

Online weight-loss services and a calculative practice of slimming

NOTE: This is the accepted version of the article submitted to Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine (2015), DOI: 10.1177/1363459315622042.

Mari Niva
University Researcher, PhD, Adjunct Professor
Consumer Society Research Centre, Department of Political and Economic Studies
University of Helsinki
P. O. Box 24 (Unioninkatu 40)
FI-00014 University of Helsinki, Finland
Tel. +358 50 574 4967, +358 29 412 0916
Email mari.niva(at)helsinki.fi

Abstract

This study examines the slimming practice produced by Internet-based weight loss services and their use. Drawing on theories of practice the study analyses the script of use that is constructed by the services, and the meanings, materialities and competences that are enacted in their use. Based on 20 semi-structured interviews with women who were users of two Finnish online weight-loss services, the study concludes that the services transform food into quantitative depictions of calories and nutrition. They configure slimmers as calculative agents and slimming as a practice based on incessant recording and monitoring. For online slimmers, the services acted in the double role of a control device with a focus on calorie restriction, and a learning device used to develop a skill of healthy eating. In the latter role, online slimming was hoped to result in an internalisation of a lifestyle change that would make calculation and constant monitoring unnecessary and the services redundant for their users. The results suggest that for its practitioners, online slimming is temporary rather than long-standing, but it may and is expected to act as a mediary in establishing other practices related to healthy lifestyles.

Keywords

online weight loss service, practice, self-monitoring, slimming, users

Introduction

In contemporary societies health and well-being are pervