but earlier the body was much more than today perceived as naturally given and interest in it focused on how it functioned and survival (Schilling, 2012:2,5). In

accordance with this, governments used to pay attention to the bodies of the population mainly when significant disasters threatened the labour force or the military force, and size was considered merely in relation to famine (Porter, 1999:631,639; Schilling, 2012:2).

In sharp contrast to this, my further readings of contemporary social theory have revealed an enormous interest in the body among contemporary individuals and today's societies in general including a huge focus on body size. Anthony Giddens, Ulrich Beck, Mike Featherstone and many others describe how the new era of late or post modernity has influenced individuals' thinking about their bodies enormously (Beck, 1992; Featherstone, 1991; Giddens, 1990; Giddens, 1991). According to Giddens, modernity and late modernity have emerged out of the fall of former regulating institutions such as class, religion, gender, and local belonging. Because of this, identity is no longer predetermined and fixed – the world is now a world of opportunities (Giddens, 1990; Schilling, 2012:4). At the same time, in late modern societies, individuals are confronted with new forms of risks, and the awareness of risk and uncertainty has increased (Beck, 1992:19; Giddens, 1990:10). While science has increased people's control over certain aspects of life, it has not provided them with values to guide their lives, and this leaves individuals alone with the task of establishing and maintaining values and making sense of their daily lives (Giddens, 1991:52; Schilling, 2012:3). The enormous increase in, on the one hand, opportunities and, on the other hand, uncertainty has resulted in a high level of reflexivity among individuals (Giddens, 1990:36-38), including reflexivity with regard to the body. This means that the body has become increasingly constitutive for the self (Featherstone, 1991; Giddens, 1991:7; Schilling, 2012:4). In late modernity, cosmopolitan cities, global media and the internalization of consumer culture valorise the body as bearer of symbolic value and individuals are thereby encouraged to be reflexive about their embodied identities (Featherstone, 1991; Schilling, 2012:4). This current focus on the body and the possibilities to change it in the process of creating identity has also been outlined empirically, for instance by Thomas Johansson as he studies the phenomenon that he terms 'make over-mania' (Johansson, 2007).

Thus, from social theories on individuals in contemporary societies, I have found that today, to a much larger extent than earlier, people have the opportunity and the need to choose their diet, their level of physical activity, their clothing, and they can also decide to initiate cosmetic interventions on their bodies. Contemporary individuals are extremely reflexive about their bodies and their health and appearance is to a large extent understood as the result of their own choices.

When I turn to look at the public authorities in my country, Denmark, I find a high level of activity with regard to attempting to influence the body size of individuals in the population. On the basis of evidence-based research, health authorities work to inform individuals about the ideal body size and to suggest activities that can facilitate this. Guidelines are published about the ideal size of the human body, and the type and amount of food and exercise required to achieve it. In Denmark, The National Board on Health operates with recommendations for Body Mass Index (BMI) and for waist circumference to assess the body size (Sundhedsstyrelsen, 2011c). On the basis of BMI calculations, bodies are categorized as being underweight, normal weight, (moderately) overweight and obese, and health risks related to these categories are delineated (Sundhedsstyrelsen, 2009; Sundhedsstyrelsen, 2011c). In this context, the term 'normal weight' does not refer to prevalence and distribution, but to normal in a medical sense, meaning physiologically well-functioning as op-

posed to the abnormal and problematic. Moreover, the National Board on Health in Denmark has published dietary guidelines with eight specific recommendations, as well as guidelines which specify the amount of time which should be spent on physical activity (Sundhedsstyrelsen, 2009; Sundhedsstyrelsen, 2011c). Historical analyses of guidelines through the ages emphasise that these are not stable over time as the recommendations are updated every now and then in accordance with the latest evidence in research (Overgaard, 2005:156-166; Porter, 1999).

All around, I see examples of authorities promoting the guidelines and monitoring the size and condition of people's bodies. Individuals are invited and encouraged to undergo regular health examinations conducted by family physicians and health visitors. For example, every child in Denmark is offered regular health examinations throughout childhood, including measuring height and weight (Sundhedsstyrelsen, 2011b:154). Also, authorities conduct population studies by surveying the population, and on this basis, the prevalence of risk and its potential consequences for society are calculated. Moreover, authorities are initiating campaigns to prevent overweight and obesity which target specific risk groups as well as the whole population (Sundhedsstyrelsen, 2009; Sundhedsstyrelsen, 2011a). Especially, individuals, who are identified as falling outside the definition of a normal, healthy body size are offered help to normalize their bodies. Thus, municipalities in Denmark offer a range of activities, for instance, obese people are invited to participate in weight loss programs, and parents in families with children categorized as overweight are encouraged to participate in courses too (e.g. Stevns Kommune, 2012; Sundhedsstyrelsen, 2003; Sundhedsstyrelsen, 2013). Also, special activities are targeted obese people, who experience problems in their work life or are unemployed (Sundhedsstyrelsen, 2013).

However, as indicated by media debates, it is not only health authorities representing the state that try to influence individuals' body size. At some workplaces, rules exist about physical appearance, while at others, employees are offered assistance to implement the recommended lifestyles. For instance, exercise facilities, smoking cessation courses and canteens with healthy food are common (Sundhedsstyrelsen, 2010). These arrangements are often presented as bonuses, but also aim to ensure that the employees are healthy enough to carry out their work and that their appearance is suitable for their positions (Sundhedsstyrelsen, 2010). There are examples of workers that have been fired from their job and applicants that have been rejected for a job because of being overweight (Avisen.dk, 2015; Larsen, 2014).

In daily life, I am confronted with myriads of notions about what the right body size is and how it can be achieved. When I turn on my computer or TV, and when I open a newspaper or magazine I am met by programs and articles about experts' tips and tricks, or personal stories about weight loss. Examples of this include web-articles from a large Danish news distributer, TV2, such as "*Test yourself: Are you overweight?*"[1] (Tv2, 2011), "*Make your body fit: Optimize your exercise and increase*

[1] My translation.

your metabolism"[2] (Tv2, 2015a) and "*Sugar free summer: How to cook healthy and delicious breakfast*"[3] (Tv2, 2015b). Shelves in bookshops are loaded with self-help books and the web swarms with blogs, which promote alternative health concepts, often suggesting strict dietary and exercise regimes. 'The Super healthy Family' (Kernesund familie) (Mauritson, 2007) and 'paleo' (Paleo kost, 2015) are among the alternative health concepts that have become popular in Denmark during recent years, but which have also been much discussed for their actual healthiness.

In all this, my attention has been drawn to the focus on body size, which is characteristic for our world today. It is striking that so many different actors assess and give suggestions on how individuals should look and how they should act with regard to their bodies. Social thinkers precisely discuss the increased interest in the body today and they outline the many various reasons for it as well as its implications. Thus, Shilling points out that today there is a popular as well as academic interest in body matters (Schilling, 2012:1), and Nettleton and Watson explain that the growing salience of the body is related to a number of factors, namely a politicisation of the body, demographic changes, changes in the disease burden, the advent of new technologies, and not least the rise of late modernity, including a consumer culture (Nettleton & Watson, 1998:4-7). All in all, today, body size stands out as a dominant discursive topic.

Bringing ordinary people into focus

In Denmark, 49.9 % of the adult population are (on the basis of self-reported weight and height) estimated to have a BMI between 18.5 and 24.9 and are thereby categorized as having a normal weight (Christensen, Davidsen, Ekholm, Pedersen, & Juel, 2014:96). Further, 33.3 % of the population have a BMI between 25 and 29.9 and are categorized as being moderately overweight (Christensen et al., 2014:96). These proportions are comparable to those in other western countries, though in some countries, especially the US, the proportions of normal weight are lower with correspondingly more people in the categories of moderately overweight and obese (OECD, 2015; Wang & Beydoun, 2007). Despite the explosive growth in the number of people with obesity during recent decades (Finucane et al., 2011; Richelsen et al., 2003; World Health Organisation, 2000), people who are normal weight or moderately overweight still make up the majority of the population in Denmark and comparable countries.

Huge attention has been paid to people in extreme weight categories, especially those categorized as obese (BMI>30), but also those categorized as underweight (BMI<18.5). Within health science, an enormous number of studies have been conducted with the intention of determining the health consequences of falling outside the category of normal weight and finding ways to reduce and prevent extreme weight (Haslam & James, 2005; Musaad & Haynes, 2007; Pathak, Mahajan,

[2] My translation.
[3] My translation.

Lau, & Sanders, 2015; e.g. Reilly et al., 2003; Sundhedsstyrelsen, 2005). Following in the aftermath of this, social science and psychology have engaged in revealing the influence of social and psychological factors on the rise of extreme weight (e.g. Ball & Crawford, 2005; Sobal & Stunkard, 1989; Wang & Beydoun, 2007; Yager & O'Dea, 2008), and have investigated how extreme weight influences individuals' identity and personality (e.g. Befort, Thomas, Daley, Rhode, & Ahluwalia, 2008; Christiansen, Borge, & Fagermoen, 2012; Cordell & Ronai, 1999; Degher & Hughes, 1999; Harmatz, Gronendyke, & Thomas, 1985; Smith & Holm, 2012; Smith & Holm, 2011). In contrast, not much scientific attention has been given to the majority of the population that actually falls within the categories of normal weight and moderately overweight – from a medical point of view, these groups may not seem very interesting because they are not considered very unhealthy (Flegal, Graubard, Williamson, & Gail, 2005; NHLBI Obesity Education Initiative Expert Panel on the Identification, Evaluation, and Treatment of Obesity in Adults (US), 1998; Reilly et al., 2003), and social science has not paid much attention to the normal weight and moderately overweight people either (Nissen & Holm, 2015).

However, I am interested in precisely the people that are not considered extreme in size. Even though the size of their bodies is not categorized as risky as for those with extreme size, these people still experience the huge focus and the discursive connotations of body size that are evident today. Most of the social science research within the field has the character of socio-epidemiology, and interestingly these studies indicate that even people who are not extreme in size have body ideals that differ from their current size, and that these people engage in practices aimed at changing their size (Nissen & Holm, 2015). The socio-epidemiological studies raise questions about what characterizes these practices and which meanings they are subscribed.

Thus, I find it interesting to explore body size management among normal weight and moderately overweight people because they experience the huge focus on body size in their daily lives with the many connotations related to how they ought to manage their bodies. Furthermore, according to earlier scientific studies, there are indications that these people engage in body size management, though this has not been fully investigated.

It may be argued that normal weight and moderately overweight people are interesting to study because they are the success stories of body size management and health promotion, but from a more critical perspective, it may also be argued that this group's body size management efforts illustrate some of the less fortunate side effects of contemporary health promotion and the general focus on health and beauty in society. In other words, it is worth contemplating whether health promotion is merely solving a problem for people of extreme body size – or rather is creating one for a lot of people who actually do not have a body size problem.

The insider's perspective

Taking into account the dominant discursive status of body size in current social life and the lack of scientific interest in how this fundamentally influences people that are not extreme in size, I adopt an *insider's perspective* as my approach to study body size management. This perspective provides the basis for a deeper understanding of how these people perceive their own bodies with regard to

size, and how they manage this in their everyday lives. Inspiration for this perspective has come from different angles and comprises different aspects.

First of all, my approach is inspired by phenomenology and related thoughts. Phenomenology is anchored in individual subjects and attempts to seek in-depth understanding by focusing on meanings ascribed to experiences and intentions behind actions (Overgaard & Zahavi, 2009:104; Schutz, 1962:208). One of the founding fathers of phenomenology, Alfred Schutz, conceptualizes the *life-world* as individuals' horizons of experiences. Individuals are oriented to the life-world with a natural attitude, in which the world is taken for granted except when problematic situations emerge (Overgaard & Zahavi, 2009:100-101; Schutz, 1962:208,231-234). Further, John Dewey, the founder of pragmatism, operated with the concept *lived experience* to describe how individuals deal with the fundamentally uncertain world by actively and intelligently creating a degree of insurance through everyday routines, values, and a sense of belonging (Grøn, 2004:20; McDermott, 1981:355). Dewey has been said to celebrate rather than deplore uncertainty, because he believed that through their interactions with ambiguous and troublesome surroundings people refine their abilities to image, plan, and control (Diggins, 1994:222-223; Grøn, 2004:20). In relation to this, meaning is viewed as a method of acting towards things(Prus & Puddephatt, 2009:81), and human activity is contextualized as being something social, situated, embodied, aesthetic and moral (Grøn, 2004:20-21; Prus & Puddephatt, 2009:81). Within phenomenology, there is a focus on the lived body and the idea that human beings and their consciousness are fundamentally embedded within the body (Nettleton & Watson, 1998:9). This focus on embodiment has especially been advanced by Maurice Merleau-Ponty as he argues that all human perception is embodied (Merleau-Ponty, 2005 (1962); Turner, 1992:56). Nettleton and Watson argue that presicely phenomenology is an appropriate approach when the aim is to examine how people experience their bodies and in particular how they articulate their experiences (Nettleton & Watson, 1998:9). Thus, phenomenology sets the stage for my attempt to understand how normal weight and moderately overweight people experience their own body size and which meanings they ascribe to practices they engage in with regard to this.

Phenomenology is one of the foundation stones within the sociology of everyday life (Jacobsen, 2009:28), but I am also inspired by the sociology of everyday life in a more general sense. In contrast to sociological analyses that focus on overall structures and changes in society, the sociology of everyday life is interested in the social interaction and the construction of meaning in ordinary, daily life (Jacobsen, 2009). This also implies a focus on creativity in people's ways of creating their everyday lives under the given circumstances and producing changes (de Certau, 1984:xiv-xv). The sociology of everyday life offers not only theoretical notions about how the social world should be grasped, but also analytical and methodological approaches for studying social phenomena (Jacobsen, 2009:17). The reason for adopting the everyday life perspective as the fundamental basis for the thesis is an intention to understand how body size management is formed by and interacts with whatever else is happening in the life of normal weight and moderately overweight people. This analytical approach encourages tuning in to how people live their everyday lives, including how specific challenges related to families, children, work-schedules, social gatherings and so on may influence people's relations to their own bodies, and also scrutinizing how meaning in relation to one's own body is created.

On a more concrete level, I am much inspired by other empirical studies that in one way or another have adopted the insider's perspective. In particular, Lone Grøn's analysis of patients and professionals concerned with lifestyle-related diseases has been very inspiring. Grøn explores how patients and professionals in an institution (called The lifestyle Center) deal with severe lifestyle related diseases. Using the concept of lived experience she frames the problem of having to change lifestyle after the onset of lifestyle disease as a relation between on the one hand an existing focus on health promotion and lifestyle change and on the other hand everyday routines together with family traditions and values of care and belonging (Grøn, 2004).

The approach that I am taking has important methodological and analytical implications. First of all, the thesis focuses on body size management empirically, investigating how body size is experienced and how body size management is practiced as embodied and discursive performance. Secondly, the focus is on identifying patterns and understanding experiences, not on individuals. This also means that the focus is not on social differences with regards to body size management, but rather on perceptions and practices which are shared by people with different socio-demographic backgrounds. That is, the thesis does not examine the prevalence of actual and objectively measurable body size management practices among specific individuals or social groups who are normal weight or moderately overweight. Rather, the idea is to explore, across individuals, embodied and discursive perceptions of body size and experienced practices undertaken with the intention to manage body size. According to Nettleton and Watson, there is a definite need to counter the dominant theoretical trend within the sociology of the body which provides a rationale for conducting empirical studies that take an embodied approach and examine how people experience their bodies from their own perspective (Nettleton & Watson, 1998:2-3).

Clarification of concepts

The overall concept of this thesis is *body size management*, understood as the practices people undertake in order to adjust their current body sizes to that accord with ideals and norms. This understanding is basically rooted in the insider's perspective, and is inspired by Nettleton and Watson as they suggest that studies on the management of bodies often "*highlight the preciousness of the body as well as humans' remarkable ability to sustain bodily control through day-to-day situations*", and they add that humans' articulations of their bodily experiences should also be considered (Nettleton & Watson, 1998:11-12). Other studies within the research field most often operate with rather narrow definitions of body size, with weight being the most typical concept studied, although some studies also include shape (Nissen & Holm, 2015). My open approach is also a response to this and my use of body size as a concept facilitates a more open exploration of the field.

My interest in understanding body size management from the perspective of ordinary people entails a focus on the way they think and act with regard to body size. Firstly, this includes their *perceptions* of own body size, which comprises ideals of body size, ideas about (a range of) acceptable body size(s) and evaluations of the current body size against their ideal. Secondly, the approach includes *management practices*, which encompasses monitoring practices as well as practices undertaken with the intention of maintaining or changing current body size.

Finally, it should be mentioned that my interest in ordinary and not extreme people is operationalised to include normal weight and moderately overweight people (BMI 18.5-29.9). However, my main interest is not the medical categorisations, but how people who have been labelled normal weight or moderately overweight perceive themselves and which practices they adopt.

Aim and research questions

The PhD project has developed out of my interest in ordinary people's relation to the size of their own bodies in a world where body size is a dominant discursive topic.

On this basis, the overall aim of the project is to:

> *Understand from an insider's perspective how normal weight and moderately overweight people think and act with regard to their own body size, and how they make sense of this.*

More specifically, the research questions that guide the project are:

1. *Which perceptions and monitoring practices with regard to body size exist among normal weight and moderately overweight people?*

2. *Which practices do normal weight and moderately overweight people undertake to attempt to maintain or change their body size; how are these practices related to their everyday lives, and what meanings are ascribed to them?*

The papers that constitute part II of the thesis contribute to the overall aim in the following manner: Paper A ("*Literature review: Perceptions and management of body size among normal weight and moderately overweight people*") spans the two research questions as it scrutinizes the existing field of social research on body size management among normal weight and moderately overweight people. This forms the outset for the empirical study, where Paper B *("Monitoring the normal body; Ideals and practices among normal weight and moderately overweight people"*) addresses the first question empirically, and Paper C (*"Managing the normal body: Self-initiated attempts to maintain or change body size among normal weight and moderately overweight people"*) addresses the second question empirically.

The following chapters

After this introduction of the topic of the thesis as well as the aim and research questions that it builds on, Chapter 2 provides an outline of the exiting research on body size within social science. This overview of the research field is based on the systematic literature review presented in Paper A.

Chapter 3 presents the theoretical perspective, which to a degree has contributed to the motivation of the thesis and in particular is found to be suitable and inspiring for the analysis of the findings from the empirical study. It is specified how the theoretical perspective is relevant and how it can be combined with the insider's perspective that is the fundamental outset of the thesis.

Chapter 4 discusses the methodology of the empirical study and describes the way it was organized and conducted including some reflections about how the study design may have affected the results.

Chapter 5 presents the main analytical results of the empirical study. The results regarding each of the two research questions and from the three papers are presented and subsequently discussed against theory as well as existing literature within the field. The results are summed up in an overall conclusion, which constitutes Chapter 6.

Chapter 7 offers some further reflections and perspectives on the basis of the results from the literature review and the empirical study. This includes reflections on the organization of the study as well as possible implications for research and practice.

The three papers presenting the literature review and the empirical results in more detail make up Part II of the thesis.

Chapter 2

Body size in research

This chapter reports on and discusses the research field of social science regarding body size management among normal weight and moderately overweight people. This is done on the basis of a systematic literature review that was conducted as the initial work of the PhD project, and which is presented in detail in paper A. The aim of the literature review has been to obtain an overview of the scientific field, which in itself constitutes important information, while also providing the basis for taking into account already existing knowledge as well as any shortcomings of previous studies when designing my own empirical study.

The chapter starts with a brief introduction to the overall research field of body size management. Then the methods used for the literature review are presented, followed by an outline of the empirical findings of the reviewed studies. Finally, an assessment of the studies is presented which includes a discussion of their strengths and weaknesses. Paper A provides details about the methods and findings of the studies separately, and it specifies the references for the literature scrutinized in this chapter.

A vast, but narrow research field

Medicine, nutrition, public health, and related disciplines are, each in their own way, deeply engaged in trying to address the obesity epidemic and understand body weight in general. Thus, during recent decades, there has been a massive increase in research activities, and the number of health science studies within this field is now enormous. At the same time, as implied in Chapter 1, there is also a degree of scientific interest in the social and psychological aspects of body size. This interest is partly related to health science studies as many analyses investigate the social and psychological implications of intervention studies (e.g. Gardner, Sheals, Wardle, & McGowan, 2014; Holm, 1993; Nielsen, Korzen, & Holm, 2008) or gain access to participants from the health sciences studies (e.g. van Genugten, van Empelen, & Oenema, 2012). Though, independent social science studies on body size management do also exist, most of which focus on people with extreme weight, while few studies deal with normal weight or moderately overweight people. Consequently, although the overall scientific field on body size management is huge, it also appears to be somewhat narrow focusing on health science with social science studies being somewhat auxiliary.

Therefore, social science literature that focuses on self-initiated body size management among normal weight and moderately overweight people is limited, but it nevertheless deserves to be scrutinized.

Methods of the systematic literature review

The literature review focuses on published work about normal weight and moderately overweight people's body size management, that is to say: 1) their perceptions of own body size, including their

ideals and monitoring practices, and 2) their body size management practices, including their self-initiated attempts to maintain or change body size.

Literature was searched for systematically in two databases covering a broad spectrum of disciplines: Pub Med (Ovid) and Web of Science (Web of Knowledge, Social Science Citation Index). Searches were based on keywords chosen on the basis of initial readings and searches, namely 'weight management', 'weight perception', 'weight assessment', 'weight norm', 'weight loss behavior', 'weight loss strategies', 'weight loss practicies', 'changing diet', and 'dietary changes' (truncations made in accordance with principles in search databases). A set of inclusion criteria was used in the set-up of the searches, meaning that intervention studies were excluded, because here strategies for change are typically not self-initiated, and studies of children, adolescents and students were excluded because of special circumstances attached to these groups. Also, to limit the number of irrelevant publications, searches were limited to publication titles. Furthermore, the searches were limited to work published between 1990 and July 2013. Apart from the systematic searches, potential relevant literature was also found in other sources, such as reference lists in publications and conference presentations. The literature searches resulted in 982 different publications for further analysis.

The subsequent process of selecting literature relevant for the review was based on the predefined inclusion criteria. Many publications were excluded because they dealt with adolescents or students or reported on intervention studies. A matrix was constructed with 34 issues according to which each of the publications selected for further investigation was evaluated. Eventually, this process resulted in 47 publications[4] to be included in the final review.

Findings from the systematic literature review

Perception of own body size is investigated in 24 of the reviewed publications, and these concentrate on body size ideals, whereas none of the publications investigate in detail monitoring practices

[4] Publications included in the literature review: (Abusabha, Hsieh, & Achterberg, 2001; Allan, 1991; Allan, 1994; Atlantis & Ball, 2008; Bendixen et al., 2002; Bish et al., 2005; Bish et al., 2007; Burke, Heiland, & Nadler, 2010; Butler & Mellor, 2006; Cachelin, Striegel-Moore, & Elder, 1998; Chambers & Swanson, 2012; Chapman & Ogden, 2009; Chapman & Ogden, 2010; Crawford & Campbell, 1999; Curry, Kristal, & Bowen, 1992; Dailey, Richards, & Romo, 2010; Dailey, Romo, & Thompson, 2011; de, Van, Kafatos, Lennernas, & Kearney, 1997; DiBonaventura & Chapman, 2008; R. Dorsey, Eberhardt, & Ogden, 2009; R. R. Dorsey, Eberhardt, & Ogden, 2009; Glanz et al., 1994; Gough & Conner, 2006; Granberg, 2006; Hendley et al., 2011; Johnson, Cooke, Croker, & Wardle, 2008; Keenan, Achterberg, Kris-Etherton, Abusabha, & von, 1996; Kelly, 2011; Kim, 2007; Kirk, Tytus, Tsuyuki, & Sharma, 2012; Kruger, Galuska, Serdula, & Jones, 2004; Lanza, Savage, & Birch, 2010; Linder, McLaren, Siou, Csizmadi, & Robson, 2010; Lopez-Azpiazu et al., 2000; McElhone, Kearney, Giachetti, Zunft, & Martinez, 1999; Mendieta-Tan, Hulbert-Williams, & Nicholls, 2013; Niva, Jauho, & Mäkelä, 2013; Nothwehr, Snetselaar, & Wu, 2006; Paeratakul, Whithe, Williamson, Ryan, & Bray, 2002; Paisley, Beanlands, Goldman, Evers, & Chappell, 2008; Paxton, Sculthorpe, & Gibbons, 1994; Potter, Vu, & Croughan-Minihane, 2001; Serdula et al., 1999; Thompson & Sargent, 2000; Timmerman & Earvolino-Ramirez, 2007; Wardle & Johnson, 2002; Yaemsiri, Slining, & Agarwal, 2009)

regarding body size. In general, the studies find that normal weight and moderately overweight people are very concerned about their body. Discrepancies are found in many studies between current and ideal size, leading to a widely shared desire to lose weight, and also discrepancies are found between own perceptions and study-derived measures. Gender differences are pervasive with women generally placing themselves in heavier weight categories, and men placing themselves in lighter categories than study-derived categorizations, while women's body ideals for both men and women appear to be smaller than men's. As for other socio-demographic factors, the findings vary, but some studies indicate that a social gradient may be at play in that individuals from higher social strata, defined by income, education and race/ethnicity, are more prone to overestimate own size than people from lower social strata.

Body size management practices in the form of self-initiated attempts to maintain or change body size are investigated in 41 of the reviewed publications. Many studies find widespread use of various types of practices aiming to maintain or change body size, most often dieting and exercise or sub-categories of these. Various stages in the process of body size management are identified, and the distribution of study participants across these specific stages is estimated with various results. Again, socio-demographic differences are identified, among other things pointing to gender differences regarding chosen strategies.

Study characteristics and strengths and weaknesses

The literature review reveals that the social science research field regarding body size management among normal weight and moderately overweight mostly consists of socio-epidemiology studies. These studies quantitatively measure the prevalence of different body sizes and related socio-demographic patterns. The main focus of these studies is to identify the distribution of populations within the different BMI categories, which is often related to gender, race/ethnicity, age, education, income, religion and other socio-demographic variables. Some studies focus on individuals' categorization of own body size versus study size, and some focus on the distribution of differences in satisfaction with own body size, again stressing socio-demographic variance. Furthermore, many studies examine the social distribution of various management practices. A few studies analyse body size perceptions with other, more specific categorizations as their starting point, e.g. receiving criticism from parents during childhood or health-related quality of life. Thus, socio-epidemiological studies are well suited to assessing the distribution of body size in the population and to identifying social patterns in management practices such as eating and exercise habits. However, on the other hand, they do not provide any explanations for the identified differences in perceptions or in the practices undertaken to manage body size, and they do not say anything about the effects of the identified patterns. Further, pre-defined categories and other prior assumptions may influence the results and the interpretations of these. For instance, binary variables such as 'satisfied versus not satisfied' and 'dieting versus not dieting' are widely used, but people's perceptions and practices may be more complex than this, and the concept 'strategies' is often used to describe practices, implying that practices related to body size management are always conscious and well-organized. In line with this critique, others have argued that in epidemiology bodies are counted, but they ought to count for

more than the measured variables, as embodiment and social context should be considered in order to understand the causes and consequences of bodily constitution (Krieger & Smith, 2004).

A significant part of the empirical studies on normal weight and moderately overweight people's body size management apply some kind of theoretical model. Several adopt the Transtheoretical Model of Behavior Change, or related models, as their starting point for investigating the distribution of populations across different stages defined in the model, and the influence of sociodemographic variables on the distribution. Other studies test or develop models of body size management practices. The idea behind using, testing and deveoloping models is to improve understanding of health behaviour, and to find out how and when individuals are most ready for interventions to change their behaviours in a healthier direction. The use of models as tools for understanding body size management implies an assumption that this is a phenomenon that occurs as a simple, linear process, which on an overall level is similar for all individuals. Theoretical models do not provide the basis for grasping the complexity of body size management, including non-linear processes and individual variations in practices and processes. In similar ways, the transtheoretical Model of Behavior Change has been criticized for unnecessary reductionism as it, among other things, does not take into account the moment-to-moment balance of motives, or how desires and values are shaped, while it also presupposes progression (Littell & Girwin, 2002; West, 2005).

In addition to – and very much in contrast to – the quantitative studies, which in different ways measure body size management and express this by models, a few sociological, anthropological and psychological studies use qualitative methods to analyze body size management exploratively. These studies investigate reasons for and personal experiences with changes in body size and with specific management practices such as dieting and drugs. Also, other aspects of body size management are considered, for instance the role of significant others during dietary changes, and perceived barriers to healthy eating. These studies offer deeper insight into experiences with body size management and the meanings ascribed to it, but on the other hand, they give less information on distributions of these.

The publications included in the literature review are, in general, characterized by some methodological problems in some of the specific studies, and also in the form of biases and shortcomings in the research field as a whole. Thus, unsystematic recruitment and self-recruitment may have biased the findings in some of the studies, and some studies may suffer from generalization problems as a result of too few participants or low response rates. Such shortcomings may call statistical generalization and external validity into question. With regard to the research field in general, a bias towards North American studies has been identified, and some of the studies are rather old. Further, many of the studies investigate very specific aspects of body size management, which makes it impossible to assess their findings in comparison with others. For instance, only two studies investigate social support in relation to body size management, and they do this in very different ways, one measuring it quantitatively and the other qualitatively. Finally, the research field lacks studies on some specific aspects of body size management. For instance, no studies explore the monitoring practices in depth, and only a few studies deal with changes in body size management over time.

Chapter 3

Theoretical inspiration

This chapter presents the theory, which has inspired and framed my attempt to answer the research questions of the thesis. First and foremost, the thesis presents an empirical contribution to understanding body size management among normal weight and moderately overweight people, and the role of theory is therefore supplementary as it contributes to understanding the empirical findings. Thus, the empirical study is not strictly theory-guided, but my prior and continuous theoretical studies evidently have informed the design of the empirical study and the analysis of the empirical findings.

Theoretical inspiration is drawn from governmentality theory and related perspectives. First, the theoretical perspectives are outlined and, following this, it is explained how the perspectives contribute to addressing the research questions and to understanding the empirical findings. Throughout the chapter, theoretical key concepts are in italics.

The power of regulation and self-regulation

By launching governmentality as a theoretical perspective, Michel Foucault has suggested ways of understanding our already familiar world and reflecting about ourselves as historical products with a focus on the development of discipline and self-discipline (Foucault, 1988b:145-148). Governmentality theory scrutinizes the ways in which power relations work in and through the human body; a phenomenon Foucault terms *bio-power* (Foucault, 1984d:258-259; Lupton, 1995:6; Rabinow, 1984:17). Individuals in modern, advanced liberal democracies are regulated and regulate themselves in wide-ranging and to a large extent indirect ways (Foucault, 1991:102-103).

From a governmental perspective, individuals are formed by their surroundings and the historical processes that they are part of (Lupton, 1995:6-7). Governments, encompassing the state as well as other institutions, impose strategies on individuals with the aim of forming populations in a way which ensures the continuing existence of the institutions. This process of disciplining occurs through the use of various, often indirect and almost imperceptible, *disciplining technologies*, i.e. practices used in modern institutions such as the schooling system, military, prisons, and hospitals which, in general, take place in all areas of social life (Lupton, 1995:9; Rabinow, 1984:15-16).

However, the process of disciplining is not only created by governments regulating individuals. Individuals have internalized governmental objectives and values in new forms of subjectivity and are, therefore, constantly conscious about how they should behave and regulate their own behaviour (Foucault, 1984a:216-217; Rabinow, 1984:18-20). Foucault operates with a specific type of technologies to capture how the self-regulation occurs in practice. These *technologies of the self* are defined as specific practices that:

> *"permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality"* (Foucault, 1988a:17)

Following this, Nikolas Rose points out that in many aspects of social life there is a focus on strategies and tools for individuals to exert self-control (Rose, 1999:241). This conceptualization of the technologies of the self emphasizes the fact that individuals are not merely governed by others and authorities, but also by themselves. It is exactly the interaction between technologies of the self and technologies of power and domination that is termed governmentality (Foucault, 1988a:18).

Essentially, it is this basic understanding – that individuals are regulated, but that they also regulate themselves that I apply when seeking to understand how normal weight and moderately overweight people think and act with regard to their own body size. When studying normal weight and moderately overweight people, these concepts facilitate a focus on how such individuals self-regulate their body size, and how this is related to governmental initiatives and regulations.

One mechanism through which regulation takes place is *normalization*. Normalizing sanctions – unlike the legislation behind which they are often hiding – make even the smallest mistakes and irregularities indictable. Normalization is a central concept since governments and individuals are engaged in isolating the abnormal from the normal; basically to ensure a healthy and safe society. Through surveillance and control, impure and abnormal individuals (the sick, the insane, the criminal, etc.) are isolated from the pure and normal (Foucault, 1984c:194-196; Lupton, 1995:10; Rabinow, 1984:20-21). *Examination* is a part of this process as individuals are ritually and scientifically described, measured and registered by authorities – they are cases. This form of regulation is conducted by the individuals themselves too, and thus they engage in self-examinations, or self-surveillance (Foucault, 1984c:197; Lupton, 1995:10-11).

Within governmentality, control over human bodies is central. The body is recognized as the place where power struggles occur and become real. This means that power does not exist independently of the body, but on the contrary acts to construct the body in certain ways. The exercise of power is material, physical, and corporal (Lupton, 1995:5,9; Turner, 1991:157-159). Thus, Deborah Lupton asserts that:

> *"More so perhaps than any other apparatus or institution, discourses on health and illness serve as routes through which we understand, think and talk about, and live our bodies"* (Lupton, 1995:6)

In line with this, Rose argues that in modern societies, public objectives for good health and good order of the social body are linked with individuals' own desire for health and wellbeing. Healthy bodies are still an objective of the state, although nowadays, the state does not need to instruct, moralize or threaten individuals into compliance as it did in the past. Rather, individuals are addressed on the assumption that they want to be healthy and seek ways of living that promote good health. Experts guide individuals regarding how they should conduct themselves with technologies,

which regard how they should care for their bodies and how they should conduct daily routines. Thus, according to Rose, modern societies are characterized by *healthism* (Rose, 1998:103-107), and Foucault states:

> *"The imperative of health: at once the duty of each and the objective of all"* (Foucault, 1984b:277)

The imperative of health and the control of the body, which is emphasized in governmentality theory, correspond with the premise of this thesis, i.e. that body size management is on the agenda today as outlined in Chapter 1. From many different angles, individuals are met with the expectation that they should manage the size of their bodies and they are provided with specific suggestions on how to do this. The main actors in this context are governments in the form of health authorities, which seek to regulate individuals by defining guidelines on how to monitor, control and regulate body size. Apart from recommending that individuals should examine and regulate their own bodies, health authorities survey individuals' bodies and encourage them to participate in organized activities. In other words, governmentality theory provides the basis for examining how normal weight and moderately overweight people deal with health authorities' recommendations on how to manage their body size in ways that increase their chances of living long, healthy lives , and this is assumed to be beneficial for individuals as well as for the economy.

Non-conformity and alternative subject positions

The interest of governmentality theory in power relations and regulation implies a focus on conformity and inertia. Power and discourses are represented as pervasive and insidious of the free will of individuals, and they can thereby be interpreted as creating docile bodies (Lupton, 1995:132). Thus, it has been argued that Foucault does not adequately explain why individuals take up some subject positions rather than others, or how they sometimes manage to dwell outside the dominant subject positions; that is how they are able to demonstrate resistance to existing power relations and other forms of non-conformity (Lupton, 1995:132).

Lupton, among others, points out that even though individuals in general comply with the health imperatives, this is not the case for all individuals and not all of the time. Sometimes, individuals actively demonstrate *resistance*, either through organized activities, or as they in less consciously and organized ways do not conform to suggestion of health promotion activities (Lupton, 1995:131,135). Lupton argues that:

> *The practices of everyday life in particular are sites at which cultural norms are 'transgressed and reworked', taken up and used by individuals for purposes that may or may not coincide the governmental state* (Lupton, 1995:131)

This is seen in specific social groups or sub-cultures, but also as a general phenomenon which occurs regardless of social variation. The individuals sometimes struggle between *different rationales* and

competing ways of constructing subjectivity from different governmental institutions and many other institutions and social settings. Thus, self-care can be understood as also implying some degree of agency, which suggests that the techniques of governmentality are not simply imposed upon individuals and, therefore, that resistance, non-conformity and change may be generated and sustained (Lupton, 1995:134).

In the case of normal weight and moderately overweight people, these notions are highly relevant as they can contribute to a deeper understanding of how individuals' body size management is practiced in everyday life and may help explain findings that do not correspond to health authorities' guidelines on body size and body size management.

Understanding regulated bodies from an insider's perspective

The starting point of my study on body size management has been an empirically based motivation to explore how normal weight and moderately overweight people perceive their own body size and which practices they undertake to manage their body size. As described in Chapter 1, the aim has been to contribute to the modest and rather limited research field, which is characterized by deductive studies based on predefined categories and assumptions. Furthermore, through a phenomenological analysis, the study attempts to determine how normal weight and moderately overweight people think and act with regard to their body size.

When defining the PhD project and designing the empirical study, governmentality theory did not, as previously mentioned, strictly guide the process. However, the fundamental assertion of governmentality theory that individuals are regulated by government and other institutions, while at the same time regulating themselves, was prevalent in my mind and inspired my approach to the study and the formulation of the interview guide.

In the following process of analysis of the empirical findings, the principal focus and outset was still empirical, but as I gradually became aware of the relevance of the governmentality perspective, I began to study it in detail and to reflect upon how the empirical material could be analysed on the basis of this perspective, and how it could contribute to answering the research questions. In that way governmentality theory has come to inform my analysis of the research questions by narrowing the focus to how regulation, which is initiated by authorities, affects individuals and is internalized in them. Using the governmentality concepts, I explore how regulation and self-regulation occur and are experienced in everyday life, including which self-technologies are used to manage body size. Examination, or monitoring, of the body can be understood as one such self-technology, providing the basis for evaluating the body. Also, including the concept of normalization in the analysis of practices found among normal weight and moderately overweight people seems very appropriate. Thus, governmentality theory is useful as it can contribute to uncovering and conceptualizing practices that individuals undertake to make themselves fit into bodily norms, while, in general, it also provides a basis for understanding how regulation is conducted and discipline occurs in people that are perceived as normal, and not extreme or abnormal. At the same time, governmentality theory, at least in its late versions, accommodates explanations of non-conformity with health authorities' recommendations.

At first glance, combining the governmentality approach with the insider's perspective inspired by phenomenology may seem somewhat odd. These perspectives operate on different levels and focus on very different aspects. Governmentality concentrates on the overall power relations in society and views human beings as basically governed by overall social structures, whereas phenomenology focuses on individuals' personal experiences and intentions, which includes ideas of creativity and agency. Nevertheless, I would argue that it is meaningful to combine the two perspectives and that they supplement each other in a way that is very useful for the aim of this thesis. Together, they provide the opportunity to take a close look at people who live in a society which has a huge focus on body size and which is permeated by discursive and physical manifestations of regulation of individuals' body size, and they raise an opportunity to unfold how this is experienced and what characterizes people's thinking and acting under these circumstances.

When combining the different theoretical perspectives, I am inspired by Bryan Turner's concept of methodological pragmatism. He argues that analytical perspectives, including the methods used and the theoretical approaches considered, should depend on the field, and that such kind of pragmatism allows for studies of the body, where this is viewed as a result of both representations and lived life (Turner, 1992:40,57).

To sum up, with the aim of obtaining a broad understanding of individuals' relation to own body size, I combine the governmentality idea of discipline and subjectivization with a basic insider's perspective that emphasizes lived experiences. When applied to the research questions of the thesis this means that normal weight and moderately overweight people *have* biological and social bodies, which are subject to scientific discourses and power structures as well as self-technologies. And moreover, they *are* living and experiencing bodies, and their body size management is understood in relation to the overall power structures as well as their social relations and their everyday lives (see Turner, 1992:40,57).

Chapter 4

Method

This chapter presents and reflects on the design of the empirical study and on the processes of data production and analysis, and further adds some comments on the quality of the study.

Research design

The starting point for the empirical part of the PhD project was my interest in gaining a deeper insight into how the indications of body size as a dominant and discursive topic in today's societies influence ordinary people's thinking and acting with regard to their own body size. This empirical motivation was enhanced by the fact that the literature review revealed that the subject has not been addressed adequately. On this basis, my overall methodological aim was to empirically explore normal weight and moderately overweight people's own perceptions of their body size and their experiences with body size management.

By means of my overall approach, the insiders' perspective inspired by phenomenology and everyday life sociology, the methodological ambition for the empirical study was to be open-minded and scrutinize perceptions and practices. This involves concentrating on a small number of individuals and their specific answers, and also going deeper than their initial comments to explore their views and practices. Qualitative studies are especially suited to gathering rich descriptions and exploring the meanings of social phenomena as experienced by individuals, and openly exploring specific issues in detail (Kvale & Brinkmann, 2009:12; Malterud, 2001). Phenomena are studied in their natural settings in an attempt to make sense of and interpret these in terms of the meanings people assign to them (Denzin & Lincoln, 2008). Furthermore, the flexibility and openness of qualitative methods allow new focuses to appear during the studies (Kvale & Brinkmann, 2009:28). Thus, the research design chosen for this thesis is qualitative, comprising mainly in-depth interviews combined with some observation.

This research design has the advantage of combining the focus on what is being said (mental and discursive aspects) in the interviews with the focus on what is being done (bodily performance of practices and the interaction with material objects) during the observations (see Bogdewic, 1999:49; Miller & Crabtree, 1999b:89). Thus, the two methods each offer the chance to investigate different aspects of body size management and, moreover, they reinforce each other as findings from the observations can inspire the interviews and vice versa. However, it should be stressed that what occurs during both interviews and observations is the enactment of thinking and actings. Thus, interviews also include bodily performances and interaction with material objects and not least a lot of talking about this, while the observation presumably includes talks about mental and discursive aspects of body size management too. Only the weight ascribed to what is said and thought versus what is done differs in the two methods.

Specifically, the empirical material was produced by means of two visits to the homes of each of the participants in the study. Here I interviewed the participants and also found opportunities to observe some management practices as well as material objects used for this.

Production of empirical material

For my empirical study, the process of data production lasted from February to September 2011 and took place in Denmark. The study was not associated with any other studies and was economically independent; funded by the Faculty of Science, University of Copenhagen.

Recruitment

The overall aim of the recruitment process was to establish a selection of participants with a maximum variation in social characteristics in order to establish an optimal balance between the breadth and depth in the empirical material (see Kuzel, 1999:39). Thus, I had no intension of attempting to achieve some kind of representative sample in any statistical sense, nor to recruit a sub-group of people with some unusual or exceptional perceptions and practices with regard to body size. Therefore, recruitment was conducted strategically. To ensure that the variables chosen for the selection process were relevant to the research questions, they were selected on the basis of initial readings and results from the literature review. Earlier studies had identified especially gender, but also age, education, race and location as social characteristics that influence body size management (Nissen & Holm, 2015). This knowledge, and the consideration of the resources available for the study, meant that some groups with very special circumstances which influence their body size management, such as younger and older people and ethnic minorities, were excluded. Also, people working professionally with food were excluded as this was assumed to potentially influence their engagement in body size management with the result that it might be out of the ordinary. For the variables used for selection (italicized), an equal distribution was strived for, while the selection was performed as described below.

First of all, the participants had to fulfil some basic inclusion criteria regarding the following variables: *BMI category* (had to be normal weight or moderately overweight, i.e. with a BMI 18.5-29.9, estimated from self-reported weight and height); *geography* (had to live in the capital or in a medium-sized provincial town in Denmark); *age* (had to be 25-55 years old) and; *cultural and language background* (had to have been raised in Denmark and be Danish speaking). The participants not only had to fulfil these criteria, but they were also selected to be evenly distributed within categories of these variables. For instance, half of the participants had to be living in the capital and the other half in the provincial town, and there had to be about the same number of participants in each of the age groups 30-39, 40-49 and 50-54 years old. In addition, the participants were strategically selected with regard to some other social characteristics that were expected to be relevant for their body size perception and management: *Education* (none/low; medium length and long education), *employment situation* (employed or unemployed), *income* (four groups), *smoking status* (daily smoker or not), and *family situation* (single with/without children or partner and with/without children).

Participants were recruited through the market analysis company Norstat using random sample lists based on a phone number database, and a small telephone questionnaire (see Appendix 1). The questionnaire consisted of 17 factual questions regarding social background, assessed height and weight status, and willingness to participate in the study. I formulated the questionnaire and instructed the staff at the market analysis company regarding how to conduct the phone calls. On the basis of random digit dialling, the market analysis company delivered a list of potential participants who had completed the questionnaire and accepted to participate in the study. The people on the list all fulfilled the basic inclusion criteria, but varied with regard to the social characteristics that were taken into consideration. The list of potential participants was extended several times in order to have enough people to choose from to ensure maximum variation with regard to all the social characteristics that were taken into account. There were no problems in recruiting potential participants with all variants of the social characteristics considered, but still biases with regard to who agreed to participate may have occurred. Also, the recruitment may be somewhat biased because phone calls were made in evening and because a number of people in Denmark, especially the younger generation, have unlisted phone numbers.

From the list of potential participants I selected the most relevant individuals with regard to all the social characteristics considered. Six women and six men from the capital were chosen so that all levels of education and income were represented, and also both employed and unemployed, smokers and non-smokers, singles and married and people with and without children. A similar selection was made of individuals from the provincial town. I called the selected individuals to invite them to participate and to arrange the time of the first home visit.

The recruiting process resulted in 24 participants agreeing to take part in the study (see Appendix 2). This number made it possible to include several participants within each of the chosen categories and appeared to be an adequate number to reach a point of saturation, where further interviews were assessed to only yield little new knowledge (see Kuzel, 1999:41-42; Kvale & Brinkmann, 2009:113). The characteristics of the participants with regard to the basic inclusion criteria and other considered social characteristics can be found in Appendix 2.

Introduction to the study

Initially, when contacted by the market analysis company, all potential participants were informed that the study was about everyday habits. When I contacted them personally shortly afterwards to invite them to participate, I introduced the study a bit further, explaining that I would like to learn about and focus on how they experienced their bodies and lived with them during their everyday lives (see Appendix 3). This introduction was repeated at the beginning of the first interviews with each of the participants. Thus, the participants were given very little information beforehand as the idea was not to signal normative ideas about how much and what kind of body size management should be performed, but to be open to all kinds of perceptions and practices (see Kvale & Brinkmann, 2009:128; Miller & Crabtree, 1999b:101-102). Participants were rewarded with a gift voucher (approximately 40 Euro) valid in a wide range of shops for their participation in the study, and they were informed about this gift voucher when invited to participate.

Interviews

The interviews were semi-structured in-depth interviews and as such they provided a basis for the participants' perspectives to be unfolded, while at the same time made it possible to cover themes that beforehand were expected to be relevant (see Kuzel, 1999:41-42; see Kvale & Brinkmann, 2009:113). The interview guide (see Appendix 4) included a list of overall themes as well as suggestions for open-ended questions and related cues for each of the themes. Themes and questions included topics identified in previous research to be relevant to the research question as well as topics that I myself considered relevant.

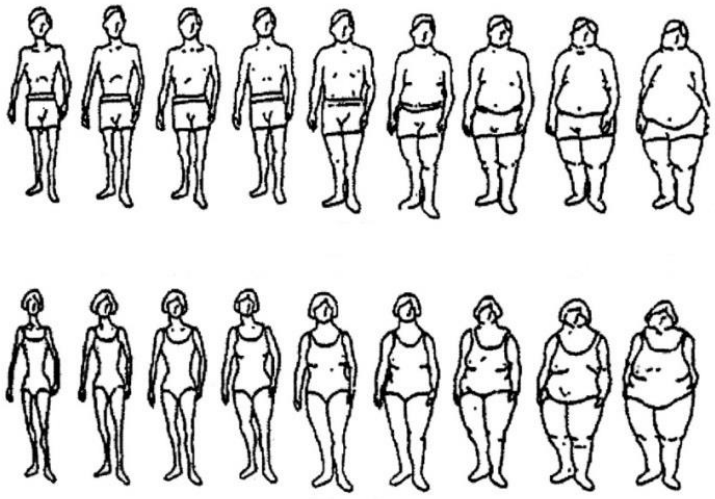
The interview guide was organised in two separate sections, used respectively for the two different interviews with each of the participants. The first section initially focused on getting to know the individuals interviewed and their daily life, and hereafter dealt with perceptions of own body size and monitoring practices, i.e. the first research question. The topics were: 'yesterday/a typical day', 'daily life', 'use of bathroom scale', 'use of mirror', 'use of clothes'. The second section dealt with practices to maintain and change body size, i.e. the second research question. The topics were: 'daily life with the body', 'changes in body size through life', 'reasons for changes', and 'barriers to changes'. The themes and questions formulated beforehand served to inspire and guide the interviews, although there was still room to make changes and reformulations as well as add new questions if it seemed relevant for each of the participants.

The interviews were designed to be conducted in two parts, i.e. at two meetings. Though, in the case of two participants the interviews, due personal circumstances, were conducted in only one meeting. The idea behind this division was both to make the participants more confident with the interview situation and with me as the interviewer. Also, the idea was to give the participants and me time between the two interviews to reflect about what was discussed, which provided the opportunity to focus on specific relevant topics in the second interview. Further, dividing the interview into two parts made time for more questions and thereby the opportunity to deepen the talks without the interviews becoming too long and tiring the interviewer and participants as a consequence.

To facilitate the discussions, and especially to focus on change, photos were included in the interviews (see Pink, 2001:71-73). Before each interview, the participant was asked to find two self-portraits, one recent portrait (taken within the last couple of years) and one earlier portrait (taken 5-10 years ago). During the first interview, the participants were asked to show their photos and describe themselves in the photos, including any changes to their appearance which may have occurred in the period between the times when the two were taken.

Furthermore, also to facilitate discussion, especially on the subject of body size ideals, silhouette drawings were included (Figure 1). The silhouette drawings (Stunkard, Sørensen, & Schulsinger, 1983) are widely used in studies of body images and weight perceptions, and they originally were numbered, but I decided to leave the numbers out to avoid signalling a ranking of the drawings. Thus, in the second part of the interview, the interviewer presented the participants with silhouette drawings of men/women with increasing body sizes. The participants were asked to place themselves on the scale, first based on how they looked at the time of the interview, and then how they would ideally like to look, after which they were requested to reflect upon their placing.

Figure 1. Silhouette drawings (Stunkard et al., 1983).



Usually, the arrangement was to meet the participants and conduct the interviews in their homes. This was what I suggested and in most cases that suited the participants. The idea was to ensure that the participants felt confident and comfortable in the interview setting, which would also remind them of their everyday practices. Furthermore, the home visits gave me the chance to supplement the interviews with some degree of participant observation. Two of the participants preferred to meet at their workplace as they were both working long hours, which I accepted in order to avoid being awkward. Further, in two other cases, I visited the participants in their homes, where I conducted the first part of the interviews, after which the second part was held at café and in a meeting room at a university, respectively, for practical reasons.

Observation

Apart from the interviews, the home visits also involved some participant observation. The idea of including observation was to gain an insight into the participants' practices, i.e. their specific activities and their interactions with other people and with physical objects (see Bogdewic, 1999:48; Hammersley & Atkinson, 1995; Spradley, 1980). The observation was included to give me the chance to identify and gain an insight into practices that the participants would not necessarily tell me about during the interviews. It was considered that such insight would be directly relevant for my analysis, but would also inform the interviews as I during the interviews would be able to ask the participants about the meaning behind the observed practices.

The observation was conducted as a natural part of my meetings with the participants for the purpose of the interviews, in the setting of their everyday lives. The home visits often included meeting the family, being served coffee, tea and sometimes cake and fruit, and lots of small talk took place. Often the participants, on their own initiative, gave me a guided tour of their homes and presented family members to me, and if not, I encouraged them to do so. It was in these situations – before, during, and after the interviews – that I found it possible and fruitful to conduct observations.

My observation followed the framework of considering all elements needed to tell a story: who, what, when, where, why and how (see Bogdewic, 1999:54). Especially, my focus was on material objects relevant for the study such as mirrors, bathroom scales, wardrobes, refrigerators and fitness equipment. To gain as much insight into the participants' practices as possible, I always asked about these relevant material objects and their use. With regard to the refrigerator, I asked the participants if they would like to show me its contents, and when they did so, I had the chance to talk in detail about their eating habits. I attempted to make the interviews and observations work together and reinforce each other as much as possible. For instance, if some exercise equipment or a bathroom scale was observed in the home of a participant, I would, either immediately when it had been observed, or later during the interview, ask about its use. During the visits, in some cases, I took one or two photos of relevant material objects, for instance the refrigerator or the bathroom scales, while we were taking about these objects.

In total, I as interviewer and observer typically spent 2-5 hours together with each of the participants. Reflections from the interviews and the observations were recorded in written field notes (see Bogdewic, 1999:58-67), and the interviews were recorded and transcribed verbatim on the basis of a transcription guideline (see Kvale & Brinkmann, 2009:180-187).

Talking about the body

Initially, when the participants first met me, the interviewer, they were all a bit puzzled about the announced topic of the study: How they view their own body and relate to it. Many laughed or said that they did not know if they would have enough to say about this. Some participants said they talked – seriously or light-heartedly - about their body size to family and friends, while others considered it too private to discuss with others. None of them were used to talking in detail about their personal perceptions and practices, and they were, more or less, unaware of these. Nevertheless, as the interviews progressed, the participants were able to describe their perceptions and practices in detail. On reflection, they knew what they were thinking and doing, though this was normally not explicitly considered and certainly not put into words. The only exceptions were a few of the male participants who talked very little and not in detail. This seemed very much to be due to their personal talking styles, but also because of the subject matter, which was clearly unfamiliar to them.

Generally, laughter became a central element in the interviews, since many of the participants talked about their bodies light-heartedly and sometimes with irony. Humour and irony were particularly used in situations where the participants considered their own statements or practices to be inappropriate or conflicting. In spite of the humour used, the interviews were also marked by gravity and introspection. Several participants indicated that they found it interesting and self-developing to reflect on and discuss their own bodies. Altogether, the interview situations no doubt were unusual experiences for the participants, yet despite this, I was able to gain deep insights into the way the participants thought and acted regarding the size of their bodies.

During the interviews, the participants undoubtedly took notice of my body; a 32 year-old female body that would be classified as being on the borderline between normal weight and moderately overweight. The presence of my body may, in some way, have influenced what they thought and said about their own bodies. For instance, one participant started the second interview by stat-

ing that he had felt very relaxed during the first interview because I appeared to be a quite normal, neither fat nor thin, and especially because he had the impression that I was a relaxed and tolerant person since I had taken my shoes off and had not minded displaying my bare feet. Several of the participants, who commented directly on my body, stated that it had only had a limited, and not negative, influence on what they said as I did not belong to an extreme weight category.

In qualitative studies, the production of empirical material is per se an interactive process which occurs in cooperation with the participants and the researcher (Kvale & Brinkmann, 2009:75). Thus, I did not expect to uncover the "real" practices of the participants without, to some extent at least, my presence having an influence on the process. Rather, throughout the process collecting and analysing the empirical material, I was aware of this potential influence and, thus, I constantly reflected on the interaction between the participants and I and its meanings.

Analytical process

The analytical process was not an entirely separate activity or phase. It already began when the project was defined and when planning the interviews, and continued during the literature review, the data production phase and throughout the entire project.

Literature

Initially, when defining and planning the project, existing empirical literature within the field was identified and scrutinized. This was conducted in a systematic and comprehensive way and resulted in the literature review (Paper A). Basically, I saw no point in reinventing the wheel and in line with constructivists I found the ideas within phenomenology and other approaches of bracketing one's knowledge and setting aside the research frame (see Charmaz, 2008:205-206) unrealistic. Rather, I sought to build on top of pre-existing knowledge, i.e. to unfold already identified points and perspectives and to identify new ones.

The initial searches focused on the categorization of individuals in research on body size and on a more general overview over the themes and approaches within this research field (see Janesick, 2000:386-387). Subsequently, a search for relevant literature was conducted and was read as part of the ongoing analytical process. Literature on themes and approaches that appeared to be relevant with regard to the empirical material, as well as recently published studies were continuously reviewed.

Reading and coding

Once all the interviews had been conducted and transcribed verbatim, I read all the empirical material thoroughly, which came to a total of more than 1100 pages. Also, I studied the new and older photos of the participants that we had talked about during the interviews as well as the photos that I had taken during the visits to the participants' homes, which helped me to recall the situations. During this process, no coding, note taking or any form of documentation was performed which may have disturbed the reading of the participants' stories and the visual impressions from their homes. I concentrated on becoming familiar with the participants and their stories as a whole.

After the initial readings, the process of coding started for which the software NVivo 9.2. (QSR International, 2015) was used to manage the coding of data. Coding followed the principles of editing style (see Crabtree & Miller, 1999:164-165) and thus was conducted using a bottom-up approach, meaning that very detailed coding was performed, often identifying several codes in each sentence, which was followed by reducing the myriads of codes into fewer, more general codes. This comprehensive coding was conducted with interview transcriptions and field notes for eight individuals, resulting in 697 codes, which was subsequently reduced to 54 codes. Afterwards, coding the remaining interviews was done on the basis of the 54 codes generated from the comprehensive coding, while still maintaining an open mind for the possibility of new codes arising. Finally, the process of close coding resulted in a list of 55 codes, which varied significantly with regard to content, abstraction level and prevalence. Six codes were on an overall level and included a huge number of passages from the interviews, while the remainder of the codes included fewer passages, many of which could be included as sub-themes under several of the main codes. The six main codes were:

- 'Perceptions and assessments of own body, what is in focus and opinions'
- 'Evaluation of own body size – how it is done'
- 'Practices that intend to change or maintain body size'
- 'The influence of external factors and everyday life on body size management'
- 'Actions performed even though they hinder intended body size management'
- 'Strategies for avoiding confronting undesirable body characteristics'

The rest of the codes occurred less often and many of them appeared to fit in as sub-codes of several of the overall codes, whereas others were independent codes. Examples of these remaining codes were:

- 'My body size is my fault'
- 'Age'
- 'Sources of inspiration for body size management'
- 'Positive influence of family on body size management'
- 'Negative influence of family on body size management'
- 'Shock'

Thus, the process of coding was inductive as it included the identification of relevant themes during the interviews with the participants and the subsequent systematizing of the material on the basis of the identified themes. The idea of making use of this editing style of organization was to search for meaning in the participants' narratives including meaningful units and segments that obviously related to the topic as well as those that stood on their own, thereby providing me with new insights (see Miller & Crabtree, 1999a:21-23).

Analytical categorization

Following the coding process of the individual interviews, overall analytical reflections were conducted and the codes were placed into categories. This process was not guided by theory as the empirically-based codes represented the focus.

In this process, empirical themes were transformed to analytical tools as I studied the themes in relation to each other and identified patterns across them, in regularities, as well as irregularities, turning points, contrasts, and paradoxes (see Coffey & Atkinson, 1996:32-36,47,71). On this basis, decisions were made about which themes and which patterns to examine more closely.

Initially, the analytical categorization resulted in the identification of the following three aspects, which body size is perceived and managed in the terms of:

- ’Weight’
- ’Shape’
- ’Firmness’

Following this, the rest of the identified categories fell into two groups, corresponding with the research questions. With regard to the first research question, the categories and sub-categories were:

- ‘Ideal body’ (‘Ideal measures’, ‘Ideal look’ and ‘Ideal feeling’)
- ‘Everyday bodily routines’ (‘Measuring routines’, ‘Looking routines’ and ‘Feeling routines’)
- ‘Wishing for a normal body’

With regard to the second question, the categories were:

- ‘Practices’ (with the sub-categories: ‘Frequency of practices’, ‘Specific practices’, ‘Aim of practices’ and ‘Slimming projects’)
- ‘Strong desires’
- ‘Knowledge’
- ‘Guidelines’
- ‘Alternative health concepts’
- ‘Everyday life’
- ‘Life events’

The subsequent process involved placing the findings into the relevant categories and interpreting the various subscribed meanings. During this process, in accordance with the setup of the study, differences in views and practices and other categorizations were not made on the basis of individuals’ different social characteristics, but on the basis of the different themes.

Quality of the empirical material

Before presenting and discussing the analysis of the empirical material, it is appropriate to reflect on the quality of the empirical material since this naturally influences the interpretation of the findings.

In this regard, the question of generalization needs to be addressed. The production of analytical categories is a way of making generalizations based on analysis without reverting to categorizations of individuals (Halkier & Jensen, 2011:113). As noted, the aim of my study has never been to achieve the kind of representativeness required to be able to make statistical generalizations of the findings. Rather, the aim has been to enable analytical generalizations in the sense of reasoned judgements about the extent to which the findings from the study can be used as a guide to what may occur in other similar situations (see Kvale & Brinkmann, 2009:262). I have sought to achieve this through the maximum variation recruitment strategy and the inductive, thorough coding. This means that I investigate the variety of perceptions and practices, but cannot draw any conclusions regarding their prevalence or explain them on the basis of classic socio-demographic variables. In other words, the character of the research questions and the way the analysis has been conducted implies that generalizations from the study can be made with regard to perceptions and practices, rather than individuals or groups (see Halkier & Jensen, 2011:113).

The question of generalization is related to the question of validity regarding the study. Representativeness as a basis for generalization is only one of many validity criteria in quantitative research, which also apply to qualitative research – others include reactivity, reliability and replicability (Mischler, 1986:108-109). However, validation can also be understood in more general terms as the thorough process of analyzing potential biases in a study. According to this understanding, with regard to qualitative research, validation is not some final verification or product control, but rather something that should be built into the entire research process comprising continuous checks on the credibility, plausibility, and trustworthiness of the findings (Kvale & Brinkmann, 2009:249-250). I have attempted to comply with these ideas of quality, not only by way of the mentioned sampling with maximum variation and the thorough coding, but also in several other ways. Firstly, the rather long interview phase lasted for half a year and the fact that I met the participants two times provided plenty of opportunity for reflection and analysis, which meant that surprising findings could be further addressed in subsequent interviews. Secondly, I discussed my findings with my supervisors and colleagues to learn from their interpretations, and together we looked for patterns, but also for contrasts, paradoxes, and extreme cases to gain a deep insight into the participants' perspectives. Finally, throughout the project, I reflected on my role as researcher, including the previously mentioned influence of my body and my personality on the interviews, but also the potential influence of my personal views and assumptions on the analytical process. Regarding the latter, an attempt was made to reduce any potential influence by discussing the empirical material with others.

Ethical considerations

In a qualitative study like this, a number of ethical issues relating to the aim of the study and how it is conducted empirically need to be considered (see Hammersley & Atkinson, 1995:263).

The first issue worthy of consideration is that of anonymity (see Kvale & Brinkmann, 2009:68). Before the interviews, the participants were informed that they would participate anonymously, meaning that it would not be possible to recognize them in any outcomes of the study. Thus, they were given different names and any other details that may have made them recognizable were deleted or changed in all published material. Besides myself, the woman who transcribed the interviews is the only other person, who viewed material with the real names and details of the participants and she signed a declaration of professional secrecy beforehand.

Secondly, informed content is a relevant ethical issue. Intuitively, it seems natural that participants should always be well-informed about the study they are taking part in to make sure that they are aware of any potential benefits and risks. However, providing the participants with information may influence the results (Hammersley & Atkinson, 1995:264; Kvale & Brinkmann, 2009:70-71). Therefore, as mentioned, I attempted to strike a balance by briefly informing the participants about the project in very general terms when they were invited to participate, just before the first interview, and finally they were debriefed about the study after the interviews.

Last, but not least, I think it is important to consider the consequences of the study for the participants on a personal level, and also for the sake of future research and practical health promotion work (see Kvale & Brinkmann, 2009:73). The intention was that the study should tell ordinary people's stories about how they perceive themselves with regards to the size of their bodies in a way that is consistent with their own perspectives on this. Therefore, it was important that the participants, when interviewed or afterwards, did not get the impression that the project had different intentions. The risk was that the participants would probably regard me, the interviewer, as a representative of the authorities aiming to improve their health and, therefore, that I would have clear ideas about how one should relate to body size to be healthy. This would, of course, have been a problem for the quality of the study, as it would have influenced what the participants had told me, but apart from that it also represents an ethical issue because it would have been very unpleasant for the participants to have been interviewed if they had felt like they were being judged on whether they had the right type of body size management. I strived to reduce this risk by emphasizing that I had not been sent by the health authorities, and by clearly expressing my understanding of their ways to live their lives, especially when they told stories about not complying with the guidelines for healthy eating and exercise. Also, there was a risk that the interviews could have stirred up things in the life of the participants that were emotionally difficult, and it may have been problematic to do so without responding by, for example offering advice. Therefore, meeting the participants twice worked well as it provided a second opportunity to close some emotional themes that had been talked about in the first interview, and it gave me the chance to get to know the participants better and thereby handle their stories and their feelings in the best way. As previously mentioned, the participants in general ended up experiencing the talks about their bodies as something positive, and sometimes even therapeutic. The positive experience of participating in the study is also important for future research as the participants otherwise might tend to refuse to participate in future research studies. Finally, it is an ethical issue, whether the participants experience that findings from the study are used in meaningful and beneficial ways in health promotion work, and I have

sought to facilitate this by addressing perspectives of the study for health promotion work in Chapter 7.

Chapter 5

Findings and discussion

This chapter deals with the findings from the empirical study conducted to answer the research questions. The findings are summarized and furthermore reflected upon crosswise and discussed in a broader context. In so doing, the chapter supplements Paper B and C, which present and discuss the findings in detail, but separately.

The first section of the chapter provides a short summary of the empirical findings in relation to the research questions. In the next section, the empirical findings are discussed crosswise transversely, and governmentality theory is applied to interpret the findings. This is followed by a section consisting of my own analytical conceptualizations, and the chapter closes with a discussion of the empirical results in relation to the findings from the systematic literature review (presented in Chapter 2 and in Paper A). Throughout the chapter, analytical key concepts are in italics.

Empirical findings in relation to the research questions

The objective of this thesis was to answer the following research questions:

1) *Which perceptions and monitoring practices with regard to body size exist among normal weight and moderately overweight people?*

2) *Which practices do normal weight and moderately overweight people undertake to attempt to maintain or change their body size; how are these practices related to their everyday lives, and what meanings are ascribed to them?*

The first research question is addressed empirically in Paper B, which focuses on an evaluation of the body, including the ideals and monitoring practices found among normal weight and moderately overweight individuals. The interviews and home visits reveal that body size among normal weight and moderately overweight is evaluated in terms of *weight*, *body shape* and *physical firmness*. Weight is by the participants understood as an objective measure, which can be assessed through regular weighings, calculations of BMI and conversion between clothing size and kilos. Shape is a subjective measure of body size and is primarily assessed by looking in the mirror in order to observe how the body corresponds to - or does not correspond to – one's ideal of what a desirable body should look like. Firmness is also a subjective measure of body size and the participants evaluate firmness by touching the body, and thereby sensing softness and hardness, curves, muscles and tightness.

The normal weight and moderately overweight people make use of a range of *monitoring tools* including bathroom scales, mirrors, belts, and clothes, and monitoring also implies making use of sight and embodied feelings. Their monitoring practices may be more or less regular, but all the

participants have strategies for when and how to evaluate their size. Thus, the normal weight and moderately overweight people have *clear ideals* regarding the size of their bodies and make use of *multiple practices* to monitor their size. In their efforts to monitor body size, they not only focus on biometric measurements recommended by health authorities, but include the various ways of calculating weight, evaluating shape and sensing firmness. Thus, establishing body size ideals and monitoring size is a complex process, and monitoring the body is present in thoughts and actions in everyday life of the normal weight and moderately overweight people.

The second research question is addressed empirically in Paper C, which focuses on the practical management of body size; that is to say normal weight and moderately overweight people's attempts to maintain or change their current body size. The overall finding in relation to this is a huge engagement in body size management and therefore practices aimed at managing body size are *omnipresent* in the everyday lives of the normal weight and moderately overweight people. In general, the management practices are *well integrated* in everyday life, and, therefore, are hardly noticed most of the time. However, sometimes, the management practices are hindered by *practical and structural obstacles*, or they conflict with *other considerations*. Also, *major life events* appear to influence body size management, with individuals either establishing new practices, or increasing or giving up body size management practices. Life events that are found to influence engagement in body size management are life cycle events, changes in social relations, illness and death, and changes in employment situation. The normal weight and moderately overweight people have a *strong desire* to manage the size of their bodies, and they believe that they have the *adequate knowledge* to do so. They feel that it is their *personal responsibility* to manage their body size. The normal weight and moderately overweight people have, to a large extent, *internalized health authorities' guidelines* with regard to body size management practices, but sometimes they *transform or go beyond the recommendations* to make these more specific and adapt them to their lived lives.

Altogether, though hardly noticed, the process of establishing body size ideals and monitoring one's body as well as attempting to maintain or change body size comes across as being a rather complex and advanced phenomenon that normal weight and moderately overweight people are much engaged in.

Following this summary of the empirical findings, I will move on to discuss the findings across the research questions and the papers. My starting point for the discussion is the overall aim of understanding body size management from the normal weight and moderately overweight peoples' own perspective, considering their lived experiences. Governmentality theory is applied to frame my discussion by means of the overall understanding of human beings as being regulated and regulating themselves and to unfold the empirical findings with the help of specific concepts, and this is supplemented by my own conceptualizations.

Regulated people regulate themselves, but do it in their own ways

Taken together, the findings from my empirical study paint a picture of people who are normal weight and moderately overweight being very much engaged in managing the size of their bodies. This engagement per se indicates that these individuals have, to a large degree, internalized, and attempt to comply with, health authorities' guidelines on taking care of one's body to prevent obesity

and lifestyle related diseases. Correspondingly, a significant part of the monitoring practices and the practices undertaken to maintain or change size reflect specific recommendations in the guidelines published by health authorities.

This implies that the findings may very well be considered from the governmentality perspective. Governments, in the form of local and national health authorities, aim to regulate the population in the direction of healthy bodies, defined as close to the BMI category of normal weight. Thus, through health campaigns and also many other, more or less visible, activities the normal weight and moderately overweight people are *regulated* by governments.

The normal weight and moderately overweight people have undergone a process of disciplining in that they have taken on the fundamental idea of *regulating* their own body size, and have adopted many of the recommended practices, which they carry out on their own initiative, while they also feel huge personal responsibility for their body size. The normal weight and moderately overweight individuals generally understand and consider the practices as their own, rather than having been outlined by the authorities. The practices conducted to monitor the body – measuring, seeing and feeling the body – as well as the many different practices attempting to maintain or change the body size, can be interpreted as *technologies of the self*, which are adopted by the individuals in their attempts to define themselves as the healthy, good-looking people who are in control that they would like to be.

The monitoring practices can be recognized as a form of *examination* as conceptualized in governmentality theory. The normal weight and moderately overweight people more or less permanently examine the size of their bodies as they evaluate the results of their monitoring against their ideals. However, their criteria for an acceptable body size are wider than the idea of binary categories outlined in governmentality theory. Often, they have a range of acceptable outcomes, which stretch from their ideals to sizes that are far from the ideals, but which are still acceptable considering the influence of their everyday lives and major life events on their body size and their personal commitment to its management. The normal weight and moderately overweight people are also familiar with and are inspired by other people examining body size. They keep in mind results from external examinations of their bodies, for instance when they have participated in weight loss programs or research studies, and they are inspired by charismatic individuals who in self-help books and other media present suggestions on how to examine one's body and how to manage it.

Therefore, the body size management conducted by the normal weight and moderately overweight people can also be interpreted as an ongoing *normalization* process, where these individuals constantly attempt to maintain or change their bodies in line with what is perceived as normal. In this respect, the concept of normal seems to have various connotations as the normal weight and moderately overweight people compare their bodies with different bodies and, thus, evaluate their own bodies differently depending on the situation. Consequently, a normal body is sometimes understood in terms of the BMI categorization and in the medical sense, while at other times it is defined in relation to experiences from daily life and comparisons with other people in similar life situations.

However, this picture of disciplined individuals that have internalized the recommended ways of thinking and acting cannot stand alone. The home visits and talks with the participants re-

vealed that many more factors are at play. The normal weight and moderately overweight people appear to be *creative* in their self-regulation as their practices are concretized and are sometimes transformed versions of the recommendations, and they sometimes even go beyond these.

Firstly, this creativity regarding the adoption of management practices may be due to the fact that the established guidelines are not very specific, but often simply outline some overall principles. Individuals basically need to concretize these themselves in order to follow them. For instance, it is not specified how much and how often specific kinds of food that are recommended to be limited should be eaten, or how the intake should be limited in other ways. Therefore, people make their own rules about for instance how much butter or cake to eat. As a result, the practices may end up differing from the principle in the guidelines, though this may not have been the intention.

Secondly, creativity regarding self-regulation relates to experiences and conditions from everyday life and from major life events. In everyday life, the normal weight and moderately overweight people experience some degree of practical and structural obstacles that impede their engagement in body size management, and they have various considerations to take into account, and they deal with these conditions by transforming the recommended practices and creating new practices in ways that suit and make sense considering their everyday lives. Further, the normal weight and moderately overweight people from time to time experience life events that practically and mentally take them in new directions, and that more or less consciously make them change their engagement in body size management and create new practices that better suit and make sense with regard to their new ways of life.

The measured body and the lived body

On the basis of the findings from my empirical study just presented and discussed theoretically I would argue that an overall analytical distinction between *the measured body* and *the lived body* may be useful in the attempt to grasp how the size of one's body is experienced and managed by the normal weight and moderately overweight people. This distinction is inspired by the work of Susan Reynolds Whyte and her colleagues, who study everyday life and illness management among people with AIDS in Uganda (Whyte, 2014:224), though taken further and in new directions.

On the one hand, the findings from my empirical study show that the body is experienced in terms of quantitative parameters that can be measured, and it is managed in this way. The normal weight and moderately overweight people evaluate whether their bodies are ideal, or at least acceptable, on the basis of measures and numbers either outlined by the health authorities or created by themselves. For instance, they are preoccupied with whether their weight is below or above some exact figure on the bathroom scales, or whether they fit into a pair of trousers in their usual size. Also, their practices aimed at maintaining or changing body size involve measuring the body, for instance calorie intake or pulse during exercise. The practices of managing body size are not merely adopted because they are imposed on them by health authorities, but are incorporated as their own, reproduced and interpreted in their own, sometimes creative, ways.

On the other hand, the normal weight and moderately overweight people experience their bodies on the basis of their embodied senses such as their sight and feelings of the body when they look in the mirror and feel it with their hands. Their engagement in body size management depends on what else is happening in their lives and how body size management fits in. Rather than achieving an exact size, the aim is to feel comfortable in the body and in life in general. In other words, the measured body is about experiencing it and taking care of it on the basis of numbers, calculations, and medical logics, whereas the lived body is about experiencing the body and taking care of it on the basis of embodied senses and what is experienced in life in general.

These two ways of experiencing body size are, of course, only distinct in an analytical sense. In practice, they exist simultaneously and they are both continuously ubiquitous. They often intermingle, since many practices are based on both ways of experiencing the body, and they are deeply internalized in the individuals' thinking, experienced as natural parts of their own thinking. However, sometimes the two different ways of experiencing body size may be more or less prevalent, depending on the social context and other circumstances. In some social contexts, one type of experience dominates, whereas the other dominates in other contexts. For instance, in periods of organized slimming, especially if the individual is participating in a weight loss program together with others, the measured body dominates, whereas the lived body may dominate during periods where the individuals' focus is on family life and well-being in a broad sense.

This way of grasping body size management, by making the analytical distinction between the measured body and the lived body, does not in any sense mean that the normal weight and moderately overweight people should be understood as split individuals forced to choose between the two. One may think that the two ways of experiencing body size clash because their distinct foci require distinct actions and have distinct success criteria. However, the measured body and the lived body exist simultaneously and are experienced and used as a basis for body size management. Thus, the analytical distinction pinpoints the existence of both of these dimensions in the normal weight and moderately overweight people's experiences of their body size and their practices undertaken to manage it. Precisely the fact that they are both present and are not mutually exclusive should be emphasized.

Lastly, to sum up how the normal weight and moderately overweight people consider themselves with regard to their own body size, I would say that they consider themselves to be *about right;* a term which is close to the actual words they used themselves. Being about right means that they do not think that their bodies are ideal, but they are not too bad either, and they manage their bodies as such. About right is not a fixed measure, but a flexible category, which is personally and socially generated.

The empirical findings related to findings from the literature review

Empirically, my study confirms the results of earlier studies with regard to the overall finding that normal weight and moderately overweight people are engaged in body size management. Previous studies have investigated body size in the form of weight and, to a lesser extent, body shape, but my study reveals physical firmness to be a third constitutive dimension of body size.

Many of the earlier studies find that normal weight and moderately overweight people are not satisfied with their current body size and would like to lose weight, and the findings of my study of a widespread desire for a different body size are in line with this. However, my study also reveals more positive and accepting notions regarding own body size and, thus, altogether much more complex perceptions of body size as well as complex ways of monitoring it.

As in earlier studies, my study finds practices involving diet and exercise to be widespread. But, most remarkably, my study also shows that dieting and exercising are far from always well-organised strategies which are applied for a limited period of time to lose weight. Rather, normal weight and moderately overweight people continuously engage in managing their body size, and they perform a wide range of dietary and exercise practices. Following this, my study does not, in contrast to some studies, find linearity in the form of various stages which follow on from each other in the process of body size management. Only very few earlier studies investigate body size management with a focus on how this is experienced and carried out in everyday life and how this is influenced by personal well-being and social relations. In most of these studies monitoring and changing practices are scrutinized among specific groups of normal weight and moderately overweight people. My study focus on people with non-extreme size in general and emphasizes how everyday life and major life events have a significant influence on engagement in, and the character of, body size management among normal weight and moderately over people.

Chapter 6

Conclusion

With the aim of *understanding, from an insider's perspective, how normal weight and moderately overweight people think and act with regard to their own body size, and how they make sense of this*, this thesis focuses on body size management among people whose size is not extreme. This focus includes their perceptions of own body size and their practices to monitor their size as well as practices to maintain or – if deemed necessary - change it. This has been achieved partly by a systematic literature review of previous research within the field, and partly by a qualitative empirical study based on in-depth interviews and some observation.

On the basis of the systematic literature review, it can be concluded that:

- Few scientific publications deal with body size management among normal weight and moderately overweight people.
- Quantitative, socio-epidemiological studies and studies testing or developing theoretical models for engagement in body size management are most common, while qualitative studies are rare.
- Methodological biases are present, for instance some studies have problematic samplings and low response rates, and a geographical bias towards North American studies has been identified.
- Previous studies find that many normal weight and moderately overweight people do not perceive their body size as adequate, and discrepancies between self-assessed and study-measured body size are prevalent. Many make attempts to change their body size, mainly by dieting and, to a lesser extent, exercising. In all respects, socio-demographic variations are significant.

On the basis of the empirical study, it can be concluded that:

- Normal weight and moderately overweight people monitor and manage body size in terms of weight, shape and firmness.
- Body size management is a complex process that is present in the thoughts and actions of the normal weight and moderately overweight people during their everyday lives.

- The normal weight and moderately overweight people are very much engaged in monitoring their body size and perform multiple monitoring practices, including various ways of calculating weight, evaluating shape and sensing firmness.
- Feelings of personal responsibility for body size, strong desires to manage it, and the self-belief in having adequate knowledge are prevailing.
- The normal weight and moderately overweight people are very much engaged in changing and, secondly, maintaining their body size and, thus, have a repertoire of well-established and well-integrated management practices, which are more or less continuously adopted. However, obstacles and other considerations in everyday life as well as major life events influence their opportunities to manage body size and their degree of engagement in this.
- To a high degree, the normal weight and moderately overweight people conform to guidelines marked out by health authorities, but they also creatively undertake concretized and transformed versions of the guidelines, and even go beyond them.

Taken together, the thesis finds that the subject of body size management among normal weight and moderately overweight people has not received much attention in the literature, but is, nevertheless, a subject where a lot is at stake. The normal weight and moderately overweight people appear to be regulated and to regulate themselves – to some extent in accordance with the official guidelines, but also in their own ways in line with what is meaningful in their lived lives. They experience their bodies as both measured bodies (that is through measurements and numbers) and lived bodies (that is through embodied senses and in the context of what is happening in their lives) and they relate to both of these conceptualizations in their deep engagement in managing the size of their bodies. It has been pointed out that body size management is widespread and comprehensive, not only among people categorized as extreme in size or among specific socio-demographic groups. Ordinary people of all kinds put a lot of effort into attempts to be *about right*.

CHAPTER 7

Reflections and perspectives

The aim of this thesis has been to better understand the way normal weight and moderately overweight people think and act with regard to body size management. Hopefully, it has done so by providing new insights into the involvement and the concerns that people have with regard to the size of their bodies, the responsibility they feel and the influence of their lived lives, and, not least, their compliance with, but also creativity in relation to officially recommended body size management. Against this background, this final chapter presents some reflections on the thesis and draws some perspectives regarding the implications of the study for future research and for health promotion practice.

Reflections on the study

This thesis differs from most research on body size management, in part because it focuses on people that are not extreme in size, and in part because it seeks to explore perceptions of body size and body size management from an insider's perspective. This means that it does not contribute knowledge regarding the statistical prevalence of specific views and practices. Neither does it test the explanatory efficacy of any models or theories, or contribute knowledge about social and cultural differences in body size management. On the contrary, it identifies views and practices exploratively, and it contributes insights regarding circumstances and issues that have reference to humans more generally and across size categories and social and cultural differences. This has several implications:

Firstly, this means that the thesis challenges the existing social science literature on body size management among normal weight and moderately overweight people. It questions the way that views and practices in many studies are explained by pre-defined categories and models. For instance, the common assumption that people are either dieting or not is not found in my empirical study. On the contrary, people are found to be continuously engaged in body size management by engaging in multiple practices, including regulating their diets in many ways. Similarly, in my empirical study, there are no signs of linearity or stages in the process of body size management. Therefore, it questions the modelling of body size management that is carried out in some other studies (see e.g. Allan, 1991; Curry et al., 1992; de et al., 1997; Lopez-Azpiazu et al., 2000).

Secondly, the current study to some extent challenges governmentality theory, though the idea has not been to test the explanatory efficacy of this. The empirical findings regarding transforming recommended practices and the tendency to go beyond these reveal that there is more to body size management than the discipline that is emphasised so much in at least the classical governmentality perspective (see Lupton, 1995:131-132).

Thirdly, the thesis can be said to challenge health promotion practice by pointing out that normal weight and moderately overweight people feel personally responsible for their body size and

have a strong desire to manage the size of their bodies, and also that these people think they have adequate knowledge to manage their size. This questions the relevance of the traditional focus on information and motivation that characterizes the majority of health authorities' campaigns and other health promotion initiatives (e.g. Fødevarestyrelsen, 2015).

Implications for research

On the basis of this thesis, I would suggest that future research on body size management should to a higher degree focus on normal weight and moderately overweight people, rather than concentrating for the most part on people with extreme size. Increased knowledge about these people might contribute to a better understanding of what characterises people who have been successful regarding their body size management and what is the reason for their success – what is it that makes these people conform, or not conform with the official guidelines? And when and why does it sometimes become difficult to adhere to already well-established routines that support body size management? To understand such things better would be an important input to obesity treatment and prevention. Today, overweight is a serious problem that needs to be addressed on a societal level and it will continue to be a problem in the future. Therefore, it is necessary to generate knowledge about how the further increase in the number of overweight people can be prevented. To succeed with this, it is relevant to focus on the normal weight and moderately overweight people and to support their successes with body size management. This would have a preventive effect, avoiding a situation in which normal weight people become overweight, but also providing the chance to gain insights that would help overweight people not merely to lose weight, but also to maintain weight after weight loss. For many overweight people, exactly the maintenance of weight after weight loss is a greater challenge than to carry out the weight loss itself (e.g. Sarlio-Lahteenkorva, 1998).

I would suggest that future research which focuses on normal weight and moderately overweight people engage more in qualitative, explorative investigations. My empirical study, together with the few other qualitative studies within the field provide deeper insights into the normal weight and moderately overweight people's perceptions and practices and especially the underlying concepts, meanings and assumptions behind these. More studies of this type would confirm the previous findings, but may also provide new information on how normal weight and moderately overweight people think and act with regard to the sizes of their bodies and focus on aspects that so far have not been thoroughly explored.

More specifically, future research ought to focus on some specific fields within body size management among normal weight and moderately overweight people that have not been adequately investigated so far:

For one thing, it would be very relevant if future studies investigate changes in perceptions of body size and engagement in body size management practices over time. Until now, only a few quantitative studies have identified a decrease in people's ability to recognize unhealthy weight in recent decades (Burke et al., 2010; Johnson et al., 2008), while a qualitative study identifies trigger points to diet changes through the life span (Chapman & Ogden, 2009). Further investigations and explanations of changes over time would be highly relevant, contributing to a deeper understanding of the underlying reasons for perceptions and practices. Such studies would increase the knowledge

about how changes on a societal level influence individuals' perceptions and practices with regard to body size management.

Secondly, it would be very relevant if future studies engage in deeper investigations of social and cultural differences in body size management. Until now, quantitative studies have identified huge variations in perceptions and practices, but they have been much focused on identifying racial and ethnic differences and less on socio-economic differences, and they have not looked for underlying explanations for the identified differences. Especially, gender has proved to be a factor that influences body size management, but still needs to be scrutinized qualitatively. Such studies would provide the basis for health promotion work that is more targeted at specific social groups.

Also, more studies that combine qualitative and quantitative methods would be relevant. Such mixed methods would mean qualified statistics that provide information about the prevalence and distribution of specific perceptions and practices, which from qualitative research have proved to be valid with regards to normal weight and moderately overweight people. On the other hand, mixed methods would also mean qualitative studies that attempt to explain the underlying reasons for statistically identified differences in perceptions and practices, for instance geographical, social and cultural differences.

Today, much research within the field of body size is based on cross-disciplinary studies, where social science studies are attached to health science intervention studies. The role of the social science studies is often to investigate obstacles and promoters for participation in intervention programmes, or to investigate compliance with the suggested dietary changes once the intervention programmes are finished (e.g. Gardner et al., 2014; Holm, 1993; Nielsen et al., 2008). By combining health science and social science, it becomes possible to gain knowledge that can improve the interventions and participant compliance. However, as others have argued, intervention studies are not appropriate for generating knowledge about social and cultural aspects of body size, food and the like. The intervention study design might influence the way in which the participants perceive their diets and their bodies, and often the design does not leave room for taking the influence of, for instance, marked dynamics, social relations, media, and other factors into account (Nielsen, 2008:37-42). Today, many social science studies are conducted in the context of intervention studies, but to contribute knowledge that is useful in a wider context, more interdisciplinary studies that are not embedded in the intervention design, but in an everyday life context, should be conducted.

Implications for practice

Also, I would argue that health policy and health promotion work can benefit from the findings of this thesis. Taking the knowledge from the thesis into account can contribute to better targeted campaigns and activities, and lead to reflections on their consequences.

Today, health promotion work is, to a large extent, organized as campaigns promoting overall messages regarding healthy life and suggestions on how to live healthily. Thus, the focus is predominantly on motivating the population to engage in body size management and on providing the individuals with adequate knowledge to be able to manage body size (e.g. Fødevarestyrelsen, 2015; Overgaard, 2005:156-166). But as normal weight and moderately overweight people in this thesis are found to already be motivated and think that they have adequate knowledge to manage their

size, such motivation and information campaigns do not seem very relevant. Rather, health promotion work should take into account the fact that normal weight and moderately overweight people are already deeply engaged in and put much effort into body size management. These people should be understood as competent, which would set the stage for acknowledging and considering their multiple and creative ways of conducting body size management. Their many specific management practices could be used constructively and as inspiration for suggestions for specific body size management practices. Campaigns could be more specific and include some of the tips and tricks that the normal weight and moderately overweight people already undertake. Also, it would be useful if health authorities suggested alternative ways of defining adequate body size and to monitor body size, not only measuring BMI and waist, but also evaluating weight, shape and firmness in ways and with tools that are part of everyday life. Such initiatives would mean that health promotion work and people's own body size management would not be contradictory, but rather complementary or, even better, including some of the same components. My intention is not, on the basis of my study, to set aside health promotion work, or to ignore the medical arguments behind the specific recommendations and objective parameters for what is most healthy with regard to body size. However, the medical arguments may not necessarily be incompatible with people's practices that are more specific and adapted to everyday life, and increased integration of these two would presumably mean that the recommendations would be easier to follow.

Further, on the basis of my study, it could be argued that campaigns should be clear about the health risks associated with the various BMI categories in order to reduce unnecessary concern among normal weight and moderately overweight people.

Moreover, health policy could work on structural changes that reduce practical obstacles to body size management in everyday life. It has been argued that everyday life in modern societies is obesogenic as it influences people to eat unhealthily and to not do enough exercise (Swinburn, Egger, & Raza, 1999). My study confirms that the normal weight and moderately overweight people find that a shortage of time, money, exercise facilities, among other things, hinder their involvement in body size management even though they feel motivated. Therefore, structural changes which make it easier to make healthy choices would presumably reduce such experiences. Furthermore, health promotion work could benefit from taking into account how major life events mean that people at some points in life are especially receptive to health messages, while they are at increased risk of losing control of their body size at other times. Taken together, health policy ought to acknowledge and take into account the fact that body size management is not so much about skills, but much more about perceptions of body size, formed by official guidelines, media, and social relations, and about everyday life circumstances.

On an overall level, this thesis raises the question of whether normal weight and moderately overweight people should be considered as success stories because they have succeeded with their body size management, or if they instead should be viewed as examples of the disciplining and medicalization of the normal. They have, on the one hand, understood and, to a large extent, managed to conform to the messages about how to maintain a healthy body size, and they have succeeded in balancing their energy intake and exercise despite the multiple temptations due to easy access to food, and only limited inclination to engage in physical activity, which characterizes modern socie-

ties. On the other hand, they appear concerned about rather than relaxed about their body size, which should raise concerns also on a societal level because it questions their general welfare. This may put them at risk of either at some point losing their hard-won control and gaining weight, or on the other hand that their search for control becomes rampant resulting in eating disorders or exercise addiction. Research shows that eating disorders and exercise addiction, for some people, have developed from taking health messages too seriously (though there are, of course, other things at stake too with regard to these phenomena) (Malson, 1998:x; Marzano-Parisoli, 2001), and orthorexia has been identified as a serious condition which has emerged out of a simple intention to lead a healthy life (Koven & Abry, 2015). Thus, normal weight and moderately overweight people's concerns about body size may have health consequences as well as unintentional psychological side effects. Therefore, health policy ought to recognize and consider that regulation in the form of health promotion does not merely solve problems, but may also create some problems itself. The widespread concern about body size has potential negative consequences among people who, medically speaking, do not have notable health problems, and who in their daily lives basically do not experience any physical problems with regard to their body size.

References

Abusabha, R., Hsieh, K. H., & Achterberg, C. (2001). Dietary fat reduction strategies used by a group of adults aged 50 years and older. *Journal of the American Dietetic Association, 101*(9), 1024-1030.

Allan, J. D. (1991). To lose, to maintain, to ignore: Weight management among women. *Health Care for Women International, 12*(2), 223-225.

Allan, J. D. (1994). A biomedical and feminist perspective on women's experiences with weight management. *Western Journal of Nursing Research, 16*(5), 524-543.

Atlantis, E., & Ball, K. (2008). *Association between weight perception and psychological distress 50*

Avisen.dk. (2015). EU fælder dom: Må karsten fyres, fordi han er for fed? Retrieved from http://www.avisen.dk/eu-faelder-dom-maa-karsten-fyres-fordi-han-er-fed_298338.aspx

Ball, K., & Crawford, D. (2005). Socioeconomic status and weight change in adults: A review. *Social Science and Medicine, 60*(9), 1987-2010.

Beck, U. (1992). *Risk society. Towards a new modernity*. London: Sage.

Befort, C. A., Thomas, J. L., Daley, C. M., Rhode, P. A., & Ahluwalia, J. S. (2008). Perceptions and beliefs about body size, weight, and weight loss among obese african american women . *Health Education & Behavior, 35*, 410.

Bendixen, H., Madsen, J., Bay-Hansen, D., Boesen, U., Ovesen, L. F., Bartels, E. M., & Astrup, A. (2002). An observational study of slimming behavior in Denmark in 1992 and 1998. *Obesity Research, 10*(9), 911-922.

Bish, C. L., Blanck, H. M., Maynard, L. M., Serdula, M. K., Thompson, N. J., & Khan, L. K. (2007). Health-related quality of life and weight loss practices among overweight and obese US adults, 2003 behavioral risk factor surveillance system. *Medscape General Medicine 9(2)*, 35

Bish, C. L., Blanck, H. M., Serdula, M. K., Marcus, M., Kohl, H. W.,3rd, & Khan, L. K. (2005). Diet and physical activity behaviors among americans trying to lose weight: 2000 behavioral risk factor surveillance system. *Obesity Research, 13*(3), 596-607.

Bogdewic, S. P. (1999). Participant observation. In B. F. Crabtree, & W. L. Miller (Eds.), *Doing qualitative research* (Second edition ed., pp. 47-69). London: Sage Publications.

Burke, M. A., Heiland, F. W., & Nadler, C. M. (2010). From "overweight" to "about right": Evidence of a generational shift in body weight norms 9. *Obesity, 18*(6), 1226-1234.

Butler, P., & Mellor, D. (2006). Role of personal factors in women's self-reported weight management behaviour. *Public Health, 120*(5), 383-392.

Cachelin, F. M., Striegel-Moore, R. H., & Elder, K. A. (1998). Realistic weight perception and body size assessment in a racially diverse community sample of dieters*. Obesity Research, 6(1)*, 62-68.

Chambers, J. A., & Swanson, V. (2012). Stories of weight management: Factors associated with successful and unsuccessful weight maintenance. *British Journal of Health Psychology, 17*, 223-243.

Chapman, K., & Ogden, J. (2009). How do people change their diet?: An exploration into mechanisms of dietary change. *Journal of Health Psychology, 14*, 1229.

Chapman, K., & Ogden, J. (2010). The prevalence of mechanisms of dietary change in a community sample. *Appetite, 55*(3), 447-453.

Charmaz, K. (2008). Grounded theory in the 21st century. In N. Denzin, & Y. S. Lincoln (Eds.), *Strategies of qualitative inqury* (pp. 203-241). London: Sage Publications.

Christensen, A. I., Davidsen, M., Ekholm, O., Pedersen, P. V., & Juel, K. (2014). *Danskernes sundhed - den nationale sundhedsprofil 2013*. København: Sundhedsstyrelsen.

Christiansen, B., Borge, L., & Fagermoen, M. S. (2012). Understanding everyday life of morbidity obese adults - habits and body image. *International Journal of Qualitative Studies on Health and Well-Being, 7*, 17255.

Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data. Complementary research strategies*. Thousand Oaks: Sage.

Cordell, G., & Ronai, C. R. (1999). Identity management among overweight women: Narrative resistance to stigma. In J. Sobal, & D. Maurer (Eds.), *Interpreting weight. the social management of fatness and thinness* (pp. 29). New York: Aldine de Gruyter.

Crabtree, B. F., & Miller, W. L. (1999). Using codes and code manuals: A template organizing style of interpretation. In B. F. Crabtree, & W. L. Miller (Eds.), *Doing qualitative research* (Second edition ed., pp. 163-177). California: Sage.

Crawford, D., & Campbell, K. (1999). Lay definitions of ideal weight and overweight. *International Journal of Obesity, 23*, 738.

Curry, S. J., Kristal, A. R., & Bowen, D. J. (1992). An application of the stage model of behavior change to dietary fat reduction. *Health Education Research, 7*(1), 97-105.

Dailey, R. M., Richards, A. A., & Romo, L. K. (2010). Communication with significant others about weight management: The role of confirmation in weight management attitudes and behaviors. *Communication Research, 37*(5), 644-673.

Dailey, R. M., Romo, L. K., & Thompson, C. M. (2011). Confirmation in couples' communication about weight management: An analysis of how both partners contribute to individuals' health behaviors and conversational outcomes. *Human Communication Research, 37*(4), 553-582.

de Certau, M. (1984). *The practice of everyday life*. Berkeley: University of California Press.

de, G. C., Van, d. G., Kafatos, A., Lennernas, M., & Kearney, J. M. (1997). Stages of dietary change among nationally-representative samples of adults in the european union. *European Journal of Clinical Nutrition, 51(Suppl 2)*,47-56.

Degher, D., & Hughes, G. (1999). The adaption and management of a "fat" identity". In J. Sobal, & D. Maurer (Eds.), *Interpreting weight. the social management of fatness and thinness* (pp. 11). New York: Aldine de Gruyter.

Denzin, N. K., & Lincoln, Y. S. (2008). Introduction: The discipline and practice of qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 1-44). Thousand Oaks: Sage Publications.

DiBonaventura, M., & Chapman, G. B. (2008). *The effect of barrier underestimation on weight management and exercise change 60*

Diggins, J. P. (1994). *The promise of pragmatism. Modernism and the crisis of knowledge and authorithy*. Chicago: The University of Chicago Press.

Dorsey, R., Eberhardt, M., & Ogden, C. (2009). Racial and ethnic differences in weight management behavior by weight perception status 29. *Ethnicity & Disease, 20*, 244-250.

Dorsey, R. R., Eberhardt, M. S., & Ogden, C. L. (2009). Racial/ethnic differences in weight perception. *Obesity, 17*(4), 790-795.

Featherstone, M. (1991). *Consumer culture & postmodernism*. London: Sage.

Finucane, M. M., Stevens, G. A., Cowan, M. J., Danaei, G., Lin, J. K., Paciorek, C. J., . . . Global Burden of Metabolic Risk Factors of Chronic Diseases Collaborating Group (Body Mass Index). (2011). National, regional, and global trends in body-mass index since 1980: Systematic analysis of health examination surveys and epidemiological studies with 960 country-years and 9.1 million participants. *The Lancet, 377(9765)*, 557-567.

Flegal, K. M., Graubard, B. I., Williamson, D. F., & Gail, M. H. (2005). Excess deaths associated with underweight, overweight, and obesity. *JAMA : The Journal of the American Medical Association, 293*, 1861-1867.

Fødevarestyrelsen. (2015). Altomkost.dk. Retrieved from http://altomkost.dk/

Foucault, M. (1984a). Complete and austere institutions. In P. Rabinow (Ed.), *The Foucault reader:An introduction to Foucault's thought* (pp. 214-225). London: Penguin Books.

Foucault, M. (1984b). The politics of health in the eighteenth century. In P. Rabinow (Ed.), *The Foucault reader. An introduction to Foucault's thought* (pp. 273-289). London: Penguin Books.

Foucault, M. (1988a). Technologies of the self. In L. H. Martin, H. Gutman & P. H. Hutton (Eds.), *Technologies of the self: A seminar with Michel Foucault* (pp. 16-49). Amherst: University of Massachusetts Press.

Foucault, M. (1991). Governmentality. In G. Burchell, C. Gordon & P. Miller (Eds.), *The Foucault effect: Studies in governmentality*. Chicago: University Of Chicago Press.

Foucault, M. (1988b). The political technology of individuals. In L. H. Martin, H. Gutman & P. H. Hutton (Eds.), *Technologies of the self, a seminar with Michel Foucault*. Amherst: University of Massachusetts Press.

Foucault, M. (1984c). The means of correct training. In P. Rabinow (Ed.), *The Foucault reader. An introduction to Foucault's thought* (pp. 188-205). London: Penguin Books.

Foucault, M. (1984d). Right of dealth and power over life. In P. Rabinow (Ed.), *The Foucault reader. An introduction to foucault's thought* (pp. 258-272). London: Penguin Books.

Gardner, B., Sheals, K., Wardle, J., & McGowan, L. (2014). Putting habit into practice, and practice into habit: A process evaluation and exploration of the acceptabilty of a habit-based dietary behaviour change intervention. *International Journal of Nutrition and Physical Activity, 30*(11), 135.

Giddens, A. (1990). *The consequenses of modernity*. Cambridge: Polity Press.

Giddens, A. (1991). *Modernity and self-identity. Self and society in the late modern age*. Cambridge: Polity Press.

Glanz, K., Patterson, R. E., Kristal, A. R., DiClemente, C. C., Heimendinger, J., Linnan, L., & McLerran, D. F. (1994). Stages of change in adopting healthy diets: Fat, fiber, and correlates of nutrient intake. *Health Education Quarterly, 21*(4), 499-519.

Gough, B., & Conner, M. T. (2006). Barriers to healthy eating amongst men: A qualitative analysis. *Social Science & Medicine, 62*(2), 387-395.

Granberg, E. (2006). *"Is that all there is?" Possible selves, self-change, and weight loss*

Grøn, L. (2004). *Winds of change, bodies of persistence. Health promotion and lifestyle change in institutions and everyday context.* Aarhus: University of Aarhus.

Halkier, B., & Jensen, I. (2011). Methodological challenges in using practice theory in consumption research. Examples from a study on handling nutritional contestations of food consumption. *Journal of Consumer Culture, 11*(1), 101-123.

Hammersley, M., & Atkinson, P. (1995). *Ethnography. Principles in practice* (Second ed.). London: Routledge.

Harmatz, M. G., Gronendyke, J., & Thomas, T. (1985). The underweight male: The unrecognized problem group of body image research. *Journal of Obesity & Weight Regulation, 4*(4), 258-267.

Haslam, D. W., & James, W. P. T. (2005). Obesity. *The Lancet, 366*(9492), 1197-1209.

Hendley, Y., Zhao, L., Coverson, D. L., Din-Dzietham, R., Morris, A., Quyyumi, A. A., . . . Vaccarino, V. (2011). Differences in weight perception among blacks and whites. *Journal of Women's Health, 20*(12), 1805-1811.

Holm, L. (1993). Cultural and social acceptability of a healthy diet. *European Journal of Clinical Nutrition, 47*((8)), 592-599.

Jacobsen, M. H. (2009). Introduction: The everyday: An introduction to an introduction. In M. H. Jacobsen (Ed.), *Encountering the everyday. an introduction to the sociologies of the unnoticed* (pp. 1-42). Hampshire: Palgrave Macmillan.

Janesick, V. J. (2000). The choreography of qualitative research design: Minutes, improvisations, and crystallisation. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 379-399). Thousand Oaks: Sage.

Johansson, T. (2007). *Makeovermani - om Dr. phil, plastikkirurgi og illusionen om det perfekte jeg*. København: Akademisk Forlag.

Johnson, F., Cooke, L., Croker, H., & Wardle, J. (2008). Changing perceptions of weight in great britain: Comparison of two population surveys. *BMJ,* 337.

Keenan, D. P., Achterberg, C., Kris-Etherton, P. M., Abusabha, R., & von, E. A. (1996). Use of qualitative and quantitative methods to define behavioral fat-reduction strategies and their relationship to dietary fat reduction in the patterns of dietary change study 142. *Journal of the American Dietetic Association, 96*(12), 1245-1250.

Kelly, C. W. (2011). Commitment to health: A predictor of dietary change. *Journal of Clinical Nursing, 20*(19-20), 2830-2836.

Kim, K. H. (2007). Religion, weight perception, and weight control behavior. *Eating Behaviors, 8*(1), 121-131.

Kirk, S. F., Tytus, R., Tsuyuki, R. T., & Sharma, A. M. (2012). Weight management experiences of overweight and obese canadian adults: Findings from a national survey. *Chronic Diseases and Injuries in Canada, 32*(2), 63-69.

Koven, N. S., & Abry, A. W. (2015). The clinical basis of orthorexia nervose: Emerging perspectives. *Neuropsychiatric Disease and Treatment, 11*, 385-395.

Krieger, N., & Smith, G. D. (2004). 'Bodies count,' and body counts: Social epidemiology and embodying inequality. *Epidemiologic Reviews, 26*, 92-103.

Kruger, J., Galuska, D. A., Serdula, M. K., & Jones, D. A. (2004). Attempting to lose weight: Specific practices among US adults. *American Journal of Preventive Medicine, 26*(5), 402-406.

Kuzel, A. J. (1999). Sampling in qualitative inquery. In B. F. Crabtree, & W. L. Miller (Eds.), *Doing qualitative research* (Second edition ed., pp. 33-45). London: Sage Publications.

Kvale, S., & Brinkmann, S. (2009). *Interviews. Learning the craft of qualitative research interviewing* (Second ed.). California: Sage.

Lanza, S. T., Savage, J. S., & Birch, L. L. (2010). Identification and prediction of latent classes of weight-loss strategies among women. *Obesity, 18*(4), 833-840.

Larsen, T. V. (2014). Tema: Overvægt: Overvægtige taber i jobkampen. *Børn & Unge, 5*

Linder, J., McLaren, L., Siou, G. L., Csizmadi, I., & Robson, P. J. (2010). The epidemiology of weight perception: Perceived versus self-reported actual weight status among albertan adults. *Canadian Journal of Public Health. Revue Canadienne De Sante Publique, 101*(1), 56-60.

Littell, J. H., & Girwin, H. (2002). Stages of change. A critique. *Behavior Modification, 26*(2), 223-273.

Lopez-Azpiazu, I., Martinez-Gonzalez, M. A., Leon-Mateos, A., Kearney, J., Gibney, M., & Martinez, J. A. (2000). Stages of dietary change and nutrition attitudes in the Spanish population. *Publich Health, 114(3)*, 183-189.

Lupton, D. (1995). *The imperative of health. Public health and the regulated body*. London: Sage.

Malson, H. (1998). *The thin woman. feminism, post-stucturalism and the social psychology of anorexia nervosa*. London: Routledge.

Malterud, K. (2001). Qualitative research: Standards, challenges, and guidelines. *Lancet, 353*, 483-488.

Marzano-Parisoli, M. M. (2001). The contemporary construction of a perfect body image: Bodybuilding, exercise addiction, and eating disorders. *Quest, 53*(2), 216-230.

Mauritson, N. (2007). *Kernesund familie sådan! Livsstil, uden sukker, stress og kemi, passer ind i din hverdag og ændrer den for evigt*. København: Politiken.

McDermott, J. J. (Ed.). (1981). *The philosophy of John Dewey*. Chicago: The University of Chicago Press.

McElhone, S., Kearney, J. M., Giachetti, I., Zunft, H. J., & Martinez, J. A. (1999). Body image perception in relation to recent weight changes and strategies for weight loss in a nationally representative sample in the european union. *Public Health Nutrition, 2*(1A), 143-151.

Mendieta-Tan, A., Hulbert-Williams, L., & Nicholls, W. (2013). Women's experiences of using drugs in weight management. An interpretative phenomenological analysis. *Appetite, 60*, 220-225. doi:10.1016/j.appet.2012.09.027

Merleau-Ponty, M. (2005 (1962)). *Phenomenology of perception*. Oxford: Routledge.

Miller, W. L., & Crabtree, B. F. (1999a). Clinical research: A multimethod typology and qualitative roadmap. In B. F. Crabtree, & W. L. Miller (Eds.), *Doing qualitative research* (Second edition ed., pp. 3-30). London: Sage Publications.

Miller, W. L., & Crabtree, B. F. (1999b). Depth interviewing. In B. F. Crabtree, & W. L. Miller (Eds.), *Doing qualitative research* (Second edition ed., pp. 89-107). London: Sage Publications.

Mischler, E. G. (1986). *Research interviewing. Context and narrative*. Harvard: Harvard University Press.

Musaad, S., & Haynes, E. N. (2007). Biomarkers of obesity and subsequent cardiovascular events. *Epedimiological Reviews, 29*(1), 98-114.

Nettleton, S., & Watson, J. (Eds.). (1998). *The body in everyday life*. London: Routledge.

NHLBI Obesity Education Initiative Expert Panel on the Identification, Evaluation, and Treatment of Obesity in Adults (US). (1998). *Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults. The evidence report.* (No. 98-4083). US: National Heart, Lung, and Blood Institute.

Nielsen, A. (2008). *Keeping it down and getting it right. A sociological analysis of weight control and dietary change in an experimental setup*. Copenhagen: University of Copenhagen.

Nielsen, A., Korzen, S., & Holm, L. (2008). Inverting the food pyramid? social and cultural acceptability of walter willett's dietary recommendations among people with weight concerns. *Appetite, 51*(1), 178-186.

Nissen, N. K., & Holm, L. (2015). Literature review: Perceptions and management of body size among normal weight and moderately overweight people". *Obesity Reviews, 16*(2), 150-160.

Niva, M., Jauho, M., & Mäkelä, J. (2013). "If I drink it anyway, then I rather take the light one". Appropriation of foods and drinks designed for weight management among middle-aged and elderly finns. *Appetite, 64*, 12-19.

Nothwehr, F., Snetselaar, L., & Wu, H. (2006). Weight management strategies reported by rural men and women in iowa. *Journal of Nutrition Education and Behavior, 38*(4), 249-253.

OECD. (2015). Overweight and obesity among adults. Retrieved from http://www.oecd-ilibrary.org/sites/9789264183896-en/02/07/index.html?itemId=/content/chapter/9789264183896-26-en

Overgaard, S. S. (2005). *Fra mangel til overflod. ernæring og sundhed 1905-2005*. København: Suhr's 100.

Overgaard, S. & Zahavi, D. (2009). Phenomenological sociology: The subjectivity of everyday life. In M. H. Jacobsen (Ed.), *Encountering the everyday. an introduction to the sociologies of the unnoticed* (pp. 93-115). Hampshire: Palgrave Macmillan.

Paeratakul, S., Whithe, M. A., Williamson, D. A., Ryan, D. H., & Bray, G. A. (2002). Sex, race/ethnicity, socioeconomic status, and BMI in relation to self-perception of overweight. *Obesity Research, 10*(5), 345.

Paisley, J., Beanlands, H., Goldman, J., Evers, S., & Chappell, J. (2008). Dietary change: What are the responses and roles of significant others? *Journal of Nutrition Education and Behavior, 40(2)*, 80-88.

Paleo kost. (2015). Paleo kost - danmarks side om paleo kost. Retrieved from http://paleo-kost.dk/

Pathak, R. K., Mahajan, R., Lau, D. H., & Sanders, P. (2015). The implications of obesity for cardiac arrhythmia mechanisms and management. *Canadian Journal of Cardiology, 31*(2), 203-210.

Paxton, S. J., Sculthorpe, A., & Gibbons, K. (1994). Weight-loss strategies and beliefs in high and low socioeconomic areas of melbourne. *Australian Journal of Public Health, 18*(4), 412-417.

Pink, S. (2001). *Doing visual ethnography*. London: Sage Publications.

Porter, R. (1999). *The greatest benefit to mankind - a medical history of humanity.* New York: W. W. Norton & Company.

Potter, M. B., Vu, J. D., & Croughan-Minihane, M. (2001). Weight management: What patients want from their primary care physicians. *Journal of Family Practice, 50*(6), 513.

Prus, R. C., & Puddephatt, A. J. (2009). American pragmatism. examining everyday life 'in the making'. In M. H. Jacobsen (Ed.), *Encountering the everyday. an introduction to the sociologies of the unnoticed* (pp. 69-92). New York: Palgrave Macmillan.

QSR International. (2015). NVivo 9. Retrieved from http://www.qsrinternational.com/products_previous-products_nvivo9.aspx

Rabinow, P. (1984). Introduction. In P. Rabinow (Ed.), *The Foucault Reader. An introduction to Foucault's thought*. London: Penguin.

Reilly, J. J., Methven, E., McDowell, Z. C., Hacking, B., Alexander, D., Stewart, L., & Kelnar, C. J. H. (2003). Health consequenses of obesity. *Archives of Disease in Childhood, 88*, 748-752.

Richelsen, B., Astrup, A., Hansen, G. L., Hansen, H. S., Heitman, B., Holm, L., . . . Olsen, S. F. (2003). *Den danske fedmeepidemi. Oplæg til en forebyggelsesindsats.* (No. 30). København: Ernæringsrådet.

Rose, N. (1998). *Inventing our selves. psychology, power, and personhood* (First paperback ed.). Cambridge: Cambridge University Press.

Rose, N. (1999). *Powers of freedom. Reframing political thought*. Cambridge: Cambridge Univerity Press.

Sarlio-Lahteenkorva, S. (1998). Relapse stories in obesity. *European Journal of Public Health, 8*, 203-209.

Schilling, C. (2012). *The body & social theory* (Third ed.). London: SAGE.

Schutz, A. (1962). *Collected papers I. The problem of social reality*. The Hague: Martinus Nijhoff.

Serdula, M. K., Mokdad, A. H., Williamson, D. F., Galuska, D. A., Mendlein, J. M., & Heath, G. W. (1999). Prevalence of attempting weight loss and strategies for controlling weight. *JAMA : The Journal of the American Medical Association, 282*(14), 1353-1358.

Smith, L., & Holm, L. (2012). Embodied experiences associated with obesity and the management of body weight. Gender and social differences. *Journal of Food Research, 1*(4).

Smith, L., & Holm, L. (2011). Obesity in a life-course perspective: An exploration of lay explanations of weight gain. *Scandinavian Journal of Public Health, 39*, 396.

Sobal, J., & Stunkard, A. J. (1989). Socioeconomic status and obesity: A review of the literature. *Psychological Bullentin, 105*(2), 260-275.

Spradley, J. (1980). *Participant observation*. New York: Rinehart and Winston.

Stevns Kommune. (2012). *Projekt 'tab dig og hold vægten' - intern evaluering/afrapportering.* Stevns: Stevns Kommune.

Stunkard, A. J., Sørensen, T. I., & Schulsinger, F. (1983). Use of the danish adoption register for the sudy of obesiity and thinness. In S. Kety, L. P. Rowland, R. L. Sidman & S. W. Matthysse (Eds.), *The genetics of neurological and psychiatric disorders* (pp. 115-120). New York: Raven Press.

Sundhedsstyrelsen. (2003). *Oplæg til en national handlingsplan mod svær overvægt - forslag til løsninger og perspektiver. Kort version.* København: Sundhedsstyrelsen.

Sundhedsstyrelsen. (2005). *Spiseforstyrrelser. Anbefalinger for organisation og behandling*. København: Sundhedsstyrelsen.

Sundhedsstyrelsen. (2009). Voksne med moderat overvægt (BMI=25-29.9). København: Sundhedsstyrelsen.

Sundhedsstyrelsen. (2010). *Sundhed og trivsel på arbejdspladsen - inspiration til systematisk og strategisk arbejde med sundhedsfremme i virksomheden*. København: Sundhedsstyrelsen, Center for forebyggelse.

Sundhedsstyrelsen. (2011a). *Opsporing og behandling af overvægt hos voksne. Klinisk vejledning for almen praksis.* København: Sundhedsstyrelsen.

Sundhedsstyrelsen. (2011b). *Vejledning om forebyggende sundhedsydelser til børn og unge.* København: Sundhedsstyrelsen.

Sundhedsstyrelsen. (2011c). *Vurdér dine vaner og tag det første skridt*. København: Sundhedsstyrelsen.

Sundhedsstyrelsen. (2013). *Forebygggelsespakke - overvægt.* København: Sundhedsstyrelsen.

Swinburn, B., Egger, G., & Raza, F. (1999). Dissecting obesogenic environments: The development and application of a environmental framework for identifying and prioritizing environmental interventions for obesity. *Preventive Medicine, 29*(6), 563-570.

Thompson, S. H., & Sargent, R. G. (2000). Black and white women's weight-related attitudes and parental criticism of their childhood appearance. *Women & Health, 30*, 77-92.

Timmerman, G. M., & Earvolino-Ramirez, M. (2007). Strategies and barriers to weight management when eating out: Does gender play A role? *Annals of Behavioral Medicine, 33*, S39-S39.

Turner, B. S. (1992). *Regulating bodies. Essays in medical sociology*. London: Routledge.

Turner, B. S. (1991). The discourse of diet. In M. Featherstone, M. Hepworth & B. S. Turner (Eds.), *The body- soccial process and cultural theory* (pp. 157-168). London: Sage.

Tv2. (2011). Test dig selv: Er du overvægtig? Retrieved from http://nyhederne.tv2.dk/article.php/id-36905052:test-dig-selv-er-du-overvægtig.html

Tv2. (2015a). Få kroppen i form: Optimer din træning og forøg forbrændingen. Retrieved from http://go.tv2.dk/kropogsundhed/2014-08-07-f%C3%A5-kroppen-i-form-optimer-din-tr%C3%A6ning-og-for%C3%B8g-forbr%C3%A6ndingen

Tv2. (2015b). Sukkerfri sommer: Sådan laver du sund og lækker morgenmad. Retrieved from http://go.tv2.dk/mad/2014-07-31-sukkerfri-sommer-s%C3%A5dan-laver-du-sund-og-l%C3%A6kker-morgenmad

van Genugten, L., van Empelen, P., & Oenema, A. (2012). From weight management goals to action planning: Identification of a logical sequence from goals to actions and underlying determinants. *Journal of Human Nutrition and Dietetics, 25*(4), 354-364.

Wang, Y., & Beydoun, M. A. (2007). The obesity epidemic in the united states - gender, age, socioeconomic, racial/ethnic, and geographic charactheristics: A systematic review and meta-regression analysis. *Epidemiologic Reviews, 29*, 6-28.

Wardle, J., & Johnson, F. (2002). Weight and dieting: Examining levels of weight concern in british adults. *International Journal of Obesity, 26*, 1144.

West, R. (2005). Time for a change: Putting the Transtheoretical (Stages of Change) Model to rest. *Addiction, 100*(8), 1036-1039.

Whyte, S. R. (Ed.). (2014). *Second chances. Surviving AIDS in uganda*. Durham: Duke University Press.

World Health Organisation. (2000). *Obesity: Preventing and managing the global epidemic. Report of a WHO consultation.* (No. WHO Techical report series 894). Genova: World Health Organisation.

Yaemsiri, S., Slining, M. M., & Agarwal, S. K. (2009). Weight perception and physician diagnosis are strong predictors of weight loss behavior among adults in the united states: The NHANES 2005-2006 study 12. *Obesity, 17*, S305-S305.

Yager, Z., & O'Dea, J. A. (2008). Prevention programs for body image and eating disorders on university campuses: A review of large, controlled interventions. *Health Promotion International, 23*(2), 173-189.

Appendices

Appendix 1: Questionnaire for telephone screening (in Danish)

Indledning
Goddag mit navn er …, og jeg ringer fra Norstat Danmark på vegne af Københavns Universitet, som vi er i gang med at lave en undersøgelse for om folks hverdagsvaner. Kan jeg få lov til at tale med en person i husstanden i alderen 25-54 år?

Ved rette person:
Goddag mit navn er …, og jeg ringer fra Norstat Danmark på vegne af Københavns Universitet, som vi er i gang med at lave en undersøgelse for om folks hverdagsvaner, og jeg vil i den forbindelse høre om jeg må stille dig et par spørgsmål. Det tager max. 5-7 minutter?

1. **Arbejder du eller nogen anden i din husstand indenfor nogen af følgende områder? (læs alle op)**

   ☐ Markedsføring (reklamebureau) ➔ **AFSLUT**
   ☐ Markedsundersøgelser ➔ **AFSLUT**
   ☐ Journalistik/PR/Kommunikation (presse, Radio, TV) ➔ **AFSLUT**
   ☐ Forarbejdning af eller salg af fødevarer ➔ **AFSLUT**
   ☐ Ingen af disse

2. **Hvad er din alder?**

(INT.: De skal være mellem 25 – 54 år ellers AFSLUT interview. Der skal være spredning på alder)

   ☐ Noter alder:_____
   ☐ Vil ikke svare ➔ **AFSLUT**

3. **(INT.: Noter køn: 50% kvinder og 50% mænd)**

   ☐ Kvinde
   ☐ Mand

4. **Hvilket land er du født i?**

(INT.: De skal være født i Danmark)

   ☐ Danmark
   ☐ Andet land ➔ **AFSLUT**

☐ Vil ikke svare ➔ **AFSLUT**

5. Hvilket land er du opvokset i?
(INT.: De skal være opvokset i Danmark)

☐ Danmark
☐ Andet land ➔ **AFSLUT**
☐ Vil ikke svare ➔ **AFSLUT**

6. Hvilken kommune bor du i?

☐ x kommune
☐ x kommune
☐ Anden kommune ➔ **AFSLUT**
☐ Vil ikke svare ➔ **AFSLUT**

7. Hvor høj er du?

☐ Noter højde:_____m
☐ Vil ikke svare ➔ **AFSLUT**

8. Hvor meget tror du ca. du vejer?

☐ Noter vægt:_____kg
☐ Vil ikke svare ➔ **AFSLUT**

(INTV.: For at blive rekrutteret til undersøgelsen, og for at fortsætte skemaet, så skal personen leve op til følgende BMI kriterier "BMI mindst 18,5 og højest 29,9".

BMI udregnes som følgende BMI= kropsvægt i kilo/(højden i meter x højden i meter).

NOTER HER UDREGNELSE AF BMI :
_____ (*"BMI mindst 18,5 og højest 29,9")*

9. Må jeg spørge til din civilstand?
(INT.: LÆS OP, og vigtigt der er lidt spredning i disse i begge kommuner)

☐ Single
☐ Skilt/enke/separreret
☐ Gift/samboende

10. Hvor mange personer bor der i din husstand?

☐ Noter antal: _____
☐ Vil ikke svare ➔ **AFSLUT**

11. Er der nogen børn i husstanden under 18 år, og hvis ja hvor mange?

☐ Ja, noter antal:_____
☐ Nej

12. Hvad er din højeste gennemførte uddannelse?
(INTV.: Læs kun op hvis nødvendigt, HUSK spredning se kvoter)

☐ 7. kl. eller kortere
☐ 8.-9. kl./mellemskole
☐ 10. kl./realeksamen
☐ Student/HF-eksamen
☐ Grundlæggende erhvervsuddannelse (f.eks. EFG/HH)

☐ Afsluttende erhvervsuddannelse (f.eks. social- og sundhedsass., EFG 2. del, landbrugsmedhjælper, tømmer, murer o.l.)
☐ Kort videregående uddannelse (1-2 år) (f.eks. tandplejer/el-installatør/politibetjent)
☐ Mellemlang videregående uddannelse (3-4 år) (f.eks. folkeskolelærer/bachelor/sygeplejerske)
☐ Lang videregående uddannelse, eller i gang med dette (5 år +) (f.eks. kandidat eller PhD fra universitet)
☐ Andet notér: _____
☐ Vil ikke svare ➔ **AFSLUT**

13. Hvad er din nuværende eller seneste beskæftigelse/stilling?
Noter:_____

14. Ryger du?

☐ Ja, hvor meget?:_____
☐ Nej
☐ Vil ikke svare

15. Hvad er din husstands samlede årlige indkomst før skat?

☐ Under 200.000 kr.
☐ 201.000 – 399.999 kr
☐ 400.000 – 599.999 kr.
☐ 600.000 – 799.999 kr.
☐ 800.000 kr. og derover

☐ Ved ikke
☐ Vil ikke svare

16. Har du deltaget i en fokusgruppe tidligere?

☐ Ja ➔ ***Afslut***
☐ nej
☐ Ved ikke / Vil ikke svare ➔ ***Afslut***

Københavns Universitetet, som vi ringer for, gennemfører i forbindelse med denne undersøgelse nogen personlige interview som led i et forskningsprojekt. Interviewene laves af sociolog Nina Konstantin Nissen og kan foregå hjemme hos dig, de varer ca. 1-2 timer.

Der kræves ingen særlige forudsætninger, og Nina vil gerne tale med dig om, hvordan du lever i hverdagen, og hvordan du fungerer med din krop.

Som tak for din hjælp vil du modtage et supergavekort til en værdi af 300 kroner, som vil blive udleveret efter interviewet.

(INTV.: Hvis respondenten ikke kan tage stilling nu, så foreslå at ringe tilbage senere)

17. Har du lyst til og mulighed for at deltage i sådan et interview, hvis du bliver udvalgt til dette?

☐ Ja
☐ Nej

Tak fordi du vil deltage i dette. Nina vil få udleveret dine oplysninger, og så vil hun ringe til dig i løbet af februar for at aftale en dag og tid, der passer dig bedst.

FILTER: Hvis "ja"
Så vil jeg på forhånd sige tusind tak for, at du vil deltage. Til allersidst vil jeg bede om din adresse/e-mail, så vi kan sende dig et bekræftende brev.

Navn:_____

Adresse:_____

Postnr. og by:_____

Evt. e-mail:_____@_____ _ _____

Telefonnummer:_____

Mobilnummer:_____

Det var så det hele. Vi glæder os til at se dig og vil sige mange tak for samtalen og tilsagnet om deltagelse, som vi bekræfter skriftligt til dig en af de nærmeste dage.

Jeg vil også gøre opmærksom på, at vi inviterer ganske få til at deltage, så det er vigtigt du deltager, nu du har sagt ja.

Farvel og tak. **NOTÈR INT.NR.:_____**

Appendix 2: Table of participants' socio-demographic characteristics

Participants' socio-demographic characteristics (Lists of educational level and income levels below).

Cover name	Place of living	Gender	Age	Educational level	Income level	Job	Family status (children in household)	Smoking (per day)	Height, self-reported	Weight, self-reported	BMI (category)
Alex	Capital	M	42	1	4	Electrical technician	Living with partner (2)	No	179	80.5	25.0 (NW)
Annie	Capital	F	40	1	4	TV-production assistant	Living with partner (2)	No	167	78	28.0 (MO)
Laura	Capital	F	26	3	5	Consultant in the finance sector	Living with partner (0)	No	179	77	24.0 (NW)
Nick	Capital	M	47	1	3	Production planning manager	Single (0)	Yes (6)	185	95	27.8 (MO)
Michael	Capital	M	35	2	4	Teacher	Living with partner(1)	No	192	98	26.6 (MO)
Mark	Capital	M	28	3	3	Consultant in trade union	Living with partner (0)	No	187	75	21.5 (NW)
Sarah	Capital	F	32	1	1	Student at college of education	Partner, but not living together (0)	No	173	65	21.7 (NW)
Caroline	Capital	F	29	2	1	University student	Partner, but not living together (pregnant)	No	169	60	21.0 (NW)
Monica	Capital	F	46	3	2	Unemployed HR manager	Divorced (1)	Yes (20)	165	80	29.4 (MO)
Tom	Capital	M	47	3	3	IT manager	Divorced (2, part time)	No	186	88	25.4 (MO)
Frank	Capital	M	55	1	1	On early retirement	Single (0)	Yes (not specified)	180	96	29.6 (MO)
Sandra	Capital	F	50	1	3	Unemployed	Living with partner (0)	Yes (15-20)	170	80	27.7 (MO)
Helen	Town	F	41	1	2	Accounts clerk	Divorced (2)	No	160	72	28.1 (MO)
Winnie	Town	F	43	1	No answer	Unemployed factory worker	Living with partner (0)	No	170	74	25.6 (MO)
Peter	Town	M	40	2	4	Bug exterminator	Living with partner(3)	Yes (10)	188	81	22.9 (NW)
Jim	Town	M	53	2	2	Social worker	Partner, but not living together (1, part time)	Yes (10)	185	80	23.4 (NW)
Jacob	Town	M	35	1	5	Electrical technician	Living with partner (2)	No	169	74	25,9 (MO)

John	Town	M	47	3	4	Computer scientist	Living with partner (0)	No	190	100	27.7 (MO)
Irene	Town	F	41	1	5	Banking consultant	Living with partner (2)	No	173	68	22,7 (NW)
Kate	Town	F	52	2	2	Nurse	Partner, but not living together (0)	No	166	66	24,0 (NW)
Christian	Town	M	38	1	2	Café manager	Divorced (1, part time)	Yes (10)	173	69	23,1 (NW)
Eric	Town	M	48	1	5	General manager	Living with partner (1)	No	180	90	27,8 (MO)
Lisa	Town	F	50	3	4	Psychologist	Living with partner (1)	No	179	62	19,4 (NW)
Mariah	Town	F	31	3	4	Teacher, upper-secondary school	Living with partner (2)	No	171	60	20,5 (NW)

Level of education, highest completed.

1	7. class or less 8.-9. Class/middle school 10. class/lower secondary school Upper secondary school/higher preparatory examination course Basic vocational training (e.g. EFG/HH) Final vocational training (e.g. EFG second part, social and health care help, agricultural worker, carpenter, bricklayer murer and likewise) Short-term further education (1-2 years) (e.g. dental hygienist, electrical contractor, police constable)
2	Middle-range further education (1-2 years) (e.g. primary and lower secondary school teacher, nurse, bachelor)
3	Long-term further education (5 years or more) (e.g. candidate from university)

Level of income for household, Danish kroner.

1	200.000 or less
2	201.000-399.999
3	400.000-599.999
4	600.000-799.999
5	800.000 or more

Appendix 3: Instructions for interviewer's initial contact to participants (in Danish)

Mit navn er **Nina Konstantin Nissen**, og jeg ringer fra **Københavns Universitet**.

Jeg ringer, fordi du i en **undersøgelse fra Norstat** har sagt **ja til, at jeg måtte kontakte dig** vedrørende et interview.

Jeg vil meget gerne **lave et interview** med dig. Jeg er **sociolog**, og jeg er i gang med at lave en række interview **i forbindelse med et treårigt projekt**. Det er en bred undersøgelse, der handler om, hvordan almindelige mennesker lever i hverdagen, og hvordan de synes, de fungerer med deres krop, og hvordan de opfatter den. Så **interviewet vil handle om**, hvad du **laver i hverdagen**, og hvad der er vigtigt for dig i hverdagen samt hvordan du synes **din krop fungerer**, og **hvordan den ser ud**.

Du vil naturligvis være **anonym**. I det materiale, som projektet munder ud i, vil man **ikke kunne genkende enkeltpersoner**.

Hvad siger du til, at vi laver en **aftale om et interview**?

Aftale **tid** og **sted**:

(tjek: Kan vi sidde et roligt sted, hvor vi ikke bliver forstyrret)

Jeg vil tro, at interviewet vil vare omkring en **times tid**, det er det min erfaring, at den slags interview plejer at gøre. Hvis du er med på det, vil jeg måske gerne lave **yderligere et interview** mere med dig efterfølgende, men det kan vi jo altid tales ved om hen ad vejen.

Til interviewet vil jeg bede dig om at finde **to fotografier** af dig selv og eventuelt nogen andre personer. Det skal helst være billeder, hvor man kan se **personerne i hel figur** og helst rimelig **tæt på**. Det ene billede skal være forholdsvist **nyt** og det andet billede skal være **5-10 år** gammelt. **Tror du, det kan lade sig gøre?**
Du får **billederne med dig igen**, når vi er færdige med interviewet.

Hvis du får problemer med tidspunktet, eller du kommer i tanker om noget, du vil spørge om, skal du bare ringe til mig. Mit telefonnummer er **xx xx xx xx**, og mit navn var **Nina**.

Appendix 4: Interview guide (in Danish)

Første interview (first interview)

Introduktion

Om undersøgelsen:

Undersøgelsen er en del af et **treårigt projekt** på **Københavns Universitet**, hvor jeg er ansat som **sociolog**. Det er en bred undersøgelse, der handler om, hvordan almindelige mennesker lever i hverdagen, og hvordan de synes, de fungerer med deres kroppe. Så **interviewet vil handle om**, hvad du **laver i hverdagen**, og hvad der er vigtigt for dig i hverdagen samt hvordan du synes **din krop fungerer**, og **hvordan den ser ud**.

Som jeg også sagde, da vi snakkede sammen i telefonen, vil du naturligvis være **anonym**. I det materiale, som undersøgelsen munder ud i, vil man **ikke kunne genkende enkeltpersoner**.

Om interviewet

Jeg har nogle **spørgsmål** med, som jeg vil **tage udgangspunkt i**, og som vi så kan snakke ud fra. Men det er ikke sådan, at vi skal holde os til de spørgsmål hele tiden. Du må meget gerne være **med til at bestemme, hvad vi skal snakke om**, alt efter hvad du synes er relevant. Det kan også være, at jeg hen ad vejen finder på nogle andre ting at spørge om, ud fra hvad du fortæller mig. Med andre ord så **tager vi det bare sådan stille og roligt** og finder ud af det hen ad vejen.

Og så vil jeg lige sige, at min erfaring er, at de fleste synes, det er meget **hyggeligt** at sidde her og snakke, men at man også **bliver træt på et tidspunkt**. Så derfor vil jeg foreslå, at vi deler det op i **to interview**, så jeg kommer og snakker med dig igen en anden gang. Men det kan vi jo lige vende tilbage til og snakke om, om du har lyst til, senere, når vi er ved at være færdige for i dag. Jeg tror, vi kan regne med, at det tager **en times tid** eller lidt mere i dag.

Er der noget, du vil **spørge** om, inden vi går i gang?

Hverdagen

Jeg kunne godt tænke mig at **starte med at høre om din hverdag**.

Vi kan tage udgangspunkt i **din dag i går** – vil du fortælle om den? Jeg vil meget gerne høre **om hele dagen – fra du stod op til du gik i seng**. Hvornår vågnede du, hvad gjorde du så, osv.?

Var dagen i går en **almindelig dag**, eller var der noget særligt ved den?

(snak om hverdagsliv → aktiviteter, interesser, familieliv, mad)

Hvad er en **god dag**, og hvad er en **dårlig dag** for dig?

Nu er det jo ikke så længe siden, at vi gik ind i det nye år? Lavede du nogen **nytårsfortsætter**?

Nyt portræt

Jeg har bedt dig om at finde et **billede af dig selv** og eventuelt nogle andre personer, som er taget for nylig. Det vil jeg høre, om du vil vise mig nu?

Kan du **fortælle mig om billedet** her?

Hvad fik dig til at **vælge netop det** billede?

Hvad **tænker du om dig selv** på det billede?
(snak om billede → beklædning og krop (størrelse, fedtfordeling, muskler, aldringstegn, ansigtstræk, hår, kropsdeles proportionalitet i forhold til hinanden))

(Kommentér tøj): Kan du lide at **købe tøj**?

Ældre portræt

Jeg havde også bedt dig om at finde et billede af dig selv, som er taget for omkring **5-10 år siden**. Det vil jeg høre, om du vil vise mig nu?

Kan du **fortælle mig om billedet** her?

Hvad fik dig til at **vælge netop det** billede?

Hvad **tænker du om dig selv** på det billede?
(snak om billede → beklædning og krop (størrelse, fedtfordeling, muskler, aldringstegn, ansigtstræk, hår, kropsdeles proportionalitet i forhold til hinanden))

Hvordan var dit liv på det tidspunkt, hvor billedet blev taget?

Var dit liv på det tidspunkt på nogen væsentlige punkter **meget anderledes end dit liv nu**?

Kroppen (funktion, helbred og udseende)

Jeg kunne godt tænke mig at blive lidt ved det her med **kroppen**, som vi nu har talt lidt om i forhold til billederne.

Når du tænker på din krop, hvad tænker du så?

Hvis vi vender tilbage til billederne, hvordan vil du så **sammenligne din krop på de to billeder**?

Er der nogen situationer i hverdagen, hvor du **har det godt med din krop**, og nogen hvor du har det **knap så godt** eller ligefrem dårligt?

Kan du fortælle om det **tøj, du har det bedst i**, og om der er noget **tøj, du ikke bryder dig om** at have på eller aldrig kunne finde på at tage på?

Er der nogen **aktiviteter i hverdagen**, hvor du **særligt bruger din krop**, på arbejde eller i fritiden? Hvordan synes du, din **krop fungerer i de sammenhænge**?

Når du tænker på din krop, tænker du så på dit **helbred**?

Tænker du i det daglige over, hvordan din **krop ser ud**?

Hvad i **dine omgivelser** mener du har **indflydelse på, hvad du tænker om din krop**?

Kan du finde på at **tale med andre om din krop**? *(familie, venner, kollegaer, behandlere, andre).* Hvad taler I så om?

Har du oplevet, at **andre har kommenteret din krop** *(hvem, hvilke kommentarer, hvad var anledningen, og hvordan oplevede du det)?*

Krop – størrelse og figur

Hvad **tænker du om din krops størrelse**? *(vurdering; fx lille, tilpas eller stor)*.

Og hvad **tænker du om din figur**, altså kroppens former?

Når du siger, at du tænker sådan om din krop, hvordan er du så **kommet frem til det**?

Kan du sige noget om, om du **gør noget sådan helt praktisk** for at vurdere din kropstørrelse? Kigger du dig i **spejlet**, eller finder du **målebåndet** frem eller stiger op på **badevægten**? Eller har det noget med dit **tøj** at gøre?

Når du siger, at du tænker sådan om din krop, **hvad er det så set i forhold til**? Er der et eller andet bestemt, du **sammenligner** med? (*fx lille, tilpas eller stor i forhold til hvad)*

Spejl

Nu nævnte jeg før det her med at kigge sig i spejlet. Er der nogen **spejle her i huset**?

(hvor mange, hvor er de placeret, hvem har placeret dem der, hvornår og hvordan bruges de, og hvornår og hvordan bruges spejle uden for hjemmet)

Badevægt

Og jeg nævnte også badevægten. Er der nogen **badevægte her i huset**?
(hvor mange, hvor er de placeret, hvem har placeret dem der, hvornår og hvordan bruges de, og hvornår og hvordan bruges badevægte uden for hjemmet)

Ved du, **hvad du vejer**?

Hvornår er du **sidst blevet vejet**?

- og hvad var **grunden til det**?

Det der **tal på vægten**, hvad **siger det dig**?

Tøj

Vi har også været lidt inde på noget med tøj. Kan du sige mere om, hvad for noget **tøj, du har i din garderobe**? Hvilket **bruger du mest**, og hvilket **bruger du mindst**?

Jeg tror, vi snart er ved at være klar til at **runde af for i dag**.

Her til sidst vil jeg høre, om du har lyst til at **vise mig spejlet/vægten/tøjet**, som vi talte om?

Afrunding

Jeg tror, vi er ved at være der, hvor vi skal **runde af for i dag**. Vi har været omkring rigtig mange ting, og det har været **rigtig godt og spændende at tale med dig**.

Jeg vil høre, om du kunne være ned på, at vi tager **endnu en snak** på et senere tidspunkt. Fx om **et par uger eller senere**, alt efter hvad der passer dig bedst. Hvad siger du til det?

Tak for i dag!

Andet interview (second interview)

Sidste gang talte vi om dit **hverdagsliv, og hvordan du har det med din krop**. Hvordan du synes, den fungerer og ser ud. *(eventuelt opsummere)*

Jeg vil starte med at høre, om du har nogle kommentarer i forhold til, hvad vi talte om sidst? Er der noget, du har **tænkt på siden**, som du vil nævne?

Jeg kunne godt tænke mig, at vi **går videre ud fra den snak**. Jeg har nogle flere spørgsmål med, som jeg har tænkt på, og så kan vi jo gå videre ud fra, hvad vi talte om sidst.

Størrelse og figur – og forandring

Jeg har taget sådan nogle **tegninger med af figurer** med forskellige kropsstørrelser.

Jeg vil høre, om du vil kigge lidt på figurerne og **vælge den, som du synes, svarer bedst til din krop**?

Hvis du kigger på silhuettegningerne igen, hvilken af figurerne kunne du så **bedst tænke dig, at din krop svarede til**?

Hvad er en **passende – eller acceptabel – størrelse for dig**? *(eventuelt interval)*

Kan du forklare, **hvordan du er kommet frem til**, at det er det, der er passende/acceptabelt for dig?

Hvad er det ved denne størrelse, der **er bedre, end den du har**?

Er der **forskel på**, hvad der er **passende**, og hvad der er **acceptabelt** størrelse?

Har din størrelse eller figur **ændret sig på noget tidspunkt i dit voksenliv**?

Har du selv gjort noget eller forsøgt at gøre noget for at din krop skulle **blive ved** med at være en bestemt størrelse og figur, eller for at **ændre** på størrelsen eller figuren? *(nu eller tidligere)*

Hvis JA til at have gjort noget for at ÆNDRE kropsstørrelse:

Motivation for forandring

Hvad var det, du gerne ville ændre ved din krop?
(tabe dig/tage på eller ændre fordelingen af fedt og muskler i kroppen, samt hvor det sidder på kroppen)

Hvordan fandt du på, at du ville ændre noget?

Hvad **grunden var til, at du gerne ville ændre noget**?

Har det været på nogle **bestemte tidspunkter i dit liv**, at du har villet ændre på din kropsstørrelse?

Har det haft forbindelse til nogen **andre ting, der er sket i dit liv**?

Hvis JA til at have gjort noget for at ÆNDRE eller HOLDE kropsstørrelse:

Hvordan forandring

Kan du **beskrive nærmere**, hvad det er, du har gjort for at holde/ændre din krops størrelse eller figur?

Er det noget, du har gjort i en **afgrænset periode** eller sådan mere **fast**?

Hvordan fandt du på at gøre netop det?

Har du gjort **andre ting**?

Det kan være alle mulige **små og store ting**, som man går og gør i hverdagen. Det kan for eksempel være i forhold til, hvad man **spiser og drikker**, hvordan man **bevæger sig** eller, hvor meget man **ryger** eller noget helt andet?
(fx MAD (mængde (mellemmåltider eller portioner), tilvalg/fravalg af bestemte madvarer); DRIKKE (mere vand, mindre alkohol); MOTION; RYGNING)

Vi talte om **nytårsfortsætter** sidste gang. Har du nogen nytårsfortsætter, der har noget at gøre med at holde eller ændre størrelse eller figur?

Hvad tænker du, **hvis jeg siger slankekur**?

Hvad **er en slankekur**?

Barrierer og fremmere for forandring
Er der noget, der har været **særligt svært** ved det her med at forsøge at holde/ ændre vægten?

Er der omvendt noget, der har været **let**?

Er der nogen **andre personer**, der har spillet vigtige roller i forhold til det med at holde/ ændre vægten?

Har du hentet **råd eller vejledning** nogen steder fra i forhold til det her med at forsøge at holde/ændre vægten?

Hvordan er det gået med dit forsøg på at holde/ændre vægten? **Hvorfor** tror du, at det er gået sådan?

Hvis NEJ til at have gjort noget for at holde/ændre vægt:

Overvejelser om forandring

Har du nogensinde **overvejet at forsøge** at ændre din størrelse eller figur?

Gør du noget – eller har du i perioder af dit liv gjort noget – for at f**orsøge at holde vægten**? Altså, har du gjort nogle bestemte ting for ikke at tabe dig eller ikke tage på.

Kender du nogen – familie, venner eller bekendte – som har gjort noget for at tabe sig eller ikke tage på?

Køkken og udstyr

Jeg tror, vi snart er ved at være klar til at **runde af**.

Her til sidst vil jeg høre, om du har lyst til at vise mig dit **køkken/sportsudstyr/?**, nu hvor vi har talt en del om det?

Afrunding

Jeg tror, vi er ved at være der, hvor vi skal **runde af**. Vi har været omkring rigtig mange ting, og det har været rigtig godt og **spændende** at tale med dig, og meget givende i forhold til min undersøgelse.

Er der noget her til sidst, som du synes, vi **mangler at tale om**, og som er relevant? Eller er der noget af det, vi har talt om, som du vil knytte yderligere kommentarer til her på falderebet?

Tusind tak!

GAVEKORT

Part II: Papers

Paper A

Nissen, Nina Konstantin & Holm, Lotte:

“Literature review: Perceptions and management of body size among normal weight and moderately overweight people”

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Obesity Management

Literature review: perceptions and management of body size among normal weight and moderately overweight people

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Summary

Improved understanding of how normal weight and moderately overweight people manage their body weight and shape could be used to inform initiatives to prevent and treat obesity. This literature review offers a thorough appraisal of existing research into perceptions and management of own body size among normal weight and moderately overweight people. The studies reported in the 47 publications reviewed here address various themes based on different conceptualizations. The studies point out that normal weight and moderately overweight people are much concerned about their body size, but huge discrepancies are found between their own perceptions and study categorizations. The studies also indicate that normal weight and moderately overweight people are actively engaged in managing their body size through numerous managing strategies, and dieting is widespread. Together the studies do not form a unified and coherent research field, and there is a bias towards North American study populations. Methodological problems were identified in some publications, raising questions about generalizability of the findings. Moreover, only few studies give deeper insight into the specific perceptions and actions. Repeated studies are needed in broader and more differentiated geographical, social and cultural contexts, and longitudinal studies and more in-depth explorations are especially needed.

Keywords: Body weight, literature review, weight management, weight perception.

obesity reviews (2015) **16**, 150–160

Introduction

Obesity is often referred to as a 'lifestyle' disease to indicate that it is a condition that results from multiple practices making up the daily living habits of the individuals involved (e.g. 1). It follows that clinical trials and experiments investigating the physiological processes of obesity must be paralleled by studies taking more serious account of what we call a first-hand perspective. That is, we need to ask how people understand and experience their own body weight and shape, and which practices they may adopt in order to maintain or change this, for these are the decisive factors in whether or not a person develops overweight and obesity. Thus, in the search for effective strategies to prevent and treat obesity multiple research perspectives are called for (2).

A host of studies have investigated perceptions of own body size and motivations for changes among people classified as obese (e.g. 3–5). Those classified as underweight, especially adolescents diagnosed with anorexia or likewise, have equally received intensive study (6,7). But less attention has been given to people between these two extremes

– i.e. to those categorized as normal weight or moderately overweight. People in these weight categories make up a large and highly relevant group in the health promotion perspective, as they are either those who are successful in maintaining a healthy body size or, potentially, future members of the group of obese people. Learning more about whether and how people from this group actively seek to manage their body size, and about which practices they adopt successfully, or the opposite, ought to provide valuable insights for policies and interventions aiming at preventing obesity.

During our work in the field of sociology of food, we have encountered only a few studies focusing on healthy normal weight and/or moderately overweight adult people, and we have not identified any comprehensive literature reviews offering an overview of such studies (a few unsystematic reviews do exist; 8–10). A literature review with this focus would be valuable in gathering available knowledge and investigating whether conclusions can be drawn from the research that are useful for healthcare practice. Furthermore, a literature review should enable us to see whether the present state of knowledge in this field is adequate to identify areas needing further investigation.

Aims and objectives

The literature review presented here aims to provide a critical summary of existing published work on perceptions and management of own body size among normal weight and moderately overweight (NWMO) people. The review process was conducted on the basis of two objectives. *First*, we wanted to look into the published work on perceptions of own body weight and shape, defined in terms of the ideals and evaluation practices used to assess own weight and shape, among NWMO people. *Second*, we wanted to look into the published work on weight management, defined as self-initiated practices used to change or maintain current body weight or shape. The review process concentrated on the first-hand perspective as it looked at the personal evaluations and practices of people categorized as NWMO. We used the broader term 'body size' as a collective term including other related, relevant concepts such as body weight and body shape.

Method

The review deployed a procedure for systematic literature reviews similar to that outlined by Rhoades (11) and used by Lachal *et al*. (12). Our procedure involved the following steps:

Step 1: Definition of aim and objectives of the review
Step 2: Search of literature
Step 3: Selection of relevant literature
Step 4: Review of the included articles
Step 5: Description and evaluation of methods used in the included publications
Step 6: Presentation of results, i.e. thematic analysis of publications
Step 7: Discussion of results and whether these afford adequate knowledge
Step 9: Conclusions on the quality and scope of the literature reviewed and the review itself

Search of the literature

Relevant studies were expected to be found within social science, as well as in the health and life sciences. Therefore, literature searches were conducted in two databases that cover a broad spectrum of disciplines: PubMed (Ovid) and Web of Science (Web of Knowledge, Social Science Citation Index). Searches included keywords (see Table 1) chosen on the basis of initial readings and searches.

A set of inclusion criteria were defined and used in the set-up of the searches (see Table 1). Intervention studies were excluded because here strategies for change are typically not self-initiated. Studies of children, adolescents and students were excluded because of the special circumstances attach to these groups. To limit the number of irrelevant publications, searches were made only in publication titles. Furthermore, searches were limited to work published from 1990 and onwards. The searches were conducted in July 2013.

In addition to the database searches, potentially relevant publications found in other sources, such as reference lists in publications and conference presentations, were included in the literature review.

Selection process

The selection process is illustrated in Fig. 1. To facilitate the review process a matrix was constructed with 34 issues according to which each publication was subsequently evaluated. Many publications were excluded because they dealt with adolescents or students. Eventually, this sifting process resulted in 47 publications to be included in the final review.

Review process and data analysis

The review process started, then, with the matrix of 34 issues and the 47 included papers. This helped produce an overview of the studies and enabled us to compare study aims, designs and results. It also helped us to organize the development of themes and sub-themes relevant to our two research objectives. On the basis of this systematization and comparison, conclusions could be drawn about the main characteristics of the existing studies and research lacunae within this field.

Table 1 Keywords in searches and inclusion criteria

Keywords in searches
'weight management', 'managing weight', 'weight perception', 'perceive? weight', 'weight assessment, weight norm', 'weight loss behav*', 'weight loss strateg*', 'weight loss pract*', 'changing diet?', 'dietary change?'
Inclusion criteria
1. Publications must report empirical studies of normal weight and/or moderately overweight individuals' own thoughts and initiatives regarding weight management and change. They must not report clinical trials or intervention studies involving external initiatives regarding weight management and change. Focus is on practices adopted by individuals, not on physiological health outcomes.
2. Publications must concern human adults, i.e. report research in which the majority of participants are 30–60 years old. Publications focusing on children, or adolescents (including students), or the elderly, or animals, are excluded.
3. Publications must report studies regarding broader parts of populations in Western cultures, not specific minority groups. Those focusing on non-Western countries or specific minority groups in Western societies, such as small ethnic minorities groups and patients with specific diseases, are excluded.
4. Publications must be written in English, Danish, Swedish or Norwegian.
5. Publications must have been published on 1 January 1990 or later (searches conducted July 2013).
6. Publications must report original empirical studies or present systematic reviews of these.

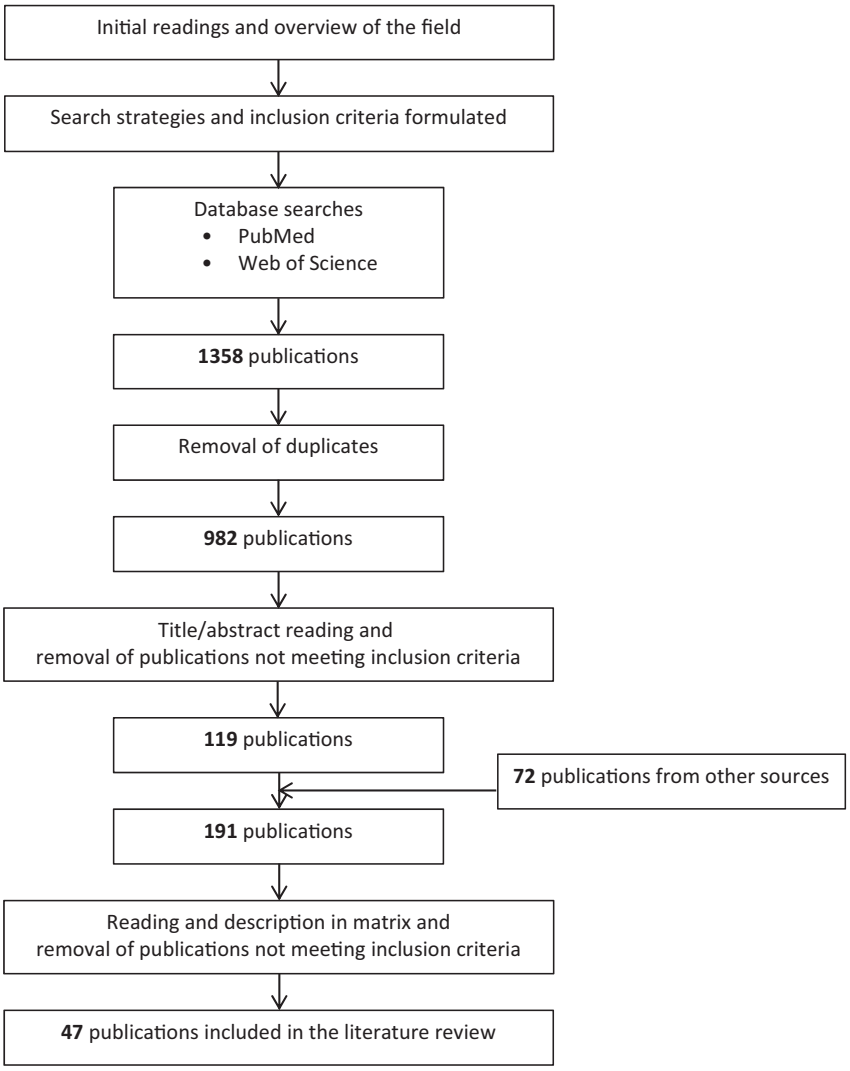

Figure 1 Flow chart of the process of selecting literature.

The methods and quality of the reviewed publications

All of the publications reviewed were original papers based on empirical studies and published in peer-reviewed journals. We did not exclude any publications on the basis of methodological problems because we wanted a full overview of the existing literature in the field that included a tentative evaluation of the quality of the research. A few of the publications matched the inclusion criteria only indirectly, but they were included in the review anyway. Some dealt with obese people, but also with normal weight and/or moderately overweight people (e.g. 13), and some studies focused on dietary changes made for many reasons of which changing size was only one (e.g. 14,15).

In this section we present an overview of the study designs and methods used in the publications reviewed, and we highlight problematic aspects. Supporting Information Table S1 (http://dx.doi.org/10.1111/obr.12231) describes the publications one by one, including summaries of the aims, key features of study designs and main findings.

Study designs

Of the 47 studies, 36 used quantitative study designs (13,16–46), nine used qualitative designs (15,47–54) and two used a combination of these methods (14,55).

With a few exceptions (17,19,23), the quantitative studies were cross-sectional surveys based on questionnaires and, in some studies, physical examinations. The most prevalent topic here was the NWMO people's own assessments and categorizations of body weight and/or shape. Some studies compared study participants' personal categorizations with physical examinations or self-reported height and weight. Several assessed the prevalence of various body size management practices. Some studies identified factors that influence body size management or estimated the relative incidence of various stages of change in the managing process. Many quantitative studies investigated socio-demographic differences in body size perceptions (13,16–46,56–59).

With the exception of one study, which deployed focus group discussions (52), the qualitative studies were based on individual semi-structured in-depth interviews. With few predefined categories, these studies explored how study participants perceived their own size and which strategies they adopted to change or maintain their body size. In general, the qualitative studies took a closer interest in informants' own experiences of, and feelings about, their body size (15,47–54).

The two studies that combined quantitative and qualitative methods made use of questionnaires and individual semi-structured interviews. The combination of methods was used to validate study results (14,55).

Study populations

Study populations varied with regard to size and other characteristics, and participants were recruited in many different ways. In some studies participants were randomly selected through statistical bureaus and various kinds of database. Some of these studies had national representative study populations (13,16–19,21,22,24,25,27,28,30, 31,35,38,43,45,46,57–59), whereas others did not (20,23,26,29,32–34,36,37,39–42,44,56). In other studies the study populations were recruited from specific sites or groups – e.g. work sites, waiting rooms in general practices, weight management groups and sports groups (21,26,32,34,39,40,44,51). Self-recruitment was also frequently used and was invited through media advertisements and notification in schools, sports clubs and weight management clubs (14,15,20,23,29,37,42,53–55). Finally, snowballing method was used in several studies (42,47–50).

Despite these variations, some shared problems in recruitment methods and population compositions were identified. A common problem was that sampling and recruitment procedures were not well described in the publications (e.g. 21,22,48). This creates uncertainty about the methods used, and therefore the quality, of the relevant studies. Further, several of the studies had low response rates (e.g. 21,36,41), which of course may bias data.

Unsystematic recruitment and self-recruitment could very likely lead to biases in the study samples with regard to social background and other traits. Although many of the studies did not aim to be statistically representative, biased study populations will clearly raise questions about external validity.

Questionnaires and interviewing techniques

In most of the quantitative publications the questionnaires and measures used were fairly well described, although more details would have been useful in some cases (13,14,16–46,55). The quantitative studies draw on self-constructed rather than standardized, validated measures (13,16–46). Also in the qualitative studies, the specific interviewing techniques and the analytical procedures used were in general well described (14,15,47–55). This allows investigative work to be duplicated; it also makes it possible to keep track of the way in which analytical themes are generated and to assess whether analytical procedures are valid.

Study origins

Of the reviewed publications 28 originated in the United States (13,14,18–21,23–29,32,34–38,41–44,47,48,51, 55,58), seven in the United Kingdom (40,49,50,53, 54,57,59), three in Canada (15,45,46), four in Australia (16,33,39,56) and one in each of Spain (30), Finland (52) and Denmark (17). Two studies were based in groups of European Union countries (22,31). It appears, then, that research in this field in Western countries is concentrated mostly in North America.

Results

We present, first, results on body size perception and then we turn to results on the management of body size. Within the two sections on these themes, we distinguish sub-themes derived from the review process. Some studies are mentioned several times because they relate to more than one theme or sub-theme.

Perceptions of own body size

Altogether, 24 publications considered the perceptions NWMO people have of their own body size. In the following we scrutinize their results within two identified sub-themes: 'Overall perception and categorization' and 'Ideals and (dis)satisfaction'.

Overall perception and categorization

Thirteen publications looked at people's overall perceptions of their body size and/or compared their perceptions with study-derived categorizations based on height and weight data, the latter being either self-reported or derived from physical examinations conducted in the studies (19,24,25,27,31,33,38,43,46,56–59). In the publications, the terms used to describe this were 'weight perception', 'weight misperception', 'weight status', 'perceived weight status' and 'body image perception'.

NWMO people's perception of their body size was found to be normally distributed (31,33). When compared with study-derived categorizations based on either self-reported data or physical examinations, discrepancies were found between the way study participants categorized themselves and the study-derived measures. A considerable proportion of normal weight individuals perceived themselves as overweight (19,24,25,27,38,43,46,56–59) while most people categorized as overweight perceived their weight accurately (46,58,59).

In all studies differences between genders were found. Women, on the one hand, would more often overestimate their weight category (58,59) and perceive themselves as overweight when study categorized as normal weight (19,24,25,38,56), and they would be more accurate than men in identifying themselves as overweight (46). Men, on the other hand, were found to more often perceive themselves as underweight when categorized as normal weight, and as having the right weight when study categorized as overweight (19,24,25,38,56,58,59).

Discrepancies between own and study-calculated categorization were also found to be related to race/ethnic minority status, body mass index (BMI), educational level and religion. Overestimation of own and other people's body size appeared to be greater among Caucasians, people with higher BMI, with higher income or higher levels of education (43,58), and among Jewish women (27). Underestimating own body size was more frequent among people with low levels of education, among racial/ethnic minorities (25), and among men and women with greater religious commitment (27).

Some studies indicate that weight perceptions have changed over time. The weight at which people perceived themselves as overweight has been found to increase dramatically from 1999 to 2007 (57), and the probability of categorizing oneself as overweight appeared to have declined especially among younger women and study-measured normal weight women as well as among study-measured overweight men (19).

Ideals and (dis)satisfaction

Twelve quantitative publications looked into the NWMO's body size ideals and degree of satisfaction with their current body. This was most often performed by asking study participants to choose their ideal weight in kilograms, their ideal weight category or their ideal silhouette (16,20,24,31–36,38,56,59). The terms used in the studies were 'definitions of ideal weight and overweight', 'body satisfaction', 'satisfaction', 'self-perception of overweight', 'perceptions of overweight', 'concerns about weight' and 'weight concern'.

Studies asking NWMO participants to choose their ideal as weight in kilograms, as weight category or as silhouette (16,20,24,31–36,38,56,59) found a huge discrepancy between current and ideal weight and shape. Dissatisfaction and concern with current weight and shape were widespread (20,31,33,59), and the majority of the NWMO people wanted to lose weight (31–36,38).

Weight ideals and satisfaction varied according to gender, race, age, education and study-categorized weight group. Most clearly, men and women had different ideal body images. The proportion wanting to lose weight was higher among women than men, and for both men and women this rose with increasing BMI (20,31–36,38). The average BMI at which women considered themselves to be at their ideal weight was significantly lower than that for men. By contrast, men defined overweight at a level higher than the pre-defined cut-off of 25 kg m^{-2} (59). For both men and women, the BMI defined as ideal and the BMI defined as overweight both increased with age and current weight (56). Women's ideals for their own figure were thinner than men's ideals for female figures, whereas men were more accurate in their assessment of male figures attractive to women (20).

People with misperception of own weight were more likely to identify their current weight as desired weight and almost all overweight or obese people with a correct perception wanted to lose weight (24).

Psychological distress in childhood and adulthood was shown to influence weight perception, and overweight and

underweight perceptions were associated with medium and high psychological distress (16).

Management of own body size

Altogether, 41 of the reviewed publications investigated self-initiated practices for the management of own weight and shape among NWMO people. In the following we scrutinize their results within five identified sub-themes: 'Motivations and readiness', 'Frequency of attempts to manage body size', 'Specific management practices', 'Social support and significant others' and finally 'Expectations, barriers and experiences'.

Motivations and readiness

Ten publications reported on what was termed people's 'motivation' and 'readiness' to try to change or maintain their current weight or shape, including factors that 'trigger' this and 'correlate with' this (13,21,22,26, 30,39,40,44,48,50).

Some explorative studies observed that the process of weight management changes over a person's lifetime. NWMO people were found to move through five phases characterized by different degrees of motivation, namely, appraising, deemphasizing, mobilizing, enacting and maintaining (48). Moreover, dietary changes were found to be initiated both by factors that evolve gradually over a lifetime, such as ageing and changes in nutritional zeitgeist, and by factors dictated by more immediate circumstances, such as change of job, change in financial circumstances, moving in with a partner and moving to another country (40,50).

Other studies had a more deductive approach, focusing on predefined processes of change, and some were inspired by or testing theoretical models, such as the stages of change model (21,22,26,30,44). Remarkable geographic and socioeconomic differences were identified. More men and persons from Southern Europe were in what was labelled the 'precontemplation' stage, and more women, younger people, people with higher education and Scandinavians were in the so-called maintenance stage (21,22,30). One study found that the relationship between stage of change and diet was, in itself, so strong that it was in large part independent of the individuals' demographic characteristics (26). Also, it was found that change from the action to the maintenance stage of change was better predicted by commitment to health than by belief about the importance of changing dietary behaviours and confidence in ability to change dietary behaviours (44).

Other studies investigated the correlation between single factors and the individual's motivations and readiness for body change. A correlation was found between health-related quality of life (HRQOL) and trying to change weight, to the effect that moderately poor HRQOL among men and better HRQOL among women were associated with trying to lose weight (13). Finally, motivation appeared to play a major role for participation in self-initiated weight loss activities in comparison with anxiety and self-efficacy, which appeared to play no significant roles (39).

Frequency of attempts to manage body size

Fourteen studies measured the frequency of previous and current attempts to change or maintain weight or shape. The attempts to manage body size were in the studies termed 'trying to lose weight', 'pursuing weight control', 'attempts to lose weight', 'weight management attempts', 'slimming behavior, 'dieting' and 'changing diet' (17,18,24,27–29,32,35,36,38,40,45,56,59).

All studies found a large proportion of NWMO reporting that they either sometimes or nearly always made an effort to manage their body size (17,18,24,32, 40,45,56,59).

The proportion of NWMO people trying to reduce their weight was estimated to be between 25 and 65% (17,18,28,32,35,36,38,45,59), and one study found that this proportion had not changed during the period 1992–1998 (17). Again, the findings revealed substantial socio-demographic differences in gender, age, education, BMI, ethnicity, race and smoking (17,18,24,28,35,36,38,45). Most clearly, the odds of trying to lose weight increased with increasing BMI and education; more women than men were trying to lose weight, and women tried to lose weight at a lower BMI than men did (17,18,24,28,32,35,36,38,45). No relationship was found between religion and weight management behaviour (27).

In studies focusing on attempts to maintain weight rather than weight loss, the proportion of NWMO people who were actively making an effort to maintain their current weight was estimated to be 25 and 35%, respectively (35,36). It was found that the prevalence of trying not to gain weight was much higher among overweight people with a correct perception of own weight than among those with a misperception (24). Further, among overweight with a misperception racial and ethnic differences were identified as non-Hispanic African Americans and Mexican Americans were less likely to try not to gain weight than non-Hispanic Caucasians (24).

One study reported on the proportion of NWMO people trying to gain weight and found this to be 3% (36). Also, a few studies found that the proportion of people reporting that they were not to doing anything to manage their weight was around 10% (29,36).

Specific management practices

Specific practices adopted by NWMO people when they attempt to maintain or change their current weight and shape were investigated in 18 publications. In the studies,

the specific practices were termed 'weight loss practices', 'strategies for slimming', 'slimming methods', 'dietary fat reduction strategies', 'weight loss strategies', 'weight management strategies', 'weight control behaviour', 'weight management behaviours', 'strategies for controlling weight', 'weight loss experiences' and 'behavioural strategies for weight control' (13,14,17,18,28,29,32–35,37,38,45,52–55,59).

On an overall level and in contrast to those without success, successful weight maintainers were monitoring their weight and were aware of alarm signals that triggered immediate action. They made use of several behavioural practices for weight control, including relatively small adjustments to diet and/or exercise, and they also had practices for coping with interruptions to their normal eating and activity patterns (54).

Many studies estimated the prevalence of different specific weight management practices with a deductive approach using predefined categories of management practices. A general finding was that dieting was the most prevalent weight management practice (17,18,28,29,32,33,35,38,59). Physical activity showed to be a little less common as weight management practice, and the combination of dieting and physical activity considerably less used, but findings about this were mixed (13,18,33,35,38). Some of the deductive studies identified socioeconomic differences in the weight management practices connected with gender, education, race/ethnicity, smoking, BMI and HRQOL (17,18,28,33). Although this is not agreed upon in all studies (17), the most common difference was that more women used dieting as weight management practice, whereas more men preferred physical activity or some other kind of practice (18,28,32,33,59).

Studies of body management practices based on an explorative approach with open questions aiming to identify many different strategies also found dieting followed by physical activity to be the most common practice in weight management (14,37,54,55). In these studies a range of approaches to dieting and being physically active were specified, as well as how these approaches were variously combined (14,37,54,55). Also, it was revealed how drug use for some women was perceived as an easy and guaranteed way to manage weight as the drugs helped them to feel in control of their lives and their weight (53). Food products perceived as suitable for weight management were found to be identified via complex sets of generalized food ideals rather than only via simple measures of energy content and nutrients (52).

Physicians are found to influence management practices in that 24% of moderately overweight and 12% of non-overweight adults had discussed weight with their current physicians (34,45), and 18% of the moderately overweight people and 5% of the non-overweight people reported to have received advise from their physician to lose weight without them specifically asking for it (45). What patients most wanted from their physicians was (i) dietary advice; (ii) help with setting realistic weight goals and (iii) exercise recommendations (34).

Social support and significant others

Four publications examined the impact of what they termed as 'significant others' and 'social support' on the process of body size management (15,32,41,42).

It was found that significant others more often played a positive role than neutral or negative roles in response to self-initiated dietary changes (15). Men experienced more social support for dieting whereas women experienced more social support for physical activity (32). Studies of self-recruited romantic couples' communication about weight management found that a partner's acceptance and challenge predicted, respectively, effectiveness in motivating healthy behaviour, eating and exercise self-efficacy, healthy eating behaviours, and level of body self-esteem (41,42).

Expectations, barriers and experiences

Six publications investigated in very different ways people's perceptions of the management process with regard to what was described as 'expectations', 'experiences' and 'barriers' (20,23,47,49,51,55).

Participants' notions of the realistic weight and shape they could obtain were found to be smaller than their current weight and shape, but larger than their ideals (20). Women considered greater weight loss to be realistic than men did (20) and women's definitions of successful weight management were found to differ from biomedical definitions (47). In the psychological process of trying to lose weight, a negotiation between the actual self and the potential self takes place, and this helps people to accept the outcome of the process (51).

Perceived barriers, in men, to starting to eat healthily was found to be practical constraints as well as a refusal to take on board the government's health messages, and a refusal to eat healthy foods because of their taste and inability to satisfy (49).

Studies looking retrospectively at experiences with attempts to change body size point in different directions. One study showed that despite people's intentions to get involved in more physical activity, and to eat more healthily, they had in many cases not succeeded with this a year later (23). However, another study found that despite subjective experiences of unsuccessful attempts to improve one's diet, dietary changes were in fact adopted and maintained over the years because multiple earlier attempts at radical dietary change were in fact not failures, but merely adoptions of small dietary changes (55).

Discussion

After systematic search and selection of literature, we reviewed 47 publications addressing perceptions and management of own body weight and shape among NWMO people.

Perception of own weight and shape was investigated in 24 of the studies. Huge discrepancies were found in many studies between own perceptions and study-derived measures, and also between current and ideal weight and shape, leading to a widely shared desire to lose weight. Gender differences were found in most studies: women generally placed themselves in heavier weight categories, and men placed themselves in lighter categories, than study-derived categorizations, and women's body ideals for both men and women were smaller than men's. As for other socio-demographic factors, findings varied, but some studies indicate that a social gradient may be at play, in that higher social strata defined by income, education and race/ethnicity were more prone to overestimate own weight and shape than were lower social strata. This needs to be investigated more systematically in future research.

Management of own body weight and shape was investigated in 41 studies. Various phases, or stages, in the process of weight management were identified, and the distribution of study participants across these specific stages was estimated. Interestingly, a few studies suggest that national populations in Europe are distributed very differently across stages of change. This underlines that weight management practices are elements in wider social and cultural traits, a fact that is also underlined by one study introducing 'changes in zeitgeist' as an explanatory factor for weight management. Systematic comparative analyses based on representative samples in various geographical areas would generate more information about this and provide a valuable knowledgebase for the development of culture-sensitive health policies.

Most studies of NWMO people were conducted in Anglo-Saxon countries and they found that a large proportion of NWMO people have actually made an effort to try to manage their own size. Socio-demographic variation was found to be significant in connection with body size management too, and gender differences were prominent, with women being more prone to engage in weight loss than men.

Dieting appeared to be the most common method of managing own weight and shape, followed (with less clear results) by physical activity and a combination of the two. Other potentially relevant weight management practices such as limiting alcohol intake or maintaining healthy sleep patterns were not addressed in any of the studies. Whether this reflects that these practices are not understood as relevant for body size among NWMO people is unclear.

On the individual level, attempts to lose weight were linked with HRQOL and motivation as well as with external events. HRQOL appeared to play a different role for men and women, and research into how gendered body ideals relate to conceptualizations of health among men and women in different social groups is an important topic for future research.

Explorative studies identified many variants of management practice and complex understandings of which food products would be useful in weight management. Successful weight maintainers – unlike those who were unsuccessful – appeared to be good at monitoring their weight and to use alarm signals that triggered immediate action.

Differences were found between ideal and realistic expectations of weight loss, but also that processes of attempted weight loss are linked to psychological negotiations about understanding of self. Also it is suggested that even attempts that are perceived as failures may in fact in retrospect appear to form small steps of positive changes. Studies addressing such issues are few, and more are clearly needed. Following this, discussions are needed whether understandings of weight management should be re-conceptualized. This should include more studies of the role of various kinds of social support, and which barriers are important to weight management, topics that are scarcely researched with respect to NWMO individuals.

The publications reviewed here represent multiple disciplines and methodologies, with different conceptualizations and research themes. As such they do not form a unified and coherent field of research and the findings in this research can only be summarized tentatively and with caution. In general most findings need to be confirmed in more studies. Especially there is a need for studies from a wider range of geographical areas. Currently, the research is geographically biased as 31 of the 47 studies are from North America, 10 from other Anglo-Saxon countries and only five from other European countries.

The 47 studies employ a blend of quantitative and qualitative methods. In principle, statistical generalization of the prevalence of well-defined phenomena and in-depth exploration of the quality and characteristics of phenomena are both valuable. However, future research should avoid self-recruitment and prioritize to use representative samples of studied populations in order to allow generalization of results and avoid the risk of selection bias. Thematically speaking, there were many studies of the way participants' ideals, evaluations and practices comply with either study-derived measures or recommended practices for body size management. This is valuable in identifying the scope of problem areas of importance in obesity policy, and in describing the social and cultural impact of the discourse on obesity in the wider population. But if we are to address problems with lay ideals and evaluations of own body size, more knowledge is needed about the normative and social rationales underlying such ideals and evaluations.

A few qualitative studies more openly allowed study participants to speak in their own voice and offered in-depth understanding of specific body size management practices. More and improved knowledge of the specific practices involved in, for example, 'dieting' or 'physical activity' and other potentially relevant management practices is needed, as is a better understanding of how and why various body size management practices emerge and develop in different social contexts.

The way in which body size is perceived and managed by people depends on the larger social and cultural context in which they live. As contexts change when societies change, such practices arguably change too. Two studies suggested that normative evaluations of overweight and obesity have changed over time (19,57). This could have a serious impact on obesity policy, and so more research about this is needed.

Strengths and weaknesses

In examining the 47 publications reviewed above, the present paper may not be comprehensive. Much research in social science and health and life sciences has been omitted. The quantity of literature derived from the first searches was huge, although it is also true that many of the identified publications appeared not to be relevant. Reformulation and refinement of the keywords used in the search process would presumably have resulted in a greater number of relevant publications. For resource reasons, we limited the research databases searched to two. Both were, however, very large and with a broad coverage.

To our knowledge this is the first review of research addressing perceptions and managing practices of body size among NWMO people. The review can be characterized as both systematic and wide ranging. It offers a valuable overview of the research literature within this field.

Conclusions and recommendations

This review points out main tendencies, but also discrepancies, contradictions and problems within research into people's perceptions of, and practices for managing, body size.

In general, studies agreed that NWMO people are much concerned about their weight and shape, but huge discrepancies are found in their own perceptions versus study categorizations of their bodies. The NWMO people are actively engaged in managing their weight and shape as numerous managing strategies exist and some are widespread.

Nevertheless, the research field here is characterized by somewhat scattered studies of varying, and sometimes unclear, methodological quality, and a strong bias towards North America. Also, few of the studies highlight differentiated and specific understandings and practices adopted by people who succeed in managing their body weight.

Future research should also cover wider and more differentiated geographical, social and cultural contexts. There is a need especially for new studies addressing the way perceptions and practices vary between and have changed in societies. There is also a need for more in-depth explorations of how weight management perceptions and practices emerge, develop and are used by people at first hand.

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Conflict of interest statement

No conflict of interest statement.

Supporting information

Additional Supporting Information may be found in the online version of this article, http://dx.doi.org/10.1111/obr.12231

Table S1. Descriptions of publications and summaries of their main results according to subthemes in the perception and management of body size.

References

1. Rössner S. Obesity: the disease of the twenty first century. *Int J Obes Relat Metab Disord* 2002; **26**(Suppl. 4): S2–S4.
2. EASO. Report from the briefing on obesity research: the obesity epidemic in Europe – societal challenge and research needs. EASO, 2012.
3. Smith L, Holm L. Embodied experiences associated with obesity and the management of body weight – gender and social differences. *J Food Res* 2012; **1**: 7–16.
4. Befort AC, Thomas JL, Daley CM, Rhode PC, Ahluwalia JS. Perceptions and beliefs about body size, weight, and weight loss among obese African American women: a qualitative inquiry. *Health Educ Behav* 2008; **35**: 410–426.
5. Christiansen B, Borge L, Fagermoen MS. Understanding everyday life of morbidly obese adults – habits and body image. *Int J Qual Stud Health Well-being* 2012; **7**: 17255.
6. Chia SC. Third-person perceptions about idealized body image and weight-loss behavior. *Journalism Mass Comm Q* 2007; **84**: 677–694.
7. Malinauskas BM, Raedeke TD, Aeby VG, Smith JL, Dallas MB. Dieting practices, weight perceptions, and body composition: a comparison of normal weight, overweight, and obese college females. *Nutr J* 2006; **5**: 11.
8. Dennis KE. Weight management in women. *Nurs Clin North Am* 2004; **39**: 231–241.
9. Polivy J, Herman P. Is the body the self? Women and body image. *Coll Antropol* 2007; **31**: 63–67.
10. Rodin J. Cultural and psychological determinants of weight concerns. *Ann Intern Med* 1993; **119**: 643–645.

11. Rhoades EA. Literature reviews. *Volta Rev* 2011; **111**: 61–71.
12. Lachal J, Orri M, Speranza M *et al*. Qualitative studies among obese children and adolescents: a systematic review of the literature. *Obes Rev* 2013; **14**: 351–368.
13. Bish CL, Blanck HM, Maynard LM, Serdula MK, Thompson NJ, Khan LK. Health-related quality of life and weight loss practices among overweight and obese US adults, 2003 Behavioral Risk Factor Surveillance System. *MedGenMed* 2007; **9**: 35.
14. Keenan DP, Achterberg C, Kris-Etherton PM, Abusabha R, von Eye A. Use of qualitative and quantitative methods to define behavioral fat-reduction strategies and their relationship to dietary fat reduction in the patterns of dietary change study. *J Am Diet Assoc* 1996; **96**: 1245–1250.
15. Paisley J, Beanlands H, Goldman J, Evers S, Chappell J. Dietary change: what are the responses and roles of significant others? *J Nutr Educ Behav* 2008; **40**: 80–88.
16. Atlantis E, Ball K. Association between weight perception and psychological distress. *Int J Obes* 2008; **32**: 715–721.
17. Bendixen H, Madsen J, Bay-Hansen D *et al*. An observational study of slimming behavior in Denmark in 1992 and 1998. *Obes Res* 2002; **10**: 911–922.
18. Bish CL, Blanck HM, Serdula MK, Marcus M, Kohl HW, Khan LK. Diet and physical activity behaviors among Americans trying to lose weight: 2000 Behavioral Risk Factor Surveillance System. *Obes Res* 2005; **13**: 596–607.
19. Burke MA, Heiland FW, Nadler CM. From 'overweight' to 'about right': evidence of a generational shift in body weight norms. *Obesity* 2010; **18**: 1226–1234.
20. Cachelin FM, Striegel-Moore RH, Elder KA. Realistic weight perception and body size assessment in a racially diverse community sample of dieters. *Obes Res* 1998; **6**: 62–68.
21. Curry SJ, Kristal AR, Bowen DJ. An application of the stage model of behavior change to dietary fat reduction. *Health Educ Res* 1992; **7**: 97–105.
22. de Graaf C, Van der Gaag M, Kafatos A, Lennernas M, Kearney JM. Stages of dietary change among nationally-representative samples of adults in the European Union. *Eur J Clin Nutr* 1997; **51** (Suppl. 2): S47–S56.
23. DiBonaventura M, Chapman GB. The effect of barrier underestimation on weight management and exercise change. *Psychol Health Med* 2008; **13**: 111–122.
24. Dorsey R, Eberhardt M, Ogden C. Racial and ethnic differences in weight management behavior by weight perception status. *Ethn Dis* 2009; **20**: 244–250.
25. Dorsey RR, Eberhardt MS, Ogden CL. Racial/ethnic differences in weight perception. *Obesity* 2009; **17**: 790–795.
26. Glanz K, Patterson RE, Kristal AR *et al*. Stages of change in adopting healthy diets: fat, fiber, and correlates of nutrient intake. *Health Educ Q* 1994; **21**: 499–519.
27. Kim KH. Religion, weight perception, and weight control behavior. *Eat Behav* 2007; **8**: 121–131.
28. Kruger J, Galuska DA, Serdula MK, Jones DA. Attempting to lose weight: specific practices among US adults. *Am J Prev Med* 2004; **26**: 402–406.
29. Lanza ST, Savage JS, Birch LL. Identification and prediction of latent classes of weight-loss strategies among women. *Obesity* 2010; **18**: 833–840.
30. Lopez-Azpiazu I, Martinez-Gonzalez MA, Leon-Mateos A, Kearney J, Gibney M, Martinez JA. Stages of dietary change and nutrition attitudes in the Spanish population. *Public Health* 2000; **114**: 183–189.
31. McElhone S, Kearney JM, Giachetti I, Zunft HJ, Martinez JA. Body image perception in relation to recent weight changes and strategies for weight loss in a nationally representative sample in the European Union. *Public Health Nutr* 1999; **2**: 143–151.
32. Nothwehr F, Snetselaar L, Wu H. Weight management strategies reported by rural men and women in Iowa. *J Nutr Educ Behav* 2006; **38**: 249–253.
33. Paxton SJ, Sculthorpe A, Gibbons K. Weight-loss strategies and beliefs in high and low socioeconomic areas of Melbourne. *Aust J Public Health* 1994; **18**: 412–417.
34. Potter MB, Vu JD, Croughan-Minihane M. Weight management: what patients want from their primary care physicians. *J Fam Pract* 2001; **50**: 513–518.
35. Serdula MK, Mokdad AH, Williamson DF, Galuska DA, Mendlein JM, Heath GW. Prevalence of attempting weight loss and strategies for controlling weight. *JAMA* 1999; **282**: 1353–1358.
36. Thompson SH, Sargent RG. Black and white women's weight-related attitudes and parental criticism of their childhood appearance. *Women Health* 2000; **30**: 77–92.
37. Timmerman GM, Earvolino-Ramirez M. Strategies for and barriers to managing weight when eating at restaurants. *Prev Chronic Dis* 2010; **7**: A60.
38. Yaemsiri S, Slining MM, Agarwal SK. Perceived weight status, overweight diagnosis, and weight control among US adults. The NHANES 2003–2008 study. *Int J Obes (Lond)*; **35**: 1063–1070.
39. Butler P, Mellor D. Role of personal factors in women's self-reported weight management behaviour. *Public Health* 2006; **120**: 383–392.
40. Chapman K, Ogden J. The prevalence of mechanisms of dietary change in a community sample. *Appetite* 2010; **55**: 447–453.
41. Dailey RM, Richards AA, Romo LK. Communication with significant others about weight management: the role of confirmation in weight management attitudes and behaviors. *Commun Res* 2010; **37**: 644–673.
42. Dailey RM, Romo LK, Thompson CM. Confirmation in couples' communication about weight management: an analysis of how both partners contribute to individuals' health behaviors and conversational outcomes. *Hum Commun Res* 2011; **37**: 553–582.
43. Hendley Y, Zhao L, Coverson DL *et al*. Differences in weight perception among blacks and whites. *J Womens Health (Larchmt)* 2011; **20**: 1805–1811.
44. Kelly CW. Commitment to health: a predictor of dietary change. *J Clin Nurs* 2011; **20**: 2830–2836.
45. Kirk SF, Tytus R, Tsuyuki RT, Sharma AM. Weight management experiences of overweight and obese Canadian adults: findings from a national survey. *Chronic Dis Can* 2012; **32**: 63–69.
46. Linder J, McLaren L, Siou GL, Csizmadi I, Robson PJ. The epidemiology of weight perception: perceived versus self-reported actual weight status among Albertan adults. *Can J Public Health* 2010; **101**: 56–60.
47. Allan JD. A biomedical and feminist perspective on women's experiences with weight management. *West J Nurs Res* 1994; **16**: 524–543.
48. Allan JD. To lose, to maintain, to ignore: weight management among women. *Health Care Women Int* 1991; **12**: 223–225.
49. Gough B, Conner MT. Barriers to healthy eating amongst men: a qualitative analysis. *Soc Sci Med* 2006; **62**: 387–395.
50. Chapman K, Ogden J. How do people change their diet? An exploration into mechanisms of dietary change. *J Health Psychol* 2009; **14**: 1229–1242.
51. Granberg E. 'Is that all there is?' Possible selves, self-change, and weight loss. *Soc Psychol Q* 2006; **69**: 109–126.

52. Niva M, Jauho M, Makela J. 'If I drink it anyway, then I rather take the light one'. Appropriation of foods and drinks designed for weight management among middle-aged and elderly Finns. *Appetite* 2013; **64**: 12–19.
53. Mendieta-Tan A, Hulbert-Williams L, Nicholls W. Women's experiences of using drugs in weight management. An interpretative phenomenological analysis. *Appetite* 2013; **60**: 220–225.
54. Chambers JA, Swanson V. Stories of weight management: factors associated with successful and unsuccessful weight maintenance. *Br J Health Psychol* 2012; **17**: 223–243.
55. Abusabha R, Hsieh KH, Achterberg C. Dietary fat reduction strategies used by a group of adults aged 50 years and older. *J Am Diet Assoc* 2001; **101**: 1024–1030.
56. Crawford D, Campbell K. Lay definitions of ideal weight and overweight. *Int J Obes Relat Metab Disord* 1999; **23**: 738–745.
57. Johnson F, Cooke L, Croker H, Wardle J. Changing perceptions of weight in Great Britain: comparison of two population surveys. *BMJ* 2008; **337**: a494.
58. Paeratakul S, White MA, Williamson DA, Ryan DH, Bray GA. Sex, race/ethnicity, socioeconomic status, and BMI in relation to self-perception of overweight. *Obes Res* 2002; **10**: 345–350.
59. Wardle J, Johnson F. Weight and dieting: examining levels of weight concern in British adults. *Int J Obes Relat Metab Disord* 2002; **26**: 1144–1149.

Table S1 Descriptions of publications and summaries of their main results according to subthemes in the perception and management of body size

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Abusabha, Hsieh and Achterberg (2001) (55) Dietary fat reduction strategies used by a group of adults aged 50 years and older *Journal of the American Dietetic Association*	To investigate the fat reduction strategies used by a group of older adults who successfully made and maintained dietary changes for 5 years or longer.	*Quantitative and qualitative* Questionnaire and in-person qualitative interviews with time line drawing	*N* = 65 Individuals who believed they had been making substantial dietary changes to decrease fat in their diet for at least 5 years, USA Self-recruited via radio and television announcements and newspaper advertisements	*Specific management practices:* Five fat reduction strategies with 63 food changes were identified: 'increase summer fruits', 'increase vegetables and grains', 'decrease recreational foods', 'decrease cooking fat' and 'use of fat-modified foods'. *Expectations, barriers and experiences:* Decrease in fat intake happened gradually at different time points in participants lives and over a long period of time. Despite subjective experiences of unsuccessful attempts to improve their diets, dietary changes were adopted and maintained by participants over the years.
Allan (1991) (48) To lose, to maintain, to ignore: weight management among women *Health Care Women International*	To describe the process of weight management and factors influencing this process.	*Qualitative* Ethnographic interviews Part of a larger cultural–ecological study of Caucasian women	*N* = 37 Middle-class and working-class Caucasian women, normal weight to moderately obese, USA Combination of snowball and theoretical sampling	*Motivations and readiness:* Five stages were identified through which the interviewed women moved, repeatedly, when they managed weight: 'appraising', 'de-emphasizing', 'mobilizing', 'enacting' and 'maintaining'. *Specific management practices:* Each stage consisted of multiple processes characterized by the use of personally developed strategies. For example, the stage 'enacting' included 'dieting' (skipping meals, reducing high-calorie foods and exercising) and 'changing lifestyle' (new eating patterns and new lifestyle).
Allan (1994) (47) A biomedical and feminist perspective on women's experiences with weight management *Western Journal of Nursing Research*	To describe women's successful and unsuccessful experiences with weight management over time using biomedical definitions for comparison.	*Qualitative* Ethnographic interviews with a feminist approach and anthropometric measurements	*N* = 20 Middle-class and working-class Caucasian women, normal weight to moderately obese, USA Recruited among participants in the study reported by Allan, 1991	*Expectations, barriers and experiences:* The re-interviewed women's definitions of successful weight management diverged from biomedical definitions and could be categorized into three perspectives: 'biomedical' (embodying the cultural ideal of thinness by adhering to an underweight weight norm), 'reframed normal weight' (rejecting biomedical weight norms and creating their own norms) and 'holistic' (using a broader health-focused definition of successful weight management such as eating and exercising for health and well-being and not for weight loss or appearance).
Atlantis and Ball (2008) (16) Association between weight perception and psychological distress *International Journal of Obesity*	To determine whether weight status and weight perceptions are independently associated with psychological distress.	*Quantitative* Cross-sectional study Questionnaire and self-reported height and weight Data from Australian National Health Survey 2004–2005	*N* = 17 253 Residents of sampled private dwellings, 18 years and older, Australia Recruitment through bureau of statistics. Nationally representative data	*Ideals and (dis)satisfaction:* Perceived overweight and underweight rather than study-assessed weight status were associated with medium and high psychological distress. No variance associated with gender, education or alcohol consumption was found.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Bendixen, Madsen, Bay-Hansen, Boesen, Ovesen, Bartels and Astrup (2002) (17) An observational study of slimming behavior in Denmark in 1992 and 1998 *Obesity Research*	To describe how frequent weight loss attempts are made, the methods used to achieve weight loss and the extent to which the outcome is positive.	*Quantitative* Longitudinal study Telephone interviews, same questionnaire used in 1992 and 1998	*N* = 2446 Representative sample of adults, 17 years and over, Denmark Selected randomly via social security numbers	*Frequency of attempts to manage body size:* 61% of women and 32% of men had attempted weight loss at least once in their lifetime. Slimming was more prevalent among younger subjects and the prevalence increased with increasing BMI. The proportion of subjects who had attempted weight loss did not change from 1992 to 1998. *Specific management practices:* Dieting was the most used slimming method followed by increased exercise, physician supervision, over-the-counter pills or meal replacements, and other methods. From 1992 to 1998 fewer subjects chose dieting and over-the-counter pills or meals replacements and more chose physician supervision. The prevalence of increased exercise as slimming method did not change over the period. Socio-demographic differences were found in the choice of slimming method.
Bish, Blanck, Serdula, Marcus, Kohl and Khan (2005) (18) Diet and physical activity behaviors among Americans trying to lose weight: 2000 Behavioral Risk Factor Surveillance System *Obesity Research*	To examine the prevalence and correlates of efforts to lose weight among U.S. adults, to describe weight loss strategies and to assess attainment of recommendations for weight control.	*Quantitative* Cross-sectional study State-based survey with telephone interview. Part of BRFSS 2000	*N* = 184 450 Non-institutionalized residents, 18 years and older, USA Independent probability sample	*Frequency of attempts to manage body size:* Results showed that 46% of the participating women and 33% of the participating men were currently trying to lose weight. Women reported trying to lose weight at a lower BMI than men, and the odds of trying to lose weight rose as years of education increased. Receipt of medical advice to lose weight was highly associated with trying to lose weight. *Specific management practices:* Approximately half of participants reported using dieting in the form of reduced calorie intake, and two-thirds reported using physical activity as weight loss strategies. Only one-fifth of the individuals trying to lose weight used a combination of reduced calories and the recommended level of physical activity. Both sexes used similar weight loss strategies. Individuals with low education were least likely to use the recommended strategies.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Bish, Blanck, Maynard, Serdula, Thompson and Khan (2007) (13) Health-related quality of life and weight loss practices among overweight and obese US adults, 2003 Behavioral Risk Factor Surveillance System *Medscape General Medicine*	To examine the prevalence of HRQOL measures and their association with independent moderators of weight loss practices among overweight and obese men and women.	*Quantitative* Cross-sectional study State-based survey with telephone interview. Part of BRFSS 2003	*N* = 264 684 Non-institutionalized residents, 18 years and older, USA Independent probability sample	*Motivations and readiness:* HRQOL was differently associated with trying to lose weight for men and women. Moderate HRQOL among men and better HRQOL among women were associated with trying to lose weight. This suggests that men associate poorer HRQOL with their weight and seek to improve health or HRQOL by losing weight, whereas women need time and energy to change lifestyle. *Specific management practices:* Among those who were trying to lose weight approximately 60% of both men and women had reduced calorie intake as weight loss practice, and this practice was common regardless of HRQOL level. Physical activity as weight loss practice was less common (21–54%) and the relationship to HRQOL was not clear. The prevalence of combining fewer calories with physical activity was lower (15–35%).
Burke, Heiland and Nadler (2010) (19) From 'overweight' to 'about right': evidence of a generational shift in body weight norms *Obesity*	To trace differences in the self-perception of weight status in the United States between the most recent NHANES periods, and to test the hypothesis that secular increases in adult mean BMI, adult obesity and childhood obesity have contributed to changes over time in weight perceptions.	*Quantitative* Longitudinal study Interviews and physical examinations Data from NHANES	*N* = varying Non-institutionalized and non-pregnant civilians, 17–74 years old, USA Multistage probability sampling design	*Overall perception and categorization:* Comparing the two study periods, 1988–1994 and 1999–2004, it was found that the average probability of self-classifying as overweight, controlled for study-measured weight category and other factors, was significantly lower in the more recent survey. Among women the decline in the tendency to self-classify as overweight was concentrated in the 17–35 age range, and was more pronounced among women with normal BMI than those in the BMI category overweight. Among men, the shift away from feeling overweight was roughly equal across age groups, and overweight men exhibited a sharper decline in feeling overweight than normal weight men did.
Butler and Mellor (2006) (39) Role of personal factors in women's self-reported weight management behavior *Public Health*	To investigate the role of motivation, anxiety and self-efficacy in self-reported behaviour that may be important for weight loss and weight maintenance.	*Quantitative* Cross-sectional study Questionnaire	*N* = 129 Women, 18–81 years old, generally homemakers, Australia Recruited from two local community groups: one social group and one sports group	*Motivations and readiness:* Motivation was found to play a major role in participation in weight management activities such as exercise, low-fat diet and fastening, whereas anxiety and self-efficacy was found to play no significant role.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Cachelin, Striegel-Moore and Elder (1998) (20) Realistic weight perception and body size assessment in a racially diverse community sample of dieters *Obesity Research*	To investigate perceptions of realistic shape and weight, and how they compare with perceptions of current and ideal or attractive shape and weight, in a large community sample of female and male dieters of various ethnicities.	*Quantitative* Cross-sectional study Questionnaire Data (subsample) from a large survey on body image and eating behaviours	*N* = 1893 Individuals who had tried to lose weight within last 3 years, USA Recruitment among subscribers to *Consumer Reports*	*Ideals and (dis)satisfaction:* Women displayed less body satisfaction than men did, measured as the difference between choice of current and ideal body image figures. In general, women chose ideal body image figures that were smaller than men did, and women were inaccurate in their assessment of the female figure attractive to men, choosing body image figures that were considerably smaller than what men reported to prefer, whereas men were more accurate in their assessment of male figures attractive to women. In contrast to the outstanding gender differences, no significant differences with regard to race was found. *Expectations, barriers and experiences:* For both men and women, realistic shape and weight were smaller than current shape and weight, but larger than their ideal shape and weight. Women were more likely to consider greater weight loss to be realistic than men.
Chambers and Swanson (2012) (54) Stories of weight management: factors associated with successful and unsuccessful weight maintenance *British Journal of Health Psychology*	To investigate factors that can help in long-term weight maintenance.	*Qualitative* Semi-structured interviews	*N* = 20 Individuals 30–67 years old, no pregnancy or medications or medical conditions, UK Partly self-recruited through poster advertisements at a university and partly personally invited	*Specific practices for body size management:* Successful weight maintainers appeared to adopt a staged approach to weight management, including monitoring weight fluctuations and having a clear alarm signal for weight gain that triggers immediate action. Successful weight maintainers had several behavioural strategies for weight control involving relatively small adjustments to diet and/or exercise behaviour. They also had clear strategies for coping with lifestyle interruptions. In contrast, unsuccessful weight maintainers appeared to display negative cognitive factors, including erratic or inconsistent weight vigilance, failure to respond to warning signs of weight gain and failure to restrict weight unless in a positive mindset. Further, their coping strategies for weight gain or failed actions appeared to be poor.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Chapman and Ogden (2009) (50) How do people change their diet? An exploration into mechanisms of dietary change *Journal of Health Psychology*	To explore how people change their diet over the course of their lifespan and what factors facilitate this process.	*Qualitative* Semi-structured interviews	*N* = 20 Symmetrical group of 10 men and 10 women with varied life experiences and diverse social backgrounds, UK Recruited though a village sports club, using snowballing method	*Motivations and readiness:* The narratives of the participants indicated that dietary change can occur along an active and/or passive path, i.e. either with or without the individual's active involvement. Dietary changes along the active path required engagement in initiation and maintenance, and two mechanisms seemed to be important: 'accumulation of evidence' and 'trigger to action'. Thus, changes were generated by the individuals as they observed evidence that destabilized their well-being and self-perception, or as external events or internal thought processes triggered them to action. By contrast, dietary changes that occurred along the passive path might be either 'seamless', or influenced by age, financial circumstances, availability (etc.) or 'imposed' by a new job, or by migration (etc.).
Chapman and Ogden (2010) (40) The prevalence of mechanisms of dietary change in a community sample *Appetite*	To establish the prevalence of four mechanisms of dietary change in a community sample across the participants' lifespan: two mechanisms within an active path ('accumulation of evidence' and 'trigger to action') and two mechanisms within a passive path ('imposed change' and 'seamless change').	*Quantitative* Cross-sectional study	*N* = 404 Individuals over 18 years, UK Recruited in the waiting room of a general medical practice.	*Motivations and readiness:* *and* *Frequency of attempts to manage body size:* 99% of the participants declared they had made some dietary changes during their lifetime. Participants using the active path relied on different, self-regulatory styles. By contrast, the passive path changes reflected participants' flexible adaptation to the external environment and evolving personal health needs. Both kinds of change, on active and passive paths, occurred with almost equal frequency across participant's lifespan.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Crawford and Campbell (1999) (56) Lay definitions of ideal weight and overweight *International Journal of Obesity and Related Metabolic Disorders*	To describe lay definitions of ideal weight and overweight, to determine whether they correspond with current health definitions and to examine the relationship between lay definitions and weight control behaviour.	*Quantitative* Cross-sectional study Self-reported and study-measured height and weight, and questionnaire in clinics Part of a cardiovascular risk factor screening study	*N* = 1342 Individuals aged 18 years and older, Australia Random selection from federal electoral rolls	*Overall perception and categorization: and Ideals and (dis)satisfaction:* The average BMI at which women considered themselves to be overweight was well within the acceptable BMI range and significantly lower than that for men. A majority of men defined overweight at a level higher than the current cut-off of 25 kg m^{-2}. The BMI at which women considered themselves to be at their ideal weight was significantly lower than that for men. For both men and women, the BMI defined as ideal and the BMI defined as overweight both increased with age and with current weight. Thus, lay definitions of ideal weight and overweight deviated substantially from health definitions. *Frequency of attempts to manage body size:* Among men and women who were not overweight according to the BMI-defined ideal, own definitions of overweight were associated with weight control behaviour.
Curry, Kristal and Bowen (1992) (21) An application of the stage model of behavior change to dietary fat reduction *Health Education Research*	To assess the applicability of Prochaska and DiClemente's stage model to dietary change.	*Quantitative* Cross-sectional study Questionnaire Some data derived from a larger study, Washington State Cancer Behavior Risk Survey	*N* = 158 + 1083 Two samples: enrolees in a large health maintenance organization and participants in a telephone survey of health behaviour, USA Recruitment by random selection from enrolment files and by random digit dialling	*Motivations and readiness:* Individuals were classified with by stages of change related to dietary fat reduction, following Prochaska and DiClemente's stages of change model. Men and women differed in their distribution across the five stages of change, with more men than women in the contemplation stage and more women than men in the maintenance stage. Significantly positive correlates with stage of change, for both men and women, were age education, BMI, number of chronic conditions, high serum cholesterol and intake of calories from fat.
Dailey, Richards and Romo (2010) (41) Communication with significant others about weight management: the role of confirmation in weight management attitudes and behaviors *Communication Research*	Using a confirmation perspective, to examine the relationship between communication with significant others and individuals' weight management.	*Quantitative* Cross-sectional study Two questionnaires, two sub-studies	*N* = 1413 and 2161 Individuals 18–66 years old, USA Self-recruited through university and advertisements on a web site	*Social support and significant others:* A combination of acceptance and challenge from significant others was related to the highest levels of body self-esteem, eating and exercise self-efficacy, and healthy eating behaviours beyond the individual effects of acceptance and challenge. Messages higher in both acceptance and challenge were rated as more effective in motivating healthy behaviours than messages that were higher either in acceptance, or in challenge, or lower in both.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Dailey, Romo and Thompson (2011) (42) Confirmation in couples' communication about weight management: an analysis of how both partners contribute to individuals' health behaviors and conversational outcomes *Human Communication Research*	Using a confirmation perspective, to investigate how romantic couples' accepting and challenging communication was associated with several weight management outcomes.	*Quantitative* Cross-sectional study Two questionnaires: one on weight management behaviour and one on communication and interaction with partner	*N* = 200 (100 couples) Individuals had been in relationship for at least one year, living together, one partner wanted to change his or her weight management behaviour, USA Self-recruitment through online postings, newspaper, church bulletin and flyers, and snowball sampling	*Social support and significant others:* Accepting and challenging forms of communication between partners predicted how effective the individuals were in motivating healthy behaviour. The combination of acceptance and challenge also predicted general effectiveness, more productive weight management conversations and healthier eating.
de Graaf, Van der Gaag, Kafatos, Lennernas and Kearney (1997) (22) Stages of dietary change among nationally-representative samples of adults in the European union *European Journal of Clinical Nutrition*	To investigate the extent to which socio-demographic determinates of stages of dietary change vary between 15 European countries, and to investigate the relationship between these stages of change and a number of other variables in a pan-EU survey.	*Quantitative* Cross-sectional study Face-to-face interviews with questionnaire, omnibus survey	*N* = 14 331 15 years and older, approximately 1000 individuals from each of the 15 participating EU member states Recruitment conducted by international group of market research organizations. Nationally representative samples	*Motivations and readiness:* Of the participants in this survey, 32% were in the 'precontemplation stage', 2% in the 'contemplation stage', 1% in the 'decision stage', 7% in the 'action stage' and 31% in the 'maintenance stage'. Geographic and socio-demographic differences were observed: in the Mediterranean countries and Germany more participants were in the precontemplation stage, whereas in the Scandinavian countries there were fewer participants in the precontemplation stage. The opposite was true for the maintenance stage. Female participants and participants with a higher education tended to be in the maintenance stage.
DiBonaventura and Chapman (2008) (23) The effect of barrier underestimation on weight management and exercise change *Psychology, Health & Medicine*	To identify the barriers to weight loss behaviours and to determine (longitudinally) how accurate people are at assessing the degree to which these barriers will influence their behaviour.	*Quantitative* Longitudinal study Questionnaire	*N* = 422 Faculty and staff at a university, USA Self-recruited	*Expectations, barriers and experiences:* Although all participants intended to exercise more and eat more healthily, this had not happened when they were asked about their behaviour changes 1 year later. The results for dieting were more consistent than the results for exercise.
Dorsey, Eberhardt and Ogden (2009) (25) Racial/ethnic differences in weight perception *Obesity*	To estimate the prevalence of weight misperception among adults using the most recent nationally representative data, according to measured weight categories, and to assess the relationship between weight misperception and race/ethnicity.	*Quantitative* Cross-sectional study Questionnaire Data from NHANES	*N* = 17 270 Individuals from all weight categories, aged 20 years and more, USA Nationally representative sample	*Overall perception and categorization:* 31.7, 38.1 and 8.1% of participants placed in the respective study-measured categories healthy weight, overweight and obese perceived their weight differently from the relevant study-measured category. Discrepancies in own and study-assessed weight category were more frequent among racial/ethnic minorities, men and those with lower educational level.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Dorsey, Eberhardt and Ogden (2009) (24) Racial and ethnic differences in weight management behavior by weight perception status *Ethnicity & Disease*	To examine racial/ethnic differences in weight management behaviours among overweight and obese adults.	*Quantitative* Cross-sectional study Questionnaire Data from NHANES, 1999–2006	*N* = 11 319 Overweight and obese individuals, aged 20 years and more, USA Nationally representative sample	*Overall perception and categorization:* Some study-categorized overweight and obese individuals had a 'weight misperception' of own weight, i.e. they categorized their weight differently from the study categorization. The prevalence of misperception varied by ethnicity, but the exact proportions was not reported. *Ideals and (dis)satisfaction:* Study-categorized overweight and obese individuals with 'weight misperception' were less likely to have the desire to lose weight. Racial/ethnical differences were observed as ethnic minorities with weight misperception were less likely to desire to lose weight. *Frequency of attempts to manage body size:* Study-categorized overweight and obese individuals with 'weight misperception' were less likely to have tried to lose weight or not to gain weight. Racial/ethnical differences were observed as ethnic minorities with weight misperception were less likely to have tried to lose weight.
Glanz, Patterson, Kristal, DiClemente, Heimendinger, Linnan and McLerran (1994) (26) Stages of change in adopting healthy diets: fat, fiber, and correlates of nutrient intake *Health Education Quarterly*	To present data that characterizes workers by stage of readiness to change their intake of fat, fibre and fruits and vegetables, and to examine the association of stages with dietary intake, also to investigate associations between stages of dietary change and demographic factors, health status, attitudes and past change efforts.	*Quantitative* Cross-sectional study Self-administered food frequency questionnaire Baseline data from a study called the Working Well Trial	*N* = 17 121 Workers, USA Recruitment at 93 work sites of broad geographical and industrial diversity	*Motivations and readiness:* The proportion of the population that had actively tried to reduce fat intake was greater than that which had tried to consume more fibre. Stage of change was associated with fat, fibre, and fruit and vegetable intake in a stepwise manner. Status of stage predicted between 8 and 13% of the variance in dietary intake, and thus predicted more than demographic variables. The authors concluded that stage of change was an important predictor of dietary habits, and that the relationship between stages and diet was in large part independent of individuals' demographic characteristics.
Gough and Conner (2006) (49) Barriers to healthy eating amongst men: a qualitative analysis *Social Science & Medicine*	To provide an analysis of men's accounts of food and health using concepts pertaining to masculinity.	*Qualitative* In-depth interviews	*N* = 24 Men of various age groups and social class groups, UK Snowball sampling	*Expectations, barriers and experiences:* Two principal barriers to healthy eating were found: 'cynicism about government health messages' and 'rejection of healthy food on grounds of poor taste and inability to satisfy'. Further, practical constraints such as time and expense were perceived as obstacles to a more healthy diet.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Granberg (2006) (51) 'Is that all there is?' Possible selves, self-change, and weight loss *Social Psychology Quarterly*	To explore the self and social processes that operate during efforts to validate possible selves after self-change is complete.	*Qualitative* In-depth interviews	*N* = 46 Individuals who had lost at least 15 pounds and maintained normal weight for at least 3 months, USA Recruitment from Weight Watchers and Overeaters Anonymous	*Expectations, barriers and experiences:* The possible selves that the participants had associated with weight loss beforehand appeared not to be achieved. The gap between potential and actual selves had to be negotiated before the participants could consider their weight loss successful and complete, and this was performed by drawing on structural and cultural resources, and identity control, and by revising personal narratives. By combining these resources, participants recognized and negotiated the gap between their expectations and the reality of intentional self-change.
Hendley, Zhao, Coverson, Din-Dzietham, Morris, Quyyumi, Gibbons and Vaccarino (2011) (43) Differences in weight perception among blacks and whites *Journal of Women's Health*	To explore race and gender differences in the underestimation of weight using BMI and waist circumference, after adjusting for other cardiovascular risk factors.	*Quantitative* Cross-sectional study Telephone interviews and physical measuring Part of the META-Health Study	*N* = 459 Individuals 30–66 years old, USA Random digit dialling	*Overall perception and categorization:* The odds of a participant underestimating BMI category were three times greater for African Americans than Caucasians, and higher for African–American women than African–American men. When the question was framed in terms of waist circumference, this difference in size underestimation remained.
Johnson, Cooke, Croker and Wardle (2008) (57) Changing perceptions of weight in Great Britain: comparison of two population surveys *British Medical Journal*	To examine changes in public perceptions of overweight in Great Britain over an 8-year period.	*Quantitative* Longitudinal study Comparison of data on self-perceived weight from population surveys conducted in 1999 and 2007	*N* = 1797 (1999) and 1836 (2007) Private households, UK national representative samples	*Overall perception and categorization:* Self-reported weights increased dramatically over time. The proportion of participants whose BMI placed them in the normal weight category fell from 54 to 44%, and the corresponding proportion of moderately overweight rose from 32 to 34%. The proportion of participants in the obese category increased from 11 to 19%. But at the same time the weight at which people perceived themselves as overweight rose significantly. The proportion who perceived themselves as about the right weight increased by a few percentage points, and the proportions who perceived themselves as somewhat overweight and very overweight increased a few percentage points. In 1999, 81% of overweight participants correctly identified themselves as overweight compared with 75% in 2007, demonstrating a decrease in sensitivity in the self-diagnosis of overweight.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Keenan, Achterberg, Kris-Etherton, Abusabha and von Eye (1996) (14) Use of qualitative and quantitative methods to define behavioral fat-reduction strategies and their relationship to dietary fat reduction in the patterns of dietary change study *Journal of the American Dietetic Association*	To determine the specific food choice behaviours in a community-dwelling population used to decrease dietary fat intake; to assess qualitatively how participants grouped their food changes; to evaluate quantitatively the viability of these fat reduction strategies; and to assess which strategies best accounted for decreased fat consumption in the sample population.	*Quantitative and qualitative* Questionnaire and in-depth interviews	*N* = 145 Individuals 30–55 years old who had been decreasing their dietary fat intake for 5 years or more and had been consuming a self-defined healthy diet for at least 6 months, USA Self-recruited through newspapers, corporate fitness centres, school parent–teacher organizations and other non-profit groups	*Specific management practices:* Nine fat reduction strategies were identified: 'decrease fat flavourings', 'decrease recreational foods', 'decrease cooking fat', 'replace meat', 'alter meat/poultry', 'change breakfast' and 'use fat-modified foods', 'increase vegetables' and 'increase fruits'.
Kelly (2011) (44) Commitment to health: a predictor of dietary change *Journal of Clinical Nursing*	To determine the predictive validity of three variables on changes in diet: commitment to health (commitment), confidence in ability to change dietary behaviours (confidence) and belief about the importance of changing dietary behaviours (importance).	*Quantitative* Cross-sectional study Questionnaire	*N* = 499 Manufacturing workers at a major manufacturer, USA Recruitment from a major manufacturer by distributing questionnaires to the workers	*Motivations and readiness:* The transtheoretical model of behaviour change was used as a frame for understanding dietary behaviour change. Commitment (commitment to health) best predicted change, from the action to the maintenance stage of change. Importance (belief about the importance of changing dietary behaviours) was somewhat significant, whereas confidence (confidence in ability to change dietary behaviours) was not.
Kim (2007) (27) Religion, weight perception, and weight control behavior *Eating Behaviors*	To examine whether various measures of religion were related to weight perception and weight control behaviour.	*Quantitative* Cross-sectional study Telephone survey and mailed questionnaire Data from National Survey of Midlife Development in the United States (MIDUS)	*N* = 3032 Individuals 25–74 years old, non-institutionalized, USA National representative sample, selected with random digit dialling	*Overall perception and categorization:* In a range of religions women with greater religious commitment and men with greater religious application had higher odds of underestimating their weight category relative to BMI. Jewish women were more likely to overestimate their own body weight. It was concluded that religion plays a role in weight perception, regardless of other socio-demographic variables. *Frequency of attempts to manage body size:* The analysis indicated no relationship between religion and weight control behaviour, measured as losing 4.5 kg/10 lb. or more by dieting, exercising or changing lifestyle.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Kirk, Tytus, Tsuyuki and Sharma (2012) (45) Weight management experiences of overweight and obese adults: findings from a national survey *Chronic Diseases and Injuries in Canada*	To determine the weight management experiences of Canadian adults, asking whether overweight and obese people reported seeking support from family physician or other healthcare professionals for weight management, and whether they reported weight management experiences reflecting guideline recommendations.	*Quantitative* Cross-sectional study Telephone questionnaire with self-reported height and weight	*N* = 2004 Individuals 18 years and older, Canada Random digit dialling, data weighted to be nationally representative	*Frequency of attempts to manage body size:* 40% of normal weight and 64% of overweight participants reported having tried at some point to lose weight; 27 and 50%, respectively, had last tried within the last year; 59 and 35%, respectively, had never tried to lose weight. *Specific management practices:* 24% of the overweight participants reported having asked their physician about weight loss, 13% within the last year. 18% of the overweight participants and 5% of the normal weight participants reported that their physician advised them to lose weight without them specifically asking for guidance.
Kruger, Galuska, Serdula and Jones (2004) (28) Attempting to lose weight: weight loss practices among US adults *American Journal of Preventive Medicine*	To examine the prevalence of specific weight loss practices among U.S. adults trying to lose weight.	*Quantitative* Cross-sectional study Face-to-face interviews Data from the 1998 National Health Interview Survey	*N* = 32 440 18 years or more, USA national representative sample	*Frequency of attempts to manage body size:* 24% of men and 38% of women were trying to lose weight. Weight loss efforts were less common in normal weight participants than they were in overweight and obese participants. Fewer participants over 65 years old were trying to lose weight. *Specific management practices:* The most common weight loss strategies were eating fewer calories (58% of men and 63% of women trying to lose weight), eating less fat (49 and 56%) and exercising more (54 and 52%). One-third of the participants trying to lose weight reported both eating fewer calories and exercising more.
Lanza, Savage and Birch (2010) (29) Identification and prediction of latent classes of weight-loss strategies among women *Obesity*	To apply latent class analysis to quantify multidimensional patterns of weight loss strategies, and explore the degree to which dietary restraint, disinhibition and other individual characteristics predict membership in latent classes of weight loss strategies.	*Quantitative* Cross-sectional study Questionnaires and physical measuring Part of a longitudinal study concerning parental influences on girls' growth and development	*N* = 197 Non-Hispanic, Caucasian women, USA Self-recruitment through newspaper advertisements and other, unspecified methods	*Frequency of attempts to manage body size:* Four subgroups of women were identified, one of which was 'No weight loss strategy' (10%). *Specific management practices:* The four subgroups of women were 'No weight loss strategy' (10%), 'Dietary guidelines' (27%), 'Guidelines + macronutrients' (39%) and 'Guidelines + macronutrients + restrictive' (24%). BMI, weight concerns, the desire to be thinner, disinhibition and dietary restraint were all significantly related to weight control strategy latent class. Disinhibition increased the odds of women with low dietary restraint engaging in any of the sets of weight loss strategies rather than none, but it increases the likelihood that medium- and high-restraint women will adopt an unhealthy rather than healthy strategy.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Linder, McLaren, Siou, Csizmadi and Robson (2010) (46) The epidemiology of weight perception: perceived versus self-reported actual weight status among Albertan adults *Canadian Journal of Public Health*	To examine the accuracy of weight perceptions relative to actual weight in men and women using three indicators of body size: BMI, wait circumference and a combined risk profile.	*Quantitative* Cross-sectional study Questionnaire and self-measuring, answered by mail Baseline data from The Tomorrow Project	*N* = 7436 Individuals 35–69 years old who had not been diagnosed with cancer, Canada Two-stage random sampling design with digit dialling	*Overall perception and categorization:* Participants displayed reasonable accuracy in weight perception. Gender differences revealed that women were more accurate than men when identifying themselves as overweight. The accuracies of own size assessments for BMI and waist circumference differed.
Lopez-Azpiazu, Martinez-González, León-Mateos, Kearney, Gibney and Martínez (2000) (30) Stages of dietary change and nutrition attitudes in the Spanish population *Public Health*	To investigate the distribution of the different stages of change concerning dietary habits across strata of socio-demographic variables, and to assess the relationships between stages of dietary change and influences on food choice as well as the definitions used to describe them.	*Quantitative* Cross-sectional study Face-to-face interview-assisted questionnaire Part of pan-European project	*N* = 1009 Individuals over 15 years old, Spain National representative sample, selected by random multistage procedure	*Motivations and readiness:* Participants were classified into categories according to their readiness for dietary change. The distribution in categories was: 56% in the 'precontemplation stage' (not considering any change), 8% in the 'dynamic stage' (considering changes, making plans to change or carrying out the changes), 28% in the 'maintenance stage' (maintaining changes for more than 6 months) and 8% in the 'relapse stage' (reverting back to the eating less healthily). Thus, a high proportion of the participants were not contemplating making changes to their dietary habits. More men and older individuals were in the stage of precontemplation, while more women and younger individuals were in the maintenance stage.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
McElhone, Kearney, Giachetti, Zunft and Martinez (1999) (31) Body image perception in relation to recent weight changes and strategies for weight loss in a nationally representative sample in the European Union *Public Health Nutrition*	To assess body image perception and satisfaction with current body image across the EU, and to explore the influence of socio-demographic variables, body weight change and strategies for losing weight on body image perception.	*Quantitative* Cross-sectional study Face-to-face interview-assisted questionnaire, omnibus survey Pan-European project	*N* = 15 239 Individuals 15 years and older, with approximately 1000 individuals from each of 15 participating EU member states National representative sample, selected by random multistage procedure	*Overall perception and categorization:* Participants' choices of silhouettes were roughly normally distributed. There was a remarkable gender difference in this distribution as more men perceived themselves to be thin (at the lower end of the silhouette scale), whereas more women perceived themselves to be overweight or obese (at the higher end of the scale). *Ideals and (dis)satisfaction:* 39% of the participants were satisfied with their current weight, meaning that they selected the same two body image figures to represent respectively their current body image and their ideal body image. 7% of the participants wanted to be heavier and 54% wanted to be lighter. Gender differences were identified in the perceptions of ideal weight as men (46%) were more likely to be satisfied than women (31%), and geographic variations across the EU member states were seen, with, for example, lower satisfaction in Finland and higher satisfaction in Belgium and Luxemburg. Differences between age groups were also observed, with younger individuals wanting to be heavier or being more content with their bodies than the older. No significant connections with educational level were identified. A strong relationship between study-measured BMI and ideal body image was identified: the highest percentages of individuals who were content with their body weight were found among underweight women (58%) and normal weight men (66%). Percentages of those wishing to be considerably lighter rose with increasing BMI in both men and women, although this rise was greater in women.
Mendieta-Tan, Hulbert-Williams and Nicholls (2013) (53) Women's experiences of using drugs in weight management. An interpretative phenomenological analysis *Appetite*	To examine the experiences of women using drugs in weight management.	*Qualitative* Semi-structured interviews	*N* = 5 Women, 19–47 years old, with a history of weight difficulties, who had used drugs for weight management and were currently engaging in weight management, UK Self-recruitment entailed by flyers, posters and e-mails	*Specific management practices:* The participating women believed they need to be thin to be happy and found weight management difficult as a result of a variety of internal and external factors. They saw drug use as an easy and guaranteed way to manage weight. They felt that the use of substances for the purpose of weight management was an error, with shame attached to it, but nevertheless drugs helped them to feel in control of their lives and their weight; moreover, the drug used acted as a maladaptive emotion regulation strategy.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Niva, Jauho and Mäkelä (2013) (52) 'If I drink it anyway, then I rather take the light one'. Appropriation of foods and drinks designed for weight management among middle-aged and elderly Finns *Appetite*	To examine lay notions of the role of different food products in weight management and their interconnection with ideals of healthy eating.	*Qualitative* Focus group discussions, differentiated by gender and weight management experiences	*N* = 68 A variety of participants with weight management experience, Finland Recruited from a consumer panel maintained by the National Consumer Research Centre	*Specific management practices:* Lay understandings of foods suitable for weight management rely not only on simple measures such as energy, fat and sugar but also on a complex set of generalized food ideals. The understandings lead to conflicts between foods described as natural as against artificial, to moral judgments of foods designed for weight management, and to an overall emphasis on moderation as a basic ideal.
Nothwehr, Snetselaar and Wu (2006) (32) Weight management strategies reported by rural men and women in Iowa *Journal of Nutrition and Educational Behavior*	To compare the specific behavioural strategies that rural men and women use to lose weight.	*Quantitative* Cross-sectional study In-person questionnaire and measures of height and weight Part of a larger study intended to identify community health promotion issues	*N* = 184 Individuals 18 years or older, currently trying to lose weight, USA Recruitment in two small towns in Iowa. Sampling by information from multiple public sources. Invitations sent in randomly selected batches until enrolment goal was met	*Ideals and (dis)satisfaction:* On an attitude scale (1 = very dissatisfied; 4 = very satisfied), both men and women appeared to be dissatisfied with their current weight, with women (mean 1.80) being significantly less satisfied than men (mean 2.11). *Frequency of attempts to manage body size:* 45% of the participants stated that they were currently trying to lose weight, but this figure was broken down to 32% of men and 55% women. *Specific management practices:* Women reported greater use of nearly all of the weight management strategies measured, i.e. self-monitoring diet and physical activity, goal setting for weight and diet, and for exercise. Results for self-efficacy and outcome expectations were mixed for men and women. *Social support and significant others:* This study found significant gender differences in respect of social support participants received when changing diet. Men reported that they received more social support for diet, while women reported more support for physical activity.
Paeratakul, White, Williamson, Ryan and Bray (2002) (58) Sex, race/ethnicity, socioeconomic status, and BMI in relation to self-perception of overweight *Obesity Research*	To compare self-perceptions of over-weight in the study population according to sex, race/ethnicity and socioeconomic status, and to compare self-perceptions of overweight among individuals classified as normal weight, overweight and obese.	*Quantitative* Cross-sectional study In-person interviews with self-reported height and weight and questionnaire Data from the Diet and Health Knowledge Survey by the US Department of Agriculture	*N* = 5440 Individuals of 20 years and older, USA National representative sample	*Overall perception and categorization:* Of individuals study categorized as normal weight 18% perceived themselves as overweight, and of those study categorized as overweight 60% perceived themselves as such. Self-perception of overweight was more common in women than men, and more common also in Caucasians than African Americans or Hispanics. The odds ratio of perceived overweight was significantly higher in women and whites, and in individuals with higher BMI, higher income or higher education.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Paisley, Beanlands, Goldman, Evers and Chappell (2008) (15) Dietary change: what are the responses and roles of significant others? *Journal of Nutrition and Educational Behavior*	To examine the impact of one person's dietary change on the experiences of a significant other with whom they regularly share meals.	*Qualitative* Semi-structured interviews with pairs of participants	*N* = 42 (21 pairs) Individuals aged 21 years and older, pairs in which at least one person had been (for various reasons) attempting dietary change for 6 month or less, Canada Self-recruited through newspaper advertisements and word of mouth	*Social support and significant others:* Significant others described a range of emotional responses to the other's dietary change, including 'cooperation', 'encouragement', 'scepticism' and 'anger'. Most significant others seemed to play positive (enabling) roles; a few played neutral (neither enabling nor inhibiting) or negative (inhibiting) roles.
Paxton, Sculthorpe and Gibbons (1994) (33) Weight-loss strategies and beliefs in high and low socioeconomic areas of Melbourne *Australian Journal of Public Health*	To explore sex, socioeconomic status and age differences in BMI, the perceived effectiveness of weight loss strategies and the frequency of their use, and awareness of the risks of obesity, in a representative community sample from higher and lower socioeconomic areas in Melbourne.	*Quantitative* Cross-sectional study Questionnaire	*N* = 984 Individuals from higher and lower ranked socioeconomic districts of Melbourne, Australia Random sample provided by a bureau of statistics	*Overall perception and categorization:* Participants were asked to classify their own current weight by choosing a match from a list of five size categories. Men were more likely to describe themselves as too thin or at a good weight, while women were more likely to believe they were slightly overweight. *Ideals and (dis)satisfaction:* 58% of the participants reported that they would like to lose weight, and significantly more women than men wanted to lose weight. The more a person perceived himself or herself to be overweight, the greater was the desire to lose weight, and no socioeconomic or age differences were seen with regard to this. *Specific management practices:* The most believed in strategies were 'Increase exercise and cut down on what I eat' (92%), 'increase my exercise' (91%), 'eat a more balanced diet' (87%), 'reduce the fat in my diet' (87%), 'cut down on what I eat' (85%), 'go on a calorie-controlled diet' (83%) and 'eat a low-sugar diet' (79%). Minor differences according to gender and socio-demographic status were found in beliefs about the effectiveness of the different weight loss strategies.
Potter, Vu and Croughan-Minihane (2001) (34) Weight management: what patients want from their primary care physicians *The Journal of Family Practice*	To determine the weight management experiences of patients in primary care and establish what those patients want from their physicians.	*Quantitative* Cross-sectional study Questionnaire and measures for BMI	*N* = 366 Individual 18 years and older, USA Recruited in waiting rooms for primary care visits	*Ideals and (dis)satisfaction:* Of the participants study categorized as overweight, 84% reported that they thought they needed to lose weight, and for those study categorized as non-overweight this number was 39%. *Specific management practices:* 24% of the overweight participants and 12% of the non-overweight had discussed weight with their current physicians. What they most wanted from the physicians were (i) dietary advice; (ii) help with setting realistic weight goals and (iii) exercise recommendations.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Serdula, Mokdad, Williamson, Galuska, Mendlein and Heath (1999) (35) Prevalence of attempting weight loss and strategies for controlling weight *JAMA*	To examine the prevalence of efforts to lose or maintain weight and to describe weight control strategies among U.S. adults.	*Quantitative* Cross-sectional study Questionnaire, telephone interviews Part of BRFSS 1996	*N* = 107 804 Individuals aged 18 years and older, USA Independent probability sample based on random digit dialling methods	*Ideals and (dis)satisfaction:* The men trying to lose weight had a median weight of 90.4 kg, with a goal weight of 81.4 kg. Women trying to lose weight had a median weight of 70.3 kg, with a goal weight of 59 kg. *Frequency of attempts to manage body size:* More than two-thirds of the participants were trying to lose or maintain weight. The prevalence of efforts to lose weight was 29% in men and 44% in women. The prevalence of efforts to maintain current weight was 35% in men and 34% in women. Differences in the prevalence of attempts to lose weight were also identified with regard to race and ethnicity, education, smoking and BMI. The odds of trying to lose weight were higher among younger women, non-smokers and Caucasians, and they increased with increasing BMI and education. *Specific management practices:* Of those attempting to lose weight about 90% reported modifying their diet and about 65% reported using physical activity as a strategy. Only 21.5% of men and 19.4% of women attempting to lose weight reported using the recommend combination of eating fewer calories and engaging in at least 150 min of leisure time physical activity per week. The same tendency was seen among men and women trying to maintain weight, although the percentages were lower. Some social differences were also identified with regard to race and ethnicity, education, smoking and BMI.
Thompson and Sargent (2000) (36) Black and white women's weight-related attitudes and parental criticism of their childhood appearance *Women & Health*	To examine women's concerns about weight and body satisfaction; ratings of men's and women's ideal body size; attitudes to overweight people; and reports of parents' criticism during childhood – differentiating race, current body size , weight concern score and socioeconomic level.	*Quantitative* Cross-sectional study Questionnaire	*N* = 215 Mothers whose children were participating in a statewide survey about nutrition, USA Participants recruited among mothers to randomly selected participants in a separate survey of nutrition.	*Ideals and (dis)satisfaction:* 63% of the women desired a body size thinner than their current one. Concern about weight was commonly reported (41%), and more Caucasian than African–American women were highly concerned. It was found that self-reported concern about weight was positively associated with body dissatisfaction and negative attitudes to overweight, as well as with criticism of one's childhood appearance by mothers and fathers. *Frequency of attempts to manage body size:* 64% of the women reported that they were currently trying to lose weight, whereas 3% were trying to gain weight and 25% wanted to stay the same. 9% reported that they were not trying to do anything about their weight.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Timmerman and Earvolino-Ramirez (2010) (37) Strategies for and barriers to managing weight when eating at restaurants *Preventing Chronic Disease*	To describe and compare the strategies men and women use and the barriers they encounter when managing weight while eating in restaurants.	*Quantitative* Cross-sectional study Questionnaire	*N* = 146 Individuals 18 years or older, most often parents of future university students, USA Self-recruitment during open house at a university	*Specific management practices:* The most common strategies used by participants were avoiding sugar-filled drinks, choosing steamed vegetables and whole-grain foods and stopping eating when full. Women were more likely than men to share appetizers or meals, substitute appetizers for meals, have salads as entrées, order a salad on the side and bring half of the meal home.
Yaemsiri, Slining and Agarwal (2011) (38) Perceived weight status, overweight diagnosis, and weight control among US adults: the NHANES 2003.2008 study *International Journal of Obesity*	To examine the association between perceived overweight status and weight control, discrepancies between perceived and measured weight status, and opportunities for health care professionals to correct weight perception among US adults.	*Quantitative* Cross-sectional study Questionnaire and physical examinations Data from NHANES, 2003–2004, 2005–2006 and 2007–2008	*N* = 16 720 18 years and older, U.S. nationally representative complex, multistage probability sample	*Overall perception and categorization:* 48% of men study categorized as overweight and 13% of the men study categorized as obese perceived themselves as having the right weight. Among women, 23% of those in the overweight study category and 5% of those in the obese study category perceived themselves as having the right weight. Of men in the normal weight category 18% perceived themselves as underweight and 7% as overweight. Of women in the normal weight category 5% perceived themselves as being underweight and 28% as overweight. *Ideals and (dis)satisfaction:* 64% of the individual (73% of women, 55% of men) reported a desire to weigh less. *Frequency of attempts to manage body size:* 48% of the individuals (57% of women, 40% of men) reported pursuing some kind of weight control. Weight control was positively associated with perception of overweight and diagnosis of overweight/obesity from health care professionals, independently of measured weight status. *Specific management practices:* The majority of overweight and obese individuals (74% of women, 60% of men) pursued at least one of two weight management activities: dieting or physical activity. Fewer (39% of women, 32% of men) pursued both dietary change and physical activity.

Table S1 *Continued*

Authorship, year, title and journal	Aim	Methods	Participants and sampling	Main findings, categorized by sub-themes
Wardle and Johnson (2002) (59) Weight and dieting: examining levels of weight concern in British adults *International Journal of Obesity and Related Metabolic Disorders*	To examine the nature and level of complacency and over-concern in overweight, underweight and normal weight individuals.	*Quantitative* Cross-sectional study In-person interviews in respondents' homes, self-reported weight and height	*N* = 1894 Over 16 years, UK Nationally representative, based on stratified probability sample, part of omnibus survey	*Overall perception and categorization:* Most adults categorized as overweight correctly perceived themselves as overweight. Among those categorized as normal weight 28% of the women and 14% of the men perceived themselves as overweight. *Ideals and (dis)satisfaction:* Ideal weight was significantly lower than actual weight for overweight men as well as for overweight and normal weight women. Among the normal weight men the ideal BMI was 22.6 compared with an actual average BMI of 22.5. Among the normal weight women the ideal was 21.2 compared with an actual average BMI of 22.1. *Frequency of attempts to manage body size:* 54% of women and 31% of men had attempted weight loss during the last 3 years. Among women this number represented 44% of the normal weight and 71% of the moderately overweight. Among men 16% of the normal weight and 44% of the moderately overweight participants had tried to lose weight. *Specific management practices:* Dieting alone was the most popular practice. Slimming clubs came a close second for women, but were less popular with men. Diets from books and magazines were also used as slimming guides by some women. Neither meal replacements, nor pills or injections, nor advice from professionals were common methods.

BMI, body mass index; BRFSS, Behavioral Risk Factor Surveillance System (all USA); EU, European Union; HRQOL, health-related quality of life; MIDUS, National Survey of Midlife Development in the United States; NHANES, National Health and Nutrition Examination Survey.

Paper B

Nissen, Nina Konstantin; Holm, Lotte & Baarts, Charlotte:

"Monitoring the normal body: Ideals and practices among normal weight and moderately overweight people"

Submitted to *Obesity Facts*.

Abstract

Introduction: An extensive body of literature is concerned with obese people, risk and weight management. However, little is known about weight management among people not belonging to the extreme BMI categories. Management of weight among normal weight and moderately overweight individuals provides us with knowledge about how to prevent future overweight or obesity. This paper investigates body size ideals and monitoring practices among normal weight and moderately overweight people.

Methods: The study is based on in-depth interviews combined with observations. 24 participants were recruited by strategic sampling based on self-reported BMI 18.5-29.9 and socio-demographic factors. Inductive analysis was conducted.

Results: Normal weight and moderately overweight people have clear ideals for their body size. Despite being normal weight or close to this, they construct a variety of practices for monitoring their bodies based on different kinds of calculations of weight and body size, observations of body shape and measurements of bodily firmness. Biometric measurements are familiar to them as are health authorities' recommendations. Despite not belonging to an extreme BMI category, they translate such measurements and recommendations in meaningful ways to fit their everyday life.

Conclusions: Normal weight and moderately overweight people are concerned with their body size and continuously monitor it. Future health promotion work should consider the kind of practices already established in daily life when recommending ways of conducting body management.

Introduction

In contemporary societies, the responsibility for health has become more individualized. Compared with earlier eras, individuals are becoming more positioned as choosing agents and are, consequently, considered to be responsible for their own destiny, including e.g. life-course, personal identity and health (Beck, 1992; Giddens, 1991; Lupton, 1995). It is known that extreme body weight can cause severe health problems (World Health Organisation, 2015) – obesity is considered a life-style disease (World Health Organisation, 2015) and has become one of the major threats to health in contemporary societies (World Health Organisation, 2015). Today, individuals face multiple temptations in terms of easy access to food, and only limited inclination to physical activity, which may influence their body size while, simultaneously, bill boards and other commercials present beauty and the perfect body as slim. To maintain health, individuals today face the challenge of controlling body size, and because health is increasingly considered the individual's responsibility, only individuals can be blamed if they do not succeed in maintaining a normal weight. Body size management has become an everyday individual struggle.

Social research on body weight primarily concentrates on people with extreme body size, i.e. those categorized as underweight (Body Mass Index (BMI)>=18.5) or severely overweight/obese (BMI<=30), and/or people with eating disorders (Ball & Crawford, 2005; Sobal & Stunkard, 1989; Wang

& Beydoun, 2007; Yager & O'Dea, 2008). Studies investigate individuals' perceptions of their bodies (Befort, Thomas, Daley, Rhode, & Ahluwalia, 2008; Cash & Green, 1986; Christiansen, Borge, & Fagermoen, 2012; Harmatz, Gronendyke, & Thomas, 1985), identity in relation to weight (Cordell & Ronai, 1999; Degher & Hughes, 1999; Smith & Holm, 2012; Smith & Holm, 2011), barriers to and motivations for weight control (Befort et al., 2008; Christiansen et al., 2012; Smith & Holm, 2012), and experiences of weight gain and weight loss (Befort et al., 2008; Sarlio-Lahteenkorva, 1998; Smith & Holm, 2011). Individuals categorized as normal weight (BMI 18.5-24.9) and moderately overweight (BMI 25-29.9) do not belong to the extreme BMI categories strongly associated with health risks (Flegal, Graubard, Williamson, & Gail, 2005; NHLBI Obesity Education Initiative Expert Panel on the Identification, Evaluation, and Treatment of Obesity in Adults (US), 1998), and consequently have not received much scientific attention (Nissen & Holm, 2015).

Studies which investigate perceptions of body size and practices to monitor body size among normal weight or moderately overweight individuals are rare (Nissen & Holm, 2015). The object of interest in most of the few identified studies has been to measure perceptions and monitoring practices on the basis of predefined categories, often assumed to be mutually exclusive (Atlantis & Ball, 2008; Bendixen et al., 2002; Bish et al., 2005; Bish et al., 2007; Burke, Heiland, & Nadler, 2010; Cachelin, Striegel-Moore, & Elder, 1998; Crawford & Campbell, 1999; R. Dorsey, Eberhardt, & Ogden, 2009; R. R. Dorsey, Eberhardt, & Ogden, 2009; Johnson, Cooke, Croker, & Wardle, 2008; Kim, 2007; McElhone, Kearney, Giachetti, Zunft, & Martinez, 1999; Paeratakul, Whithe, Williamson, Ryan, & Bray, 2002; Paxton, Sculthorpe, & Gibbons, 1994; Thompson & Sargent, 2000; Wardle & Johnson, 2002; Yaemsiri, Slining, & Agarwal, 2009), such as 'About right weight', 'Somewhat overweight' (Johnson et al., 2008), 'Satisfied', 'Dissatisfied' (Nothwehr, Snetselaar, & Wu, 2006), 'Not bothered about weight', 'Watching weight' and 'Trying to lose weight' (Wardle & Johnson, 2002). Only a few qualitative studies from the US and the UK investigate qualitatively the challenges faced by normal weight and moderately overweight individuals when monitoring body size (Allan, 1991; Allan, 1994; Chambers & Swanson, 2012; Nissen & Holm, 2015). From this body of research, we learn that individuals who are not even extreme in body size monitor their body weight on the basis of personalized norms and set points which trigger efforts to manage body weight (Allan, 1991; Allan, 1994; Chambers & Swanson, 2012). Still, these studies do not completely unfold the minute social processes involved in weight management.

Population studies show obesity to be more prevalent among middle-aged and older individuals than among the young. Thus, some normal weight individuals become overweight/underweight at some point in life (de Munter, Tynelius, Magnusson, & Rasmussen, 2015; Wang & Beydoun, 2007). We also know that once individuals' weight becomes extreme, it is very difficult for them to become normal weight again (Casey, Dwyer, Coleman, & Valadian, 1992; Guo et al., 2000). Hence, knowledge about how normal weight people think about and measure body size in order to manage weight is important in preventing future overweight and obesity among individuals presently belonging to the non-extreme BMI categories.

In this paper, we investigate perceptions of body size among normal weight or moderately overweight people and identify how they monitor their body size through self-initiated practices in

their everyday lives. Based on a qualitative interview study, we focus on how individuals construct ways of perceiving and monitoring body size that both relate to the general recommendations from health authorities and fit into the specific challenges of everyday life

As qualitative studies in weight management among normal weight and moderately overweight are rare, we know little about the complex considerations that individuals have relating to weight management on a micro-level. The qualitative approach adds to obesity research by offering a rich empirical and experience-based insight into the complexity of 'translating' recommendations of health authorities into practices in everyday life. As such, this research may contribute to better targeting of health promotion with regard to body size, while it may also be used to critically examine problems related to the potential discrepancy between recommendations from health authorities and their actual implementation in real life.

Method

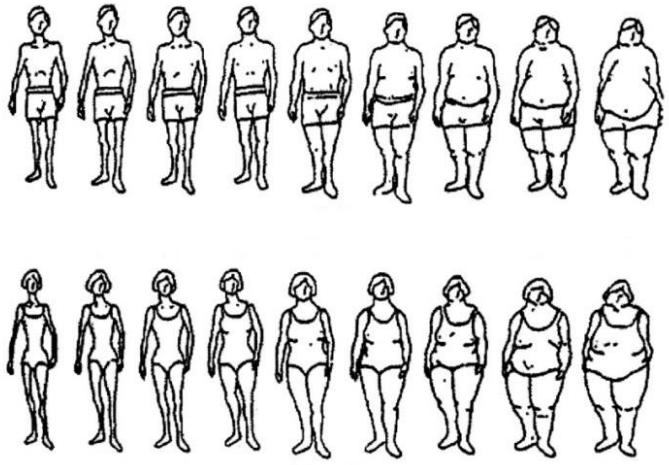
The study is based on qualitative interviews combined with observations of normal weight and moderately overweight Danish people in their homes. The interviews and observations were carried out in 2011.

Participants were recruited through collaboration with a market analysis company using a database of random phone numbers and a small telephone screening questionnaire. The sample was strategic in so far as the basic inclusion criterium was being normal weight or moderately overweight (BMI 18,5-29,9) estimated on the basis of self-reported weight and height. Participants were also selected to ensure an even distribution regarding age (25-55 years old), geography (between capital and provincial area), education (none/low; medium length and long education) and gender. Moreover, participants were strategically selected in order to ensure variation regarding employment situation, income, smoking status and family situation. In the end, 24 participants - 12 women and 12 men - were recruited.

Each participant was interviewed twice, except for two participants who, due to personal circumstances, were only interviewed once. The two-stage interview method allowed the building of trust between participants and interviewer, while it ensured ample time for detailed description. Furthermore, it also offered an opportunity to follow-up on issues from the first interview and to get an insight into possible changes in monitoring practices and weight management over time. The interviews most often took place in the homes of the participants, and the home visits also included participant observation (Hammersley & Atkinson, 1995; Spradley, 1980). Often the interviewer was taken on a guided tour of the homes, which facilitated conversation about relevant objects in the homes such as mirrors, bathroom scales, wardrobes, refrigerators and fitness equipment. In total, the interviewer typically spent 2-5 hours together with each informant. All interviews were conducted by the first author, a 32-year-old female categorized as being on the borderline between normal weight and moderately overweight.

The interviews were conducted using a semi-structured interview guide that focused on participants' ideals for body size, self-evaluations of their body size, physical changes over time, weight management practices and tools for measuring body size and weight. Participants were informed that we were interested in learning about ordinary people's views of their own bodies and their experiences with body size management. To facilitate conversation about body ideals and monitoring practices, the interviewer presented a silhouette drawing of a scale of men and women with increasing body sizes (Fig. 1) (Stunkard, Sørensen, & Schulsinger, 1983) to the participants. The participants were asked to place themselves on the scale – first based on how they looked at the time of the interviews and then how they would ideally like to look – and they were requested to reflect upon their self-evaluations. The interviews continued by giving the interviewees the opportunity to speak freely about their thoughts, emotions and actions relating to body size and weight management.

Figure 1. Silhouette drawings used in the interviews (Stunkard et al., 1983)



The interviews were recorded and transcribed verbatim on the basis of a transcription guideline. Reflections from the interviews and the observations were recorded in field notes. The software NVivo 9.2. (QSR International, 2015) was used to manage data. The analysis was conducted on the basis of inductive coding (Crabtree & Miller, 1999), and from this relevant themes in the interviews were identified and interpreted. In this paper, we examine the participants' perceptions of their body size and their use of self-constructed monitoring practices. In doing so, we engage in the identified empirical themes 'body ideals', including the sub-categories 'Ideal measures', 'Ideal look' and 'Ideal feeling') and 'Everyday bodily routines', including the sub-categories: 'Measuring routines', 'Looking routines' and 'Feeling routines'), and 'Wanting a normal body'.

Findings

Elsewhere, we have argued that social research on body weight and weight management has primarily focused on the concepts 'weight' and 'shape' (Nissen & Holm, 2015). In this study, however, the interviews and the time spent with the participants in their homes revealed other ways of talking about weight and weight management. The participants refer to different ways of measuring their bodies using measures such as '*weight'*, *'shape'* and *'firmness'*. Among the participants, 'weight' refers to a calculable way of measuring the size of the body. The participants have access to this calculable and objective measure of body size by regularly stepping on the bathroom scales. 'Shape' refers to a subjective evaluation of the participants' outer bodies, that is, particularly form and curves. The participants measure shape by comparing selected bodily parts with ideals for a 'normal body'. Finally, 'firmness' refers to a subjective measure of how the participant senses the body, not as in sensing pain or feeling joy, but as in noticing if parts of the body are in accordance with the participants' ideals for a normal body size. The participants have access to this measure by touching the body with their hands. Together, weight, shape and firmness are different measurements for what we term 'body size'.

Whereas 'weight' and 'shape' are established concepts within the literature on weight management (Nissen & Holm, 2015), to our knowledge, 'firmness' has not previously been identified and thus remains unexplored. In the analysis that follows, we investigate the meanings of 'weight' and 'shape' on an empirical level among normal weight and moderately overweight individuals and discuss these as different measures for body size used by the participants in their efforts to monitor and manage size. Moreover, we explore empirical meanings of 'firmness' among the participants as a third measure of body size thereby adding a new dimension to the research field on weight and weight management.

Calculating body size - weight

During the interviews, the participants often spontaneously began talking about weight and how they weigh themselves. As the conversations developed, it became evident that they often talked in quantitative terms about their bodies. In many of the participants' homes, bathroom scales were placed in visible positions in bathrooms or bedrooms, indicating that weight is part of the everyday lives of many of the participants and their families. The interviews confirmed that bathroom scales are used as tools to monitor weight more or less frequently, but on a regular basis. Some participants weigh themselves daily; some do it once or twice a week, while others use scales approximately every second week. For some, this regular monitoring also implies weighing themselves at fixed times or on specific occasions (such as after having been to the toilet in the morning, or just before going to bed in the evening), a few even keep a record providing them with the opportunity to monitor developments over time. Jacob describes his practices in the following way:

I jump on the bathroom scales twice a day – in the morning and in the evening – and therefore I always have full clarity about in which direction my weight is going. I keep a record of the results and have done that for maybe ten years now.

Jacob keeps track of his weight in the mornings and evenings and even writes down the results. His practice allows him to monitor changes that occur during the day and over long periods of time. As such, he may also be able to register or identify reasons for changes in his weight that may be due to aspects in life beyond the factors that we already know influence weight (such as food, smoking cessation and alcohol).

Other participants weigh themselves less often and in what may seem less organized ways. Still, they have their own strategies for deciding the right time to monitor weight, such as every time their eyes fall on the bathroom scales or every time their minds become occupied with weight. Some weigh themselves because they are in a phase or period where they are more focused on weight than during other periods. Also, a few participants report that they do not weigh themselves, but they still know their particular weight from occasional health examinations. As such, although unintended, they also have a calculable measure to be added to other ways of monitoring body size that they may practice.

Based on the interviews we know that the participants monitor body size through organized weighing practices. As such, they get a calculable measure for body size, which they use to develop scales that assess numeric limits for what they consider their ideal weight. Some scales developed by participants refer to intervals ranging from a few kilograms up to 10 kilograms:

"You know, for me it is okay to weigh something starting with a 7, I weigh something in the 70s. I have this maximum. There have been times when the number (on the bathroom scales) has started with an 8, and that I think is the most terrible thing!"

In this quotation, Laura explains that an acceptable weight for her is in the 70s. She is less focused on exactly what she weighs, but her weight should be in the range 70 to 79 kg. In other cases, the scales refer to an exact numeric number which represents the maximum acceptable weight. Jacob states:

"I have kind of a maximum of 75 kilos. I must not put on more weight than that"

As Jacob expresses, he has set the top limit for his body size in kilos, which to him represents a trigger point for action. Laura and Jacob are not exceptions with regard to defining acceptable weight. The participants in this study, although normal weight or moderately overweight, manage weight by having a clear perception of what is an acceptable maximum weight. Often, the assessed maximum weight is close to their current weight, which is not surprising considering the fact that they are normal weight or moderately overweight.

Another measure for weight used by the participants is BMI, which is the main official measure for body size recommended by health authorities (World Health Organisation, 2008). Most of the participants have had their BMI calculated at some point in their lives. They do not, however, use BMI calculations to regularly monitor, but they have had BMI figures calculated at some point of time, of-

ten during times when they are actively attempting to lose weight. They do not remember their exact BMI figure, but they know what category they belong to. Over time, some participants develop a perception of their ideal body size grounded on their subjective perceptions of their ideal personal weight, but still referring to the BMI measure. John explains:

> *"Well, what is my BMI, if we should calculate it that way? That is a good indicator for most people, a formula you can put your numbers into. How much should I weigh then, I think it would be 90 kilograms. I think I have had my BMI calculated, but I cannot remember it. I would like to weigh 90 kilograms, which would be ideal for me".*

Although John considers BMI to be a useful indicator of his ideal weight, he transforms BMI into kilograms that he can use as a measure for body size. Other participants make use of the BMI categories in order to assess their ideal body size. In so doing, they all have 'normal weight' as the ideal for their weight. Helen says:

> *"I am in the category called moderately overweight. So, at least it should not get any worse. I would rather be below 25".*

Hence, in Helen's case and for many of the participants, ideal body size corresponds to the objective measures for body size decided by health authorities.

Finally, a third way to evaluate body size is by measuring the waistline, which is also an official measure for body size recommended by health authorities (World Health Organisation, 2008). None of the participants, however, knew their waistline measurement, while only one was aware of the health authorities' hip-waist ratio. Still, there was awareness among the participants of their waistline, only not as an objective measure calculated by use of a tape measure. Tom describes it as 'the belt situation':

> *"It is that situation, when you tighten the belt, and then you suddenly have to pull more to get it into the hole you normally use, or you have to use the next hole instead. And then you look at the next hole to check if it has been used before. Actually, this kind of situation with the belt is one that makes me reflect on my body and think gosh!"*

This comment not only illustrates the participants' focus on waistlines, but in a broader sense also reveals their alternative methods of measuring body size compared to those recommended by health authorities. Clothing size is an important alternative indicator used to measure body size. The participants are very aware of the clothing size which fits them. In the same way that they have a specific weight which they consider acceptable, they also have ideals regarding acceptable clothing sizes, "*It has to do with the clothes - that I fit into size medium and size 38, sometimes 36"* (Mariah). Getting dressed is a daily monitoring practice, just as previously purchased clothing sizes function as a way to monitor changes in body size. A change in clothing size does not go unnoticed. Indeed clothing size is used as an objective indicator of body size with some participants even translating clothing size into

weight: *"For someone like me, one size of clothing is 3 kilos"* (Monica). Categories of clothing size are not included in the guidelines of health authorities. Yet, the participants construct categories for clothing size, which refer to what they consider normal and acceptable sizes.

Some clothing shops specialize in clothes for individuals who do not fit into regular clothing sizes. Some brands even have separate series of clothes produced for normal-sizes and plus-sizes, which is a distinction that Monica is much aware of. Monica explains:

> *"My size is 42. As soon as you get to size 44, and that will be my next size – God forbid! – you have to go to those plus-size-shops. And I simply don't want to go to that kind of shop!"*

As in the case of Monica, none of the participants would like to be a plus-size, no matter how big or small that size may look in reality. It is the number of the size that counts. However, to some participants, including Monica, clothing size is not only a body size problem, but also a practical issue. Plus-size shopping may imply a change in shopping patterns, because plus-size products are not necessarily found in the local shops.

Seeing body size - shape

In the previous section we discussed how the participants calculate body size based on three different quantitative measures; 1) self-constructed scales for personal weight, 2) BMI translated to personal weight ideals and 3) clothing size. In so doing, they use items such as bathroom scales and clothing as part of their monitoring practices. However, the interviews also made it clear that visual appearance of body size was important to the participants who use a mirror to monitor body size appearance.

All participants had several mirrors in their homes and reported using them on a daily basis. A few stated that they only or mostly use their mirrors for practical things such as brushing teeth, shaving and tieing their ties. However, most participants reported that they use the mirror for much more than just their daily ablutions. Some of the participants regularly stand in front of the mirror just to inspect and evaluate their bodies. Laura stands in front of the mirror as part of her everyday morning ritual. She takes her time and stands there to observe the skin, curves, muscles and other bodily forms, which together form her body size. She has specific ways of standing and moving in front of the mirror, which makes it possible to perform a total evaluation of how she looks.

Other participants such as Michael do not have such disciplined routines for standing in front of the mirror, but still use the mirror as a tool for monitoring body size:

> *"I know where the kilos are placed on my body. I have learned this from what I see in the mirror. It is not something that I go to the mirror to stand and look for, it happens just whenever I pass by the mirror, and I do that every time I finish showering"*

The participants monitor their body size in front of the mirror both with and without clothes. Being naked in front of the mirror is an opportunity to observe body size in detail, particularly bodily proportions and volume of fat. Monitoring body size while wearing clothes gives an indication of how the clothes fit and suit the body, including how the body appears to the world. In this sense, the participants use the practice of monitoring body size by looking in the mirror to construct self-representations, or in other words to produce acceptable body size ideals.

One measure of shape among the participants is the volume of fat. Many participants pointed out that they do not like too much fat anywhere on the body. In their eyes, fat looks disgusting and unhealthy. Yet for the participants, a skinny appearance is not attractive either because it makes the body look anorexic or ill in some other sense. When Laura monitors the volume of fat in the mirror, she evaluates her body by posing herself particular questions:

> *"Do I have a roll of fat starting over my top belly? Do I have a fold on my back when I wear my bra? It is those kinds of things. It is a question about, when I stand in front of the mirror, where does the shadow fall on my top belly; can I see my hip bones?"*

Monitoring the volume of fat does not only imply evaluations of the total body. Some participants specifically monitor selected body parts, such as Monica, who in particular observes the stomach:

> *"When I sit down and get to look at my stomach, I really think it is SO DISGUSTING!"*

The volume of fat on Monica's stomach makes it look big to her. To Monica the shape of her stomach comes to represent her body size. She knows how she would like her stomach to appear in comparison to how it looks presently. As such, body size is evaluated by assessing a specific body part in combination with ideals regarding a normal body.

The participants also talked about shape in terms of 'harmonious proportions', by which they mean that the length and thickness of different parts of the body should be in proportion to each other and be like everyone else's body. Also, having a muscular look such as "*six pack abs*" or being "*broad-shouldered",* was considered ideal, especially for the male body. Moreover, we know that the participants agreed that bodies should neither be too fat nor too skinny. Thus, the shape of a desirable body size is evaluated in terms of, on the one hand, matching physical proportions and, on the other hand, an ideal of 'normality.' In other words, a body which does not stand out from the crowd.

Shape as an expression of an ideal body size was discussed in the interviews based on the silhouette drawings. All the participants considered the ideal shape of a body to be either in the middle or a little to the left of the middle in the drawings. The participants' choice of ideal shape is, as discussed above, based on the ideal that the body size should be harmonious, to some extent muscular and without too much fat. Moreover, they also commented on the silhouettes at both ends of the scale, precisely because these are either too skinny or too fat, and are thus considered to be physically or mentally unhealthy.

Feeling body size - firmness

In the previous sections, we have discussed how normal weight and moderately overweight participants monitor body size by looking at the shape of the bodies as well as by calculating weight based on different objective measurements. In this section, we turn our attention to how the participants feel the size of their bodies as a third and final monitoring practice.

The participants monitor their bodies by feeling it in various ways, which implies that they examine their bodies with their hands. According to the participants, ideally the body should feel 'firm'. The participants assess firmness primarily with their hands. Through touching, they sense and simultaneously evaluate whether parts of the body are too big, too small, too soft or too flabby. They examine whether the body feels sufficiently solid and muscular. In other words, firmness is closely related to shape defined as both 'harmoniously proportioned' and the volume of fat.

Firmness is obviously a subjective measure of body size and standards regarding firmness will vary between participants. More objective and acknowledged ways of evaluating the volume of fat on the body such as skinfold measuring do exist, but these were not applied by the participants. Laura performs the following critical test to assess her body's firmness:

> *"If I can grab it and hold it, the roll of fat under my ribs, starting over my top belly – which I can at the moment – it is bad!"*

Firmness implies that you cannot grab rolls of fat anywhere on the body, and that the body is not too soft, but may have curves; soft curves for women and forms due to muscles for men. As such, men also monitor firmness by bending their arms in front of the mirror to see and feel if the bicep-muscles are toned in desired ways.

Assessing and evaluating body size

We have argued that body size among normal weight and moderately overweight people evaluated in terms of weight, body shape and physical firmness.

Weight is understood as an objective measure, which can be evaluated by regular weighings, calculations of BMI and translations between clothing size and kilos. The normal weight and moderately overweight people employ different practices to monitor body size regarding weight. Based on the monitoring results, they may regulate and decide upon actions needed to manage weight.

Shape is a subjective measure for body size. Participants approach shape primarily by looking in the mirror in order to observe in what ways their bodies correspond to, or otherwise, their ideals for how a normal and desirable body should look. Their monitoring practices may be more or less regular, yet they all have strategies for when and how to evaluate their shape.

Finally, firmness is also a subjective measure for body size. The participants approach firmness by touching their bodies and, thereby, sensing softness and hardness, curves and muscles and tightness.

Discussion

The findings suggest that normal weight and moderately overweight people make daily efforts to manage their body size. They have clear ideals for body size and make use of multiple monitoring practices by which they monitor their size. In their efforts, they not only focus on biometric measurements recommended by health authorities, but also incorporate various ways of calculating weight, evaluating shape and sensing firmness. Monitoring tools include bathroom scales, mirrors, belts, and clothes, and monitoring also implies making use of sight and embodied feelings. Thus, establishing body size ideals and monitoring size is a complex process. Monitoring the body is present in thoughts and actions in everyday life among normal weight and moderately overweight individuals.

The findings in this study support other studies which argue that normal weight and moderately overweight people have ideals for their body size and use comprehensive practices for monitoring their bodies (Allan, 1991; Allan, 1994; Chambers & Swanson, 2012). However, a large body of literature categorizes individuals as either being satisfied or not satisfied with their body, or rank individuals according to their degree of satisfaction (Cachelin et al., 1998; McElhone et al., 1999; Paxton et al., 1994; Wardle & Johnson, 2002). This study questions the relevance of such inflexible categories. No doubt the participants have clear ideals regarding body size, but they often relate to those ideals in pragmatic ways whereby they acknowledge and accept that their body size does not always match their ideals. In particular, the participants in our study do not evaluate the body as a whole. Instead they evaluate selected parts of the body where they have specific personal ideals for body size. In this sense, categorizations such as satisfied or not satisfied become insufficient because they do not allow for evaluations of selected bodily areas and, thereby, do not take into account the fact that bodily satisfaction is constructed by evaluations of selected parts of the body and that different parts are of more or less important to the individual in the total assessment of satisfaction with the body.

Chambers and Swanson highlight differences in approaches to weight management among weight maintainers and weight gainers (14). Their results suggest that successful weight maintainers monitor their bodies and have clear alarm signals for weight gain that trigger immediate action. In contrast, unsuccessful weight maintainers, who have gained weight during their life span, are erratic regarding monitoring weight, and they fail to respond to warning signs of weight gain and fail to restrict weight unless in a positive mindset (Chambers & Swanson, 2012). In our study, it appears too simplistic to categorize the participants as either successful weight maintainers or weight gainers as most of them throughout life have had periods of both stability and changes in weight. Participants do have various more or less systematic alarm signals which sometimes trigger action, but these are diverse and not always clear, and as we discuss elsewhere they are negotiated in the context of everyday life commitments and practicalities (Nissen, Holm, & Baarts, In peer-review).

Moreover, our findings do not support the linearity of the weight management stages suggested by Allan (Allan, 1991), according to whom women typically move through four stages in their weight management: appraising, mobilizing, enacting, and maintaining weight. A fifth stage, de-emphasizing weight, was found to be rarely entered. Allan points out that the stages are interactive and used re-

peatedly, but they are still presented as separate stages (Allan, 1991). In our study, we find that movements between what Allan terms 'stages' are non-linear; the participants have developed different monitoring practices, which they fit into their daily practices. Rather than continuously moving forward, they move back and forth between these different self-constructed approaches by which they evaluate their body size. In this sense, weight management is a complex network of different methods of calculating weight, and assessing body shape and firmness.

Greene has pointed out that both in health care and in society in general there is an increased reliance on numbers in health evaluations, e.g. with regard to blood pressure, cholesterol level, BMI, etc. (Greene, 2007). These measures for health are known to patients suffering from illnesses to which these numbers are relevant. Yet, even healthy individuals are aware of such measures for health and as such this focus on numbers may turn healthy people into pseudo-patients with pre-disease to be treated (Greene, 2007). Although the participants in the present study are focused on numbers, we do not find that they emphasize numbers in the same way as patients would. Instead, we suggest that the focus on numbers when monitoring body size and managing weight illustrates that they take responsibility for personal health in accordance with the recommendations of health authorities. Normal weight and moderately overweight individuals thus act as products of the individualization of health in contemporary societies initiated by health campaigns, governmental initiatives and the general health discourse. Although they do not belong to any extreme BMI category and thus are not supposed to belong to any risk-category, they attempt to avoid potential health threats to their body. Their monitoring actions are illustrations of how they take responsibility for their personal destinies.

The clear body size ideals and multiple monitoring practices indicate that the interviewed normal weight and moderately overweight individuals have internalized the recommended engagement by health authorities in creating a normal sized body. The ideal of a normal body that is not outstanding with regard to appearance or health is important, and with this in mind, the body is constantly examined by the individuals themselves. This suggests that messages in healthcare policy have been internalized not only in people categorized as having a risky body size, but in the population in general. On the other hand, the moderations and expansions of the practices adopted by the study participants compared to the guidelines from health authorities demonstrate creativity and capability in adapting such guidelines to conditions in everyday life. More specifically, we found that the normal weight and moderately overweight people translate rather abstract official guidelines to ideals and courses of action that are practicable and meaningful in their everyday lives.

Official guidelines for optimal BMI and waist circumference, and to a lesser extent unofficial guidelines too (such as advice from commercials, self-help books, pamphlets and other private actors), directly and indirectly play an important role in the participants' body size evaluations. More precisely, the participants' ideals and monitoring practices refer back to the guidelines in different ways. The participants have knowledge about official recommendations regarding body size, and they are convinced that they know themselves how to monitor their bodies. Hence, in the interplay between scientific knowledge (recommendations from health authorities) and personal embodied knowledge, they construct themselves as 'experts' in managing body size, understood as both weight, shape and firm-

ness. Therefore, it seems that guidance material and campaigns have a significant impact on the population as a whole, and not only those groups at risk at which most campaigns specifically target. In this perspective, we would question whether health promotion initiatives with regard to obesity are merely problem solving. While it may be argued that normal weight and moderately overweight people successfully maintain a low-risk body size because of their monitoring practices, it may also be argued that health promotion initiatives – although targeted at extreme BMI categories – cause much concern among normal weight individuals in ways that make them regulate their weight unnecessarily. In the worst case, such regulation might have undesirable effects, such as eating disorders or underweight.

Implications for practice

Health promotion work should recognize that normal weight and moderately overweight people are basically engaged in managing their body size. Thus, campaigns need not focus on motivation. Activities and campaigns could be organized in consideration of non-linearity, thereby acknowledging that weight management is far from always a process of pre-defined stages. Individuals are not only motivated to manage body size when they belong to an extreme weight category, or when they are gaining weight, but appear to be so continuously.

To assist people in relevant evaluation of body size, health promotion should not only include traditional campaigns based on biometric measurements, but also take into account the multiple techniques and types of knowledge already used by ordinary people. Thus, campaigns should support the everyday monitoring techniques already established because they can be regularly performed by any individual and do not need specific initiatives, tools, or calculations.

Finally, campaigns should be clear about the health risks associated with the various BMI categories in order to reduce unnessecary concern among normal weight and moderately overweight people.

Conclusion

Monitoring body size is part of the everyday thoughts and actions of normal weight and moderately overweight people. Establishing body size ideals and monitoring body size is a complex process involving multiple practices based partly on biometric measurements, but also on other ways of calculating weight as well as visual and sensory evaluations of body shape and touch-based sensing of the firmness of body tissue. Health promotion could benefit from acknowledging practices already established in daily life when recommending ways of performing body size management.

References

Allan, J. D. (1991). To lose, to maintain, to ignore: Weight management among women 248. *Health Care for Women International, 12*(2), 223-225.

Allan, J. D. (1994). A biomedical and feminist perspective on women's experiences with weight management. *Western Journal of Nursing Research, 16*(5), 524-543.

Atlantis, E., & Ball, K. (2008). *Association between weight perception and psychological distress 50*

Ball, K., & Crawford, D. (2005). Socioeconomic status and weight change in adults: A review. *Social Science and Medicine, 60*(9), 1987-2010.

Beck, U. (1992). *Risk society. Towards a new modernity*. London: Sage.

Befort, C. A., Thomas, J. L., Daley, C. M., Rhode, P. A., & Ahluwalia, J. S. (2008). Perceptions and beliefs about body size, weight, and weight loss among obese african american women. *Health Education & Behavior, 35*, 410.

Bendixen, H., Madsen, J., Bay-Hansen, D., Boesen, U., Ovesen, L. F., Bartels, E. M., & Astrup, A. (2002). An observational study of slimming behavior in denmark in 1992 and 1998. *Obesity Research, 10*(9), 911-922.

Bish, C. L., Blanck, H. M., Maynard, L. M., Serdula, M. K., Thompson, N. J., & Khan, L. K. (2007). *Health-related quality of life and weight loss practices among overweight and obese US adults, 2003 behavioral risk factor surveillance system 24*

Bish, C. L., Blanck, H. M., Serdula, M. K., Marcus, M., Kohl, H. W.,3rd, & Khan, L. K. (2005). Diet and physical activity behaviors among americans trying to lose weight: 2000 behavioral risk factor surveillance system. *Obesity Research, 13*(3), 596-607. doi:10.1038/oby.2005.64

Burke, M. A., Heiland, F. W., & Nadler, C. M. (2010). From "overweight" to "about right": Evidence of a generational shift in body weight norms 9. *Obesity, 18*(6), 1226-1234.

Cachelin, F. M., Striegel-Moore, R. H., & Elder, K. A. (1998). *Realistic weight perception and body size assessment in a racially diverse community sample of dieters 229*

Casey, V. A., Dwyer, J. T., Coleman, K. A., & Valadian, I. (1992). Body mass index from childhood to middle age: A 50 y-follow-up. *American Journal of Clinical Nutrition, 56*, 14-18.

Cash, T. F., & Green, G. K. (1986). Body weight and body image among college women: Perception, cognition, and affect. *Journal of Personality Assessment, 50*(2), 290-301. doi:10.1207/s15327752jpa5002_15

Chambers, J. A., & Swanson, V. (2012). Stories of weight management: Factors associated with successful and unsuccessful weight maintenance. *British Journal of Health Psychology, 17*(2), 223-243.

Christiansen, B., Borge, L., & Fagermoen, M. S. (2012). Understanding everyday life of morbidity obese adults - habits and body image. *International Journal of Qualitative Studies on Health and Well-Being, 7*, 17255.

Cordell, G., & Ronai, C. R. (1999). Identity management among overweight women: Narrative resistance to stigma. In J. Sobal, & D. Maurer (Eds.), *Interpreting weight. the social management of fatness and thinness* (pp. 29). New York: Aldine de Gruyter.

Crabtree, B. F., & Miller, W. L. (1999). Using codes and code manuals: A template organizing style of interpretation. In B. F. Crabtree, & W. L. Miller (Eds.), *Doing qualitative research* (Second edition ed., pp. 163-177). California: Sage.

Crawford, D., & Campbell, K. (1999). Lay definitions of ideal weight and overweight. *International Journal of Obesity, 23*, 738.

de Munter, J. S., Tynelius, P., Magnusson, C., & Rasmussen, F. (2015). Longitudinal analysis of lifestyle habits in relation to body mass index, onset of overweight and obesity: Results from a large population-based cohort in sweden. *Scandinavian Journal of Public Health*, 1-10.

Degher, D., & Hughes, G. (1999). The adaption and management of a "fat" identity". In J. Sobal, & D. Maurer (Eds.), *Interpreting weight. the social management of fatness and thinness* (pp. 11). New York: Aldine de Gruyter.

Dorsey, R., Eberhardt, M., & Ogden, C. (2009). Racial and ethnic differences in weight management behavior by weight perception status 29. *Ethnicity & Disease, 20*, 244-250.

Dorsey, R. R., Eberhardt, M. S., & Ogden, C. L. (2009). Racial/ethnic differences in weight perception. *Obesity, 17*(4), 790-795.

Flegal, K. M., Graubard, B. I., Williamson, D. F., & Gail, M. H. (2005). Excess deaths associated with underweight, overweight, and obesity. *JAMA : The Journal of the American Medical Association, 293*, 1861-1867.

Giddens, A. (1991). *Modernity and self-identity. Self and society in the late modern age*. Cambridge: Polity Press.

Greene, J. A. (2007). *Prescribing numbers. Drugs and the definitions of disease*. Baltimore: John Hopkins Press.

Guo, S. S., Huang, C., Maynard, L. M., Demerath, E., Towne, B., Chumlea, W. C., & Siervogel, R. M. (2000). Body mass index during childhood, adolescence and young adulthood in relation to adult overweight and adiposity: The fels longitudinal study. *International Journal of Obesity & Related Metabolic Disorders: Journal of the International Association for the Study of Obesity, 24*(12), 1628-1635.

Hammersley, M., & Atkinson, P. (1995). *Ethnography. principles in practice* (Second ed.). London: Routledge.

Harmatz, M. G., Gronendyke, J., & Thomas, T. (1985). The underweight male: The unrecognized problem group of body image research. *Journal of Obesity & Weight Regulation, 4*(4), 258-267.

Johnson, F., Cooke, L., Croker, H., & Wardle, J. (2008). Changing perceptions of weight in great britain: Comparison of two population surveys. *BMJ,* , 337.

Kim, K. H. (2007). Religion, weight perception, and weight control behavior. *Eating Behaviors, 8*(1), 121-131.

Lupton, D. (1995). *The imperative of health. Public health and the regulated body*. London: Sage.

McElhone, S., Kearney, J. M., Giachetti, I., Zunft, H. J., & Martinez, J. A. (1999). Body image perception in relation to recent weight changes and strategies for weight loss in a nationally representative sample in the european union. *Public Health Nutrition, 2*(1A), 143-151.

NHLBI Obesity Education Initiative Expert Panel on the Identification, Evaluation, and Treatment of Obesity in Adults (US). (1998). *Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults. The evidence report.* (No. 98-4083). US: National Heart, Lung, and Blood Institute.

Nissen, N. K., Holm, L., & Baarts, C. (In peer-review). Monitoring the normal body - ideals and practices among normal weight and moderately overweight people.

Nissen, N. K., & Holm, L. (2015). Literature review: Perceptions and management of body size among normal weight and moderately overweight people". *Obesity Reviews, 16*(2), 150-160.

Nothwehr, F., Snetselaar, L., & Wu, H. (2006). Weight management strategies reported by rural men and women in iowa. *Journal of Nutrition Education and Behavior, 38*(4), 249-253. doi:10.1016/j.jneb.2005.11.039

Paeratakul, S., Whithe, M. A., Williamson, D. A., Ryan, D. H., & Bray, G. A. (2002). Sex, race/ethnicity, socioeconomic status, and BMI in relation to self-perception of overweight. *Obesity Research, 10*(5), 345.

Paxton, S. J., Sculthorpe, A., & Gibbons, K. (1994). Weight-loss strategies and beliefs in high and low socioeconomic areas of melbourne. *Australian Journal of Public Health, 18*(4), 412-417.

QSR International. (2015). NVivo 9. Retrieved from http://www.qsrinternational.com/products_previous-products_nvivo9.aspx

Sarlio-Lahteenkorva, S. (1998). Relapse stories in obesity. *European Journal of Public Health, 8*, 203-209.

Smith, L., & Holm, L. (2012). Embodied experiences associated with obesity and the management of body weight. Gender and social differences. *Journal of Food Research, 1*(4)

Smith, L., & Holm, L. (2011). Obesity in a life-course perspective: An exploration of lay explanations of weight gain. *Scandinavian Journal of Public Health, 39*, 396.

Sobal, J., & Stunkard, A. J. (1989). Socioeconomic status and obesity: A review of the literature. *Psychological Bullentin, 105*(2), 260-275.

Spradley, J. (1980). *Participant observation*. New York: Rinehart and Winston.

Stunkard, A. J., Sørensen, T. I., & Schulsinger, F. (1983). Use of the danish adoption register for the sudy of obesiity and thinness. In S. Kety, L. P. Rowland, R. L. Sidman & S. W. Matthysse (Eds.), *The genetics of neurological and psychiatric disorders* (pp. 115-120). New York: Raven Press.

Thompson, S. H., & Sargent, R. G. (2000). Black and white women's weight-related attitudes and parental criticism of their childhood appearance. *Women & Health JID - 7608076, 30*, 77-92.

Wang, Y., & Beydoun, M. A. (2007). The obesity epidemic in the united states - gender, age, socioeconomic, racial/ethnic, and geographic charactheristics: A systematic review and meta-regression analysis. *Epidemiologic Reviews, 29*, 6-28.

Wardle, J., & Johnson, F. (2002). Weight and dieting: Examining levels of weight concern in british adults. *International Journal of Obesity, 26*, 1144.

World Health Organisation. (2008). *Waist circumference and waist–hip ratio: Report of a WHO expert consultation*. Geneva: World Health Organisation.

World Health Organisation. (2015). Http://Www.who.int/mediacentre/factsheets/fs311/en/.

Yaemsiri, S., Slining, M. M., & Agarwal, S. K. (2009). Weight perception and physician diagnosis are strong predictors of weight loss behavior among adults in the united states: The NHANES 2005-2006 study 12. *Obesity, 17*, S305-S305.

Yager, Z., & O'Dea, J. A. (2008). Prevention programs for body image and eating disorders on university campuses: A review of large, controlled interventions. *Health Promotion International, 23*(2), 173-189.

Paper C

Nissen, Nina Konstantin; Baarts, Charlotte & Holm, Lotte:

"Managing the normal body: Self-initiated attempts to maintain or change body size among normal weight and moderately overweight people"

Submitted to *Appetite*.

Abstract

Introduction: People with non-extreme weight have received very little attention in social research on body weight, despite being a highly relevant group in a health promotion perspective. This paper investigates whether normal weight and moderately overweight people actively attempt to maintain or change their own body size and, if so, which practices they adopt, and how the practices relate to health authorities' recommendations and to everyday life.

Methods: The study is based on qualitative methods in the form of in-depth interviews combined with some observation. The 24 participants, recruited by strategic sampling, had self-reported BMIs between 18.5-29.9 and various socio-demographic backgrounds. Inductive analysis was conducted.

Results: The normal weight and moderately overweight participants in our study appear to be very engaged in body size management, attempting to lose weight and improve their shape and firmness, or to maintain their current size. They strongly desire to manage their body size and are confident that they know how to do this. Their practices reflect health authorities' guidelines, but are also concretized and transformed versions of these. Everyday life routines and priorities as well as life events massively influence the attempts to manage body size, in some cases by facilitating body management practices, while in others by hindering them.

Conclusion: To be normal weight or moderately overweight implies ongoing, massive engagement and the handling of obstacles, while everyday life and major life events both facilitate and restrict body size management. This have implications for health promotion as the findings indicate that motivation is already present and that campaigns should give specific suggestions for body size management in the context of everyday life and life events.

Introduction

In a world characterized by a dramatically increased prevalence of obesity as well as a massive focus on health and appearance, we are all encouraged to engage in managing the size of our bodies. Obese people are urged to normalize their size, but also people who are within or close to the medical definition of normal and the ideal weight are continuously reminded of the importance of having a healthy and good-looking body. Health services and authorities campaign and work to prevent and treat of obesity, and their recommendations and initiatives are supplemented by suggestions by the media and alternative experts on how to obtain an appropriate body size.

In social research, much attention has been given to individuals with body sizes associated with remarkable health risks. Numerous studies investigate obese people's engagement in body size management, including motivation, prevalence of various management strategies and experiences with the strategies (Christiansen, Borge, & Fagermoen, 2012; Sarlio-Lahteenkorva, 1998; Smith & Holm, 2012; e.g. Warim, Turner, Moore, & Davies, 2008). Likewise, a number of studies investigate underweight people's ways to manage their own bodies, with most attention being put on people suspected of suffering from anorexia (e.g. Cash & Green, 1986; Nagel & Jones, 1992). These studies are either supplementary to intervention studies aiming to normalize people's size, or they contribute inde-

pendently to an understanding of the experiences and the consequences of having a size highly associated with health risks and social stigma.

In contrast, we have elsewhere found that little is known about people that do not belong to the extreme and very unhealthy categories (Nissen & Holm, 2015). People termed normal weight (BMI 18.5-24.9) and moderately overweight (BMI 25-29.9) share the condition of not belonging to the Body Mass Index (BMI) categories that are perceived as extreme - they are within or close to the medical definition of normal size, associated with low health risk. However, despite this, they are still met by health authorities with guidelines on nutritional and physical activity and recommendations on how to achieve a normal sized body. In Denmark, adults are recommended to eat a healthy diet (including fish, whole grain, lean meat, lean dairy products, fruit and vegetables, water to drink, and with a low intake of sugar and saturated fat), and they are recommended to be physically active for at least 30 minutes per day (including several high-pulse activities every week) (Ministeriet for fødevarer, landbrug og fiskeri, 2015). Among the rather few studies in the field of body management among normal weight and moderately overweight people, most quantitatively measure the prevalence of various body size management strategies and identify social patterns in the practices (Nissen & Holm, 2015). On the other hand, we have identified only small number of studies that consider self-initiated attempts to manage body size from normal weight and moderately overweight people's own perspective and the role that body size management plays in their lives (Allan, 1991; Allan, 1994; Chambers & Swanson, 2012b; Chapman & Ogden, 2009; Gough & Conner, 2006; Mendieta-Tan, Hulbert-Williams, & Nicholls, 2013; Niva, Jauho, & Mäkelä, 2013; Paisley, Beanlands, Goldman, Evers, & Chappell, 2008). These studies investigate body size management in very different ways, for instance identifying stages in weight management (Allan, 1991), exploring individuals' degree of active involvement in dietary changes (Chapman & Ogden, 2009), comparing weight management among successful versus unsuccessful weight maintainers (Chambers & Swanson, 2012b), and focusing on the role of significant others (Paisley et al., 2008), and on the appreciation of foods and drinks designed for weight management (Niva, Jauho, & Makela, 2013). Moreover, several of the few explorative studies within this area have limitations with regards to study design: Some were conducted in the US decades ago (Allan, 1991; Allan, 1994), some include only men or only women (Allan, 1991; Allan, 1994; Gough & Conner, 2006), and one includes only five participants (Mendieta-Tan et al., 2013). This means that the results of these previous studies cannot automatically be assumed to be valid among men and women in a current European context (Nissen & Holm 2015). Still, little is known about body size management among people that are not categorized as extreme in body size, and whether their body size has been attained without any particular effort or is the result of active efforts is unclear.

Governmentality, formulated by Foucault and other thinkers following him, offers a theoretical perspective in which individuals in modern, advanced liberal democracies are understood to be regulated and to regulate themselves in wide-ranging ways (Foucault, 1991; Foucault, 1988b). Through various techniques conducted in institutions and all aspects of social life, governments are understood to discipline individuals in ways that ensure their continued existence; most often in the directions of health, safety and wealth (Lupton, 1995; Rabinow, 1984). At the same time, individuals are found to internalize governmental objectives and values and, therefore, they constantly regulate their own behaviour through various self-techniques (Foucault, 1988a; Rabinow, 1984). Applying this perspective

may contribute to understanding the ways in which normal weight and moderately overweight people experience and incorporate regulation imposed by health authorities in the form of guidelines, as well as the ways they possibly regulate themselves.

In this paper, we investigate self-initiated practices that aim to manage body size among normal weight and moderately overweight people. More specifically, we look at which practices these people perform and how the practices relate to health authorities' guidelines and various aspects of their lives. In an earlier empirical analysis, we found that normal weight and moderately overweight people evaluate body size in terms of weight, body shape and physical firmness (Nissen, Holm, & Baarts, In peer-review). The management practices in focus in the present analysis, therefore, not only address body weight, but also body shape and physical firmness.

Method

The study is based on qualitative interviews combined with some observation of normal weight and moderately overweight Danish people in their homes. The interviews and observations were carried out in 2011. Recruitment was conducted in the form of strategic selection to ensure maximum variation (see Crabtree & Miller, 1999). A market analysis company recruited 24 participants using random sample lists and a small telephone screening questionnaire. Apart from the basic inclusion criterion of being normal weight or moderately overweight (BMI 18.5-29.9, estimated from self-reported weight and height), the selection aimed to ensure variations in social background, age (25-55 years old, evenly distributed), gender (12 women and 12 men), geography (12 from the capital area and 12 from a provincial area of Denmark) and education (none/low; medium length and long education). Further, there was also variation in the participant group regarding employment situation, income, smoking status, and family situation. When invited to participate, participants were told that we wanted to learn about ordinary people's perceptions of their own bodies and their attempts to change their bodies or take care of them in a broad sense. In general, people were sympathetic about the project and few refused to participate.

The interviews were conducted by the first author (NKN), a 32 year-old female who would be classified as being on the borderline between normal weight and moderately overweight. Each participant was interviewed twice, apart from two participants who, for personal reasons, were only interviewed once.

The interviews were semi-structured (see Kvale & Brinkmann, 2009) and were based on an interview guide with overall themes listed as well as suggestions for open-ended questions and related cues for each of the themes. The interview guide was based on topics identified in previous research as being relevant for our research aim as well as topics that we ourselves considered relevant. The main topics were: everyday life, use of items such as bathroom scales, mirror, and clothes, changes of body size through life, reasons for changes, and barriers for changes. During the interviews, the listed themes and questions were used as inspiration and guidance, but changes and reformulations were made to adjust to what seemed relevant in the case of each of the participants.

To facilitate the talks about changes in body size, we included photos in the interviews. Before the interviews, each participant was asked to find two self-portraits, one recent portrait (taken within

the last couple of years) and one earlier portrait (taken 5-10 years ago). During the interviews, the participants were asked to describe themselves as they appeared in the photos, and to discuss any changes that may have occurred during the time between the two photos. This formed the basis for talks about the reasons for the identified changes.

The home visits also involved some participant observation (Crabtree & Miller, 1999; see Hammersley & Atkinson, 1995; Spradley, 1980). This included general observations of the participants and their families, and especially – whenever relevant and possible – observations and talks about relevant material objects that served as management tools, for example mirrors, bathroom scales, wardrobes, refrigerators and fitness equipment. During many of the visits, the interviewer was taken for a guided tour of the home, which was combined with talks about what had been observed. For instance, if some special exercise equipment or the bathroom scales were observed, the interviewer would ask about their use. This way of combing observations and interviews – by bringing material objects into the talks – aimed to deepen the insight into the participants' practices. In total, the interviewer typically spent 2-5 hours together with each participant.

The interviews were recorded and transcribed verbatim on the basis of a transcription guideline. Reflections from the interviews and the observations were recorded in written field notes. The software NVivo 9.2. (QSR International, 2015) was used to manage data. Inductive coding (Crabtree & Miller, 1999) was conducted by identifying relevant themes in the participants' talks, and subsequently the material was systematized according to the themes. The themes which were identified as being relevant for this paper were, 'Practices' (with the sub-themes: 'Frequency of practices', 'Specific practices', 'Aim of practices' and 'Slimming projects'), 'Strong desires, 'Knowledge', 'Guidelines', 'Alternative health concepts', 'Everyday life' and 'Life events'.

Findings

In what follows, we first identify the participants' different practices related to maintaining or improving their weight, shape and firmness. We then examine how these practices are adopted in the context of other daily activities and concerns, and finally we analyze how body management practices are related to life events in the participants' biographies.

Engaging in body size management

The interviews opened with the interviewer briefly informing the participants that the aim was to learn about their perceptions of own body size and experiences with body size management. The participants were then asked to talk about their daily life, taking the structure and content of a typical day as the outset. During this opening talk, many participants mentioned "*periods of slimming*" or just "*periods*", "*rules*", "*things I don't do*", "*I-do-not-eat-that boxes*" and many other phrases describing different attempts to control and change their body size. Thus, an enormous interest and engagement in changing or maintaining body size was revealed in the beginning of the talks with the participants. This interest was evident in all interviews with one exception, Peter, who repeatedly explained that he had no interest or engagement in managing his body size:

> *"I never think about that [the body size]. I have had the same weight, give or take one or two kilograms, for more than 20 years, so there is no need to think about it."*

While underlining that he is not at all involved in body size management, Peter still acknowledged that he would have had to perform body size management if his weight had been unstable. Thus, all participants acknowledged body size management as being relevant.

Among the participants who reported that they attempt to change their body size, almost all aimed to reduce their weight and/or shape, while a few aimed to make their bodies firmer. No one reported that they were trying to increase their weight and/or shape, or reduce their firmness. However, participants made no sharp distinctions between attempts to change or to maintain the size of their bodies. Further, the physical aims of their practices were often vaguely defined and ranged from wanting an ideal body size to wanting an acceptable body size. Helen explains the broad, and somewhat vague, aim of her body size management:

> *"Now I am categorized as moderately overweight, but I would like to have a BMI below 25. Or at least it should not get any worse"*

Therefore, Helen, like many other participants, would ideally like to lose weight, although she also formulates a more pragmatic and less ambitious aim. She simply uses her repertoire of management practices without distinguishing between distinct aims or acceptable results.

Motivation

Why would normal weight and moderately overweight people engage in body size management? When talking about their attempts to manage their body size, the participants again and again referred to two basic factors, which they regarded as crucial for their involvement in controlling their body size, namely a strong desire to control the body and adequate knowledge about how to achieve it.

Our earlier empirical analysis shows that the study participants' body size ideals to a large extent differ from their current body sizes (Nissen et al., In peer-review). Furthermore, the participants talk directly about how they have a strong desire to be in control of their body size. For example Helen said:

> *"I really would like to lose some weight, and that is because of both appearance and healthiness. So, I will have to keep getting on the bike every day and also do some walking too. And I will try to eat as healthily as possible."*

In this statement, Helen refers to health and appearance as her motivation for managing her body size. Thus, she is in line with most of the participants who generally thought it was obvious that their health and appearance are strongly associated with their control over their own body size. This forms an important motivation to achieve this control.

Another motivation is that participants consider themselves to be quite knowledgeable about how to manage their body size. This is illustrated by the numerous tips and tricks they adopt. For instance Tom explained:

> *"I used to thicken the sauce with margarine and flour, you know, making a butter ball. But that ball is saturated in fat, and we should not have so much fat. So now I make the sauce with bouillon and Maizena instead. I have decided to do it that way instead."*

Similarly, Irene has a special method of combining exercise and fewer calories:

> *"When I go running, I go just before dinner. That makes me drink more water which fills my stomach. Then it takes longer before I feel like eating. For some people, running makes them hungry, but you don't if you control the pulse."*

Many of the tips and tricks that the participants have adopted are directly or indirectly inspired by the recommendations provided by health authorities. In some cases, the participants referred to campaigns and other kinds of guidance such as buying food products marked with the keyhole symbol, which is used by the Danish health authorities to indicate that a specific product is healthy (see Fødevarestyrelsen, 2015).

Other tips and tricks were not directly linked to specific recommendations, but are still in line with them, such as never, or very seldom, drinking soft drinks in order to reduce the intake of sugar. The authorities in Denmark have not issued specific instructions about how to reduce sugar intake even though this is an important recommendation. Therefore, participants transform general principles behind dietary recommendations into concrete, manageable guidelines, which they can use in their everyday lives.

At the same time, participants also make use of folk remedies and alternative health concepts or dietary regimes which are not in line with official recommendations. For example, several participants reported to have experiences with leaving sugar and milk out of their diet for shorter or longer periods, referring to the recommendations of a popular Danish health regime called 'Super Healthy Families' (see Mauritson, 2007). The participants had far from fully adopted this regime, only adhering to it for short periods of time and only adopting some of its principles. Nevertheless, this and other regimes were appreciated because they are based on very specific rules about diets and how body size should be managed. Therefore, the participants consider them to be easier to comply with, even though they are too extreme to follow completely and for longer periods of time.

In general, the participants reported that they have sufficient and adequate knowledge to manage their body size with confidence. Illustratively, Monica said about her possibilities to lose weight:

> *"I can easily do it! It will take me three months and my weight will be where I would like it to be. Actually, it is easy. Since I now eat unrestrained amounts of candy, cakes and things like that, I simply need to cut out these things. It's easy!"*

As the participants want to be in control of their body sizes for the sake of their health and appearance, and as they generally believe they have adequate knowledge, they feel both ready and able to manage their body size. Thus, personal responsibility and will-power were highlighted as the causes of their body size and the means to change it.

Body size management in daily life

So far, we have seen that a strong desire, confidence in own knowledge and a feeling of personal responsibility characterize the participants' approach to body size management. Now we take a closer look at how body size management is dealt with and experienced in everyday life. What happens when the participants' engagement, desires and knowledge are put into practice?

The rhythm and routine of body size management

As already indicated, some participants reported that they regularly go through times of organized, intense slimming, which they define as "*periods of slimming*" or simply "*periods*". Others have performed this kind of organized dieting just once or a few times in their lives. During periods of organized and intense slimming, the management practices often dominate the participants' lives. Alex is one of those who, once in a while, go on a diet. He and some colleagues have made a weight club, and a couple of times per year they run a weight loss program for about ten weeks. The program includes weekly weighings and the subsequent paying of fines to a penalty box when weight loss does not reach a set goal. Participants in the weight club run and cycle together several times per week, and they exchange experiences and ideas with regard to dieting. By the end of each period, a winner is crowned, the money from the penalty box is spent on a social event, and the weight club closes down until the participants agree to start another weight loss program.

Alex is generally very happy with the weight club, which he thinks has helped him get his weight down. Nevertheless, he comments on the regular closing down of the club:

> *"That suits me very well. I like the fact that there is a break from the we-are-monitoring-each-other-culture sometimes. It gives me energy to go through another period and it also means that I personally do not have to be so focused on whether I eat five carrots, or a cucumber. It gives me some freedom – I can have pastry for breakfast! When we are in a slimming period, I would never do that."*

Thus, in line with several other participants, Alex, on the one hand, perceives the periods of intense and organized slimming as a good and effective way of changing his body size, while on the other hand, he finds the periods difficult and exhausting. Thus, Alex describes the time between the periods of slimming as time off from controlling his body size. However, a closer look at many of the interviews reveals that the time off from intense and organised slimming does in no way mean that body size management is given up. Even when not undergoing slimming periods, most participants report numerous practices which they use to maintain or change their body size. The interviews with the participants were full of reports of such small managing practices that were omnipresent in their everyday lives. Some examples:

"I have this rule of thumb that I do not eat butter. There are exceptions, but the principal rule is that I do not eat butter." (Laura)

"I have stopped drinking soft drinks. It was one of those bad habits." (Alex)

"I always stuff our meals with vegetables. I think a lot about eating healthily." (Annie)

"I have always believed that doing everyday practical things is a way of exercising; you know to go on the bike to work and to take the stairs instead of the elevator." (Mark)

"I am trying to live a healthy life. Sometimes I hate that I ought to go running and I would find the most incredible excuses for not doing it, if I wasn't going with others (in a running club). But afterwards I feel SO good." (Kate)

These reports illustrate the myriad of practices that make up participants' ongoing efforts to manage their body size. These efforts relate to ways of eating foods and ways of performing physical exercise. Thus, in most interviews, the efforts to manage body sizes included both periods of organized and intense slimming, and numerous other on-going practices, which also take place in periods where participants do not think they are making an effort.

Integrated and unnoticed part of everyday life

Many participants reported that before the first interview they were puzzled about the subject of the study: How ordinary people perceive their body size and deal with it in their daily lives. Several commented that they might not have much to say about the subject because they do not usually think a lot about it.

Nevertheless, as already shown, during the interviews, all participants did actually have a lot to say about their body size. Their initial doubt may be an indication of how they usually relate to their body size in their daily lives. Many of the practices they undertake, which aim to change or maintain body size, are routinized which means that the participants hardly notice them. Laura's rule of not eating butter and Tom's special way of making a healthier sauce are not practices they think much about. Rather, these *"habits"*, *"ways to do things"* and *"rules"* are routinized practices that are well-integrated in their daily lives and are, therefore, hardly noticed.

Practical and structural obstacles

Together with the well-integrated body size management practices, the interviews also included numerous indications of difficulties with integrating body size management practices into everyday life. Difficulties appear to occur when the participants want to establish new and more comprehensive practices.

Many participants declared that their desire to manage their body size is often difficult to fit into their daily lives because of structural and logistical obstacles or because of other activities taking up

their time and energy. For instance, Eric would like to be more physically active as he supposes this would make him lose some of the surplus fat on his stomach, but other important things counteract this. He said:

> *"I take the car to work. I live so close to work that I could bicycle, but if I went by bike I would be very sweaty when I arrived, and I also very often need the car during my work day."*

For Helen as a single mum, a shortage of money, time and energy is a daily pressure that she struggles with when preparing food for the family. She said:

> *"I really try to make sure that we only eat good things. But it is expensive to buy vegetables, especially out of season. And to cook a lot of nice vegetables or salad, and maybe do it two times a day, takes up a lot of time. Often, I don't start cooking the dinner until 20 minutes before we should eat, and then it is like, "Oh no, what do we have that won't take too long?" And then I just cook pasta or something."*

In Eric's case, personal hygiene and commitment to his job overrule his interest in losing weight, while for Helen, her intention to prepare healthy family meals is often spoiled because she cannot afford to buy the ingredients or she cannot find the time and energy to plan and prepare them. Similarly, several other participants reported that they do not feel that they have the time, energy or money to prioritize body size management.

Contradicting considerations

In addition to the practical and structural obstacles, the interviews revealed that positive intentions to initiate body size management often collide with other considerations such as taste for specific foods or values that do not fit well with their intended practices to manage body size. Secondly, they report that the needs and wants of the people close to them often clash with or hinder their intentions to manage their body size. For instance, on the one hand, they would like to serve healthy food to themselves and their family members to improve their health; while on the other hand, they are eager to make everyone happy (and avoid conflicts) by serving their favourite food, which is often not healthy. Many participants, especially those with children in the household, talked a lot about taking other people's preferences and needs into account and trying to balance different considerations. For instance, Helen said:

> *"I really want to take good care of my children's weight and teach them good dietary habits. I know about healthy food. But I have some terribly picky children, and sometimes it is just easier to cook what they like."*

And a little later she added:

> *"It should be bearable. There should be room for sometimes having whatever we like".*

Thus, like in this case of Helen, many participants attempt to promote their own health and the healthiness of family members, but they also aim to facilitate good times together with the latter often limiting practices aiming to manage body size.

Inertia

Everyday life is, to a very high degree, made up of routinized practices and, as described, the participants often experience body size management practices to be well-implemented in their general everyday routines. However, on the other hand, routines sometimes make it difficult to implement new practices for body size management. Many participants simply feel that it is difficult to change and overrule existing practices. For instance, Winnie would very much like to lose weight and she has become aware of the unhealthiest of eating late in the day. She would like to stop doing this, but she finds it difficult because she needs to consider the needs of the other family members, and because of her own bodily cravings: In her family, they often eat dinner very late because the teenage children come home late from leisure activities. Moreover, Winnie personally has a habit of waking up at nighttime with a massive food craving. She explained:

> *"I always get hungry in the night. I wake up in the middle of the night, and my body tells me that it WANTS something. Then I go to the fridge and make myself a roll with prawn cheese or honey. Often I am half sleeping when I eat it, and as soon as I have eaten up, I immediately fall asleep again."*

Another example is Helen, who explained how she is eager to implement new routines that will make her lose weight, but nevertheless finds it difficult to break with the usual practices of eating good food together with other people. She said:

> *"It does not last for more than about 14 days; then I can't motivate myself any longer. Sometimes I say to myself that now I really should lose some weight. Then I make a big effort and I am really careful about what I eat; only the healthy food and the lean, not a one single piece of cake or anything. But then there is a social event or something, and then, well no... Then it is over! And then I can't get back to it again."*

As this comment from Helen exemplifies, many of the participants reported that just a single failure to comply with new management practices often means that they are given up permanently. Dropping new habits in this manner is in contrast to health authorities' guidelines which encourage people to continue healthy practices despite single failures (see Sundhedsstyrelsen, 2011). However, the frequent reports of dropping out indicate how hard-won the new and especially the very comprehensive body size management practices are.

Life events

In the first part of the interviews, the participants usually focused on their strong desire to manage body size, their knowledge, and their struggles to succeed with this in everyday life. An understanding of body size management as dependent on personal will-power and individual responsibility was dominating. However, later in the interviews, when the participants were asked to compare older and more recent photos of themselves, this focus faded and they started to recognize and identify major life events as being important factors for their involvement in body size management. The life events that were repeatedly mentioned in the interviews relate to specific social and/or biological events that typically happen during a life time and are discussed below.

Life cycle changes

A number of biological changes related to life cycle were reported to influence body size management. First of all, many women mentioned pregnancy as a biological event that had changed their body size enormously, and they emphasized the unusual and often uncomfortable experience of losing control of their body size, an experience which often continued after having given birth. Some female participants mentioned how the biological changes influenced their mindset and thus caused even greater changes. For instance, some decades ago during her first pregnancy, biological processes changed Monica's body permanently, and now she believes that the pregnancy also changed her view of her body and her thinking about the opportunities she has to manage her size. When interviewed, she said:

> *"I think it also had to do with some kind of mental shift. Before I had children, my body was my own in another way. I was the one who decided how it should look and how it should be shaped. If I thought something was unsatisfactory, I could just do some exercise and shape it through that. But once I had had children, it was out of my hands. Really, I just couldn't do anything about my stomach."*

Also other biological circumstances influence body size. Some female participants described how biological processes related to puberty changed their body size without them being in control. Similarly, the menopause may be expected to involve biological processes that may influence one's commitment to body size management, although this was not specifically mentioned by any participants.

Many participants talked about how age influences body size as one's metabolism is supposed to slow down with age. They believed that biological changes are linked with mental changes and thus found that their perceptions of and ideals regarding their body size, as well as their interest and ability to influence it, have changed with age. An older body is not expected to be as small and fit, both in terms of health and appearance as a young body. Also, some participants commented that they are less concerned about their body size now than earlier because they do not need to attract a partner since they already have one.

Changes in social relations

In addition to life cycle changes, changes in social relations were mentioned as being life events that influenced body size and body size management. These included changes in close relations such as becoming involved in an intimate relationship, getting married, getting divorced, becoming a parent, but also changes in other relations.

Becoming involved in an intimate relationship often means that the partners relate to their bodies in new ways. Some focus on having a good time with their partner, which often includes eating more unhealthy food and less exercise, which may influence body size. For example, Mariah talked about the *"sweetheart kilos"* that she gained soon after she started dating her boyfriend. On the other hand, Laura reported that she is more inclined to think her body is too big and in poor condition since she got together with her boyfriend, who is rather small and very sporty, and that she would like to change her body and become more like him. Eric's new partner is a former top athlete and, therefore, he is now much more focused on health than he used to be. She has convinced Eric that they should implement the shared rule of saying no to cake in the evenings, and now they are both committed to getting their respective children to eat healthier and do more exercise.

Many participants stated that becoming a parent, and their subsequent life with small children, had had a massive influence on their involvement in body size management. Having children reduced the amount of time, energy and money one can spend on oneself. Furthermore, some participants said that having children had changed or reinforced their values and focus in life in ways that influence their involvement in body size management. For instance, some reported that parenthood had made them more concerned about eating healthy food, but also that it had increased their desire to have quality time with their families, which often involves eating unhealthy food as it gathers the family.

Losing touch with friends, as well as meeting new people or obtaining new equipment, were also reported by many to influence body size management. For instance, Michael used to play football in a local club with his best friends, but since moving to a larger city, he has not found a new team. He is annoyed that he has put on weight since he stopped playing and that his former shape is changing as his large muscles are disappearing. But he has not contacted a club because he does not know anyone, and for the same reason, no one has invited him to join a team. Similarly to Michael, the sharing of practices with others is often motivated by friendship, and several participants reported experiencing huge changes in body size management practices as a result of meeting new inspiring people, either in person or from self-help books and biographies. For instance, Alex explained that reading the biography of a top racing cyclist had motivated him to be more committed to cycling and to never skip any planned exercise. Also, sometimes new equipment inspires the uptake of new body size management practices. For example, by chance, Tom found a semi-professional bike on the Internet that he could buy at a discounted price. Even though he had not cycled regularly before, he bought the bike and has since become a keen cyclist. Now he goes on trips on his own, has joined a club, and participates in races, and not least, he spends a lot of money on equipment. He explained that now he is also motivated by the fact that cycling is good for his bodily fitness and helps him maintain his desired body size, but that this was not something he thought about in the beginning:

> *"It came to me through the back door [in an indirect way]. I know it sounds ridiculous that I am sitting here as a grown up saying that I have realized that cycling is a good thing, just to cycle around. But that is how it is..."*

Thus, for Tom and many other informants, meeting new inspiring people and/or obtaining new equipment, or losing touch with friends, has changed their involvement in body size management in ways they had not planned.

Illness and death

Some participants have experienced huge changes in their own health condition and/or health problems or the death of significant others. When interviewed, they talked about these experiences as wake-up calls that had made them think more about the health and size of their bodies.

For instance, Monica's father suddenly died at the age of 55. His early death was a big shock to Monica and it made her realize that she had copied part of her father's unhealthy lifestyle. Shortly after his death, she heard about Weight Watchers and immediately got hooked. She joined the program and participated in weekly meetings. This resulted in a massive weight loss and Monica felt motivated to change her overall lifestyle and, therefore, decided to also stop smoking. Such rapid and significant changes in body size, reported by Monica and other participants, were triggered by health concerns, although they are not in line with the guidelines as these recommend a gradual reduction in weight when attempting to slim (see Brændgaard, 2015).

Changes in employment situation

Many participants mentioned changes in their employment situation as having influenced body size management in various ways over the years. Shifting from employment to unemployment, or vice versa, can dramatically change involvement in body size management due to changes in location and facilities of the work place or changes in the amount of available free time and personal levels of energy. For instance, Mariah has experienced that the location of a new job relatively close to her home made it possible for her to bicycle to work, and to Monica the loss of a job in a work place with a cantina has meant less healthy lunches.

According to a few participants, initiatives at their work place have induced them to initiate body size management leading to a healthier lifestyle. The initiatives include offers of healthy food in the cantina, and in one case, permission to spend some work time exercising. For example, Alex's weight club started when his work place allowed employees to spend two working hours per week exercising as a new initiative. On this basis, Alex and some of his colleagues started to run and cycle together in their work time. Subsequently they started to weigh themselves jointly, which led to the establishment of the weight club. Moreover, participating in the weight club has made Alex change his practices at home too. He explained:

> *"I have put things a little more into a schedule now. I make sure that I run two times per week and cycle two times per week. And I have stopped eating chocolate in the evenings and drinking soft drinks."*

For Alex, the introduction of new opportunities to eat healthily and exercise at his work place has dramatically changed the way he manages his body size in a positive way. As we have seen throughout this analysis, various life events can have a positive or negative influence on body size management.

Discussion

This paper establishes that the normal weight and moderately overweight people who were interviewed for this study are very much involved in managing the size of their bodies, most often by attempting to lose weight and improve their shape and firmness, or by maintaining their current size. They have a strong desire to manage their body size in accordance with their ideals regarding health and appearance, and they consider that they have adequate knowledge to do this. Even though body size management is not always explicitly considered, it plays an important role in the participants' lives and requires a lot of effort. Each of the normal weight and moderately overweight people in the study has a repertoire of well-established and well-integrated management practices, whereas the participants find it difficult to adhere to and incorporate new practices and especially very comprehensive practices into everyday life. Also, according to the participants, major life events, which have changed their lives in practical, physiological and/or psychological ways, have influenced their opportunities to manage the size of their bodies as well as their degree of in involvement in this. Life events either facilitate or hinder body size management depending on their nature.

In many ways, the findings contradict some basic assumptions about dichotomy in earlier studies. For instance, previous studies have investigated whether people are dieting or not (Allan, 1991), whether they are successful in their body size management or not (Chambers & Swanson, 2012a), or whether their dietary changes are motivated by external factors or are the result of internal decisions (Chapman & Ogden, 2009). According to the findings of this study, such strict categorisations and the notion of mutually exclusive factors are inadequate to understand body size management practices. Rather, our findings suggest that body size management is an ongoing process that involves multiple practices, which may be facilitated as well as countered by numerous factors that blur the distinction between external and internal and between success and failure/ignorance.

Our study finds that the normal weight and moderately overweight people have a strong desire to manage their body size and that they are confident they know how to achieve this. This suggests that the intense focus on motivation and knowledge which is found in many studies within health research (Nissen & Holm, 2015) is inadequate. Our study suggests that health promotion guidance regarding size management practices may need another focus as, on the basis of the interviews conducted for this study, motivation and knowledge appear to be already present.

The management practices adopted by the normal weight and moderately overweight participants in our study clearly reflect especially health authorities' guidelines for weight management, but also other alternative sources. Some of the officially recommended practices have been directly adopted by participants, whereas others have been transformed or participants have incorporated new practices. Such adaptations seem to have been initiated because the normal weight and moderately overweight people want very specific guidelines for action. Therefore, while other studies tend to focus on whether people comply with health recommendations or not (e.g. Chantal et al., 2014), we

suggest that it is more interesting to explore how these people implement the recommendations in practice.

Everyday routines and priorities appear in our study to influence body size management very much. While some management practices are routines which are well established in everyday life, some are difficult to combine with other practical issues and concerns. Similar obstacles have been identified in other studies (Gough & Conner, 2006; Paisley et al., 2008), which underlines the fact that everyday routines need to be carefully considered when developing recommendations for healthy body size management practices. Our finding that different areas of life such as work and family life may mutually influence each other, in this case in relation to body size management, is in line with other studies (Devine, Connors, Sobal, & Bisogni, 2002; Devine et al., 2006; Hochschild, 1997). Thus, being offered the opportunity to eat healthy food or to do exercise at work are found to also result in healthier eating and increased exercise during spare time.

Our study also reveals that major biological and social life events have a huge impact on the normal weight and moderately overweight people's involvement in managing their body size. For example, pregnancy does not just have a direct influence on body size, but it also has an influence on the options available for action, levels of energy and the experience of self-efficacy. Thus, our findings indicate that the normal weight and moderately overweight people are more/less likely to engage in body size management at specific times or as a result of specific events. This is in line with earlier studies which find that food choices develop as a result of biological and social changes during a lifetime (Carter, 2010; Devine, 2005), information which may be beneficial for health care promotion and the prevention of obesity. Major life events may facilitate or hinder management practices depending on their nature, which needs to be considered when developing health recommendations.

The normal weight or moderately overweight participants in this study appear to feel personally responsible for their body size management, but at the same time feel that they have not been completely successful. These feelings of inadequacy are present despite the fact that the normal weight and moderately overweight people put a lot of effort into managing their body size and even though their reports about the influence of life events suggest that body size management is, to a high degree, independent of personality and personal control. This indicates that what these people need may not be more information and moralizing statements about body size management, but rather some specific suggestions on how to actually conduct this in the context of their everyday lives and life events.

The widespread engagement in body size management corresponds with theoretical notions of governmentality, which focuses on the regulation of individuals and their self-regulation in modern societies. The participants in this study have complied with the recommendations outlined by health authorities, and feel responsible for managing their own body size. However, they also conduct numerous body size management practices that do not follow official recommendations. In their own, creative ways they have reinterpreted the recommendations and adapted practices, or have even gone beyond these. Our analysis finds that everyday life and life events influence body size management in ways that may both facilitate or hinder self-regulation. Thus, the normal weight and moderately overweight people can be understood as being regulated by the government, but also as self-regulating themselves in ways that take their specific life situations into account.

Strengths and weaknesses

By focusing on body size management among normal weight and moderately overweight people, rather than those of extreme size, our study contributes knowledge that is lacking in research on body weight.

Our analysis benefits from the in-depth and two-stage interviewing method. In most cases, this helped build confidence between the participants and the interviewer, and the thorough interviewing allowed the collection of detailed descriptions of practices and ideals that may otherwise not have been possible to obtain. More participant observation would presumably have strengthened the analysis further as it would have increased the insights into the practices. Especially, participant observation organised to gain insights in everyday lives periodically throughout lives, as affected for example by life events, and insights into different spheres of lives, for example work life as well as family life, would be relevant. However, we do not see many possibilities for conducting such observation without disturbing the everyday context to such a degree that the idea would lose its relevance.

Our careful selection of participants to ensure a variety of social backgrounds minimized the risk of selection bias and misleading conclusions. However, there is a risk that the attempt to gain maximum variance resulted in the loss of important details. We have not distinguished between specific socio-demographic groups or topic-related groups since our aim was not to point out differences in body size ideals and monitoring practices. On the contrary, we have pinpointed common, widespread ways of managing body size.

Conclusion and implications for practice

The normal weight and moderately overweight people interviewed and observed as part of this study undertake numerous practices to manage the size of their bodies. Body size management is both supported and impeded by everyday life routines and major life events. To a large extent, these people adhere to official guidelines, and they feel responsible for managing their body size. But their practices are also concretized and moderated versions of the guidelines, which they sometimes go beyond. These findings have implications for health policy which may benefit from taking into account the strong motivation, the feelings of responsibility, and the experiences of having adequate knowledge to practice body size management, which this study suggests is already present in the normal weight and moderately overweight people. Further, it would be beneficial if efforts to promote good health take into account the fact that major life events may be barriers to or promoters of body size management and work to reduce structural obstacles to healthy choices in everyday life.

References

Allan, J. D. (1991). To lose, to maintain, to ignore: Weight management among women. *Health Care for Women International, 12*(2), 223-225.

Allan, J. D. (1994). A biomedical and feminist perspective on women's experiences with weight management. *Western Journal of Nursing Research, 16*(5), 524-543.

Brændgaard, P. (2015). *Små skridt til vægttab - der holder.* København: Sundhedsstyrelsen og Komiteen for sundhedsoplysning.

Carter, S. K. (2010). Beyond control: Body and self in women's childbearing narratives. *Social of Health & Illness, 32*(7), 993-1009.

Cash, T. F., & Green, G. K. (1986). Body weight and body image among college women: Perception, cognition, and affect. *Journal of Personality Assessment, 50*(2), 290-301. doi:10.1207/s15327752jpa5002_15

Chambers, J. A., & Swanson, V. (2012a). Stories of weight management: Factors associated with successful and unsuccessful weight maintenance. *British Journal of Health Psychology, 17*(2), 223-243.

Chambers, J. A., & Swanson, V. (2012b). Stories of weight management: Factors associated with successful and unsuccessful weight maintenance. *British Journal of Health Psychology, 17*, 223-243.

Chantal, J., Peneau, S., Andreeva, V. A., Mejean, C., Fezeu, L., Galan, P., & Hercberg, S. (2014). Weight-loss strategies used by the general population: How are they perceived? *Plos One, 9*(5).

Chapman, K., & Ogden, J. (2009). *How do people change their diet?: An exploration into mechanisms of dietary change*.

Christiansen, B., Borge, L., & Fagermoen, M. S. (2012). Understanding everyday life of morbidity obese adults - habits and body image. *International Journal of Qualitative Studies on Health and Well-Being, 7*, 17255.

Crabtree, B. F., & Miller, W. L. (1999). Using codes and code manuals: A template organizing style of interpretation. In B. F. Crabtree, & W. L. Miller (Eds.), *Doing qualitative research* (Second ed.,). California: Sage.

Devine, C. M., Connors, M. M., Sobal, J., & Bisogni, C. A. (2002). Sandwiching it in: Spillover of work onto food choices and family roles in low- and moderate-income urban households. *Social Science & Medicine, 56*(3), 617-630.

Devine, C. M., Jastran, M., Jabs, J., Wethington, E., Farrel, T. J., & Bisogni, C. A. (2006). "A lot of sacrifices:" Work-family spillover and the food choice coping strategies of low wage employed parents. *Social Science and Medicine, 63*(10), 2591-2603.

Devine, C. M. (2005). A life course perspective: Understanding food choices in time, social location, and history. *Journal of Nutrition Education and Behavior, 37*(3), 121-128.

Fødevarestyrelsen. (2015). Herrefedt! kig efter nøglehullet når du køb mad. Retrieved from http://www.noeglehullet.dk/Forbruger/forside.htm.

Foucault, M. (1988a). Technologies of the self. In L. H. Martin, H. Gutman & P. H. Hutton (Eds.), *Technologies of the self: A seminar with michel foucault* (pp. 16-49). Amherst: University of Massachusetts Press.

Foucault, M. (1991). Governmentality. In G. Burchell, C. Gordon & P. Miller (Eds.), *The foucault effect: Studies in governmentality*. Chicago: University Of Chicago Press.

Foucault, M. (1988b). The political technology of individuals. In L. H. Martin, H. Gutman & P. H. Hutton (Eds.), *Technologies of the self, a seminar with michel foucault* (). Amherst: University of Massachusetts Press.

Gough, B., & Conner, M. T. (2006). Barriers to healthy eating amongst men: A qualitative analysis. *Social Science & Medicine, 62*(2), 387-395.

Hammersley, M., & Atkinson, P. (1995). *Ethnography. principles in practice* (Second ed.). London: Routledge.

Hochschild, A. R. (1997). *The time bind. When work becomes home and home becomes work*. New York: Metropolitan Books.

Kvale, S., & Brinkmann, S. (2009). *Interviews. learning the craft of qualitative research interviewing* (Second ed.). California: Sage.

Lupton, D. (1995). *The imperative of health. Public health and the regulated body*. London: Sage.

Mauritson, N. (2007). *Kernesund familie sådan! livsstil, uden sukker, stress og kemi, passer ind i din hverdag og ændrer den for evigt*. København: Politiken.

Mendieta-Tan, A., Hulbert-Williams, L., & Nicholls, W. (2013). Women's experiences of using drugs in weight management. An interpretative phenomenological analysis. *Appetite, 60*, 220-225.

Ministeriet for fødevarer, landbrug og fiskeri. (2015). De officielle kostråd. Retrieved from http://altomkost.dk/raad-og-anbefalinger/de-officielle-kostraad/.

Nagel, K. L., & Jones, K. H. (1992). Sociological factors in the development of eating disorders. *Adolescence, 27*(105), 107-113.

Nissen, N. K., Holm, L., & Baarts, C. (In peer-review). Monitoring the normal body - ideals and practices among normal weight and moderately overweight people.

Nissen, N. K., & Holm, L. (2015). Literature review: Perceptions and management of body size among normal weight and moderately overweight people". *Obesity Reviews, 16*(2), 150.

Niva, M., Jauho, M., & Mäkelä, J. (2013). "If I drink it anyway, then I rather take the light one". appropriation of foods and drinks designed for weight management among middle-aged and elderly finns. *Appetite, 64*, 12-19.

Paisley, J., Beanlands, H., Goldman, J., Evers, S., & Chappell, J. (2008). *Dietary change: What are the responses and roles of significant others? 21*

QSR International. (2015). NVivo 9. Retrieved from http://www.qsrinternational.com/products_previous-products_nvivo9.aspx.

Rabinow, P. (1984). Introduction. In P. Rabinow (Ed.), *The foucault reader. an introduction to foucault's thought* (). London: Penguin.

Sarlio-Lahteenkorva, S. (1998). Relapse stories in obesity. *European Journal of Public Health, 8*, 203-209.

Smith, L., & Holm, L. (2012). Embodied experiences associated with obesity and the management of body weight. Gender and social differences. *Journal of Food Research, 1*(4).

Spradley, J. (1980). *Participant observation*. New York: Rinehart and Winston.

Sundhedsstyrelsen. (2011). *Vurdér dine vaner og tag det første skridt*. København: Sundhedsstyrelsen.

Warim, M., Turner, K., Moore, V., & Davies, M. (2008). Bodies, mothers and identitites: Rethinking obesity and BMI. *Sociology of Health and Illness, 30*, 97-111.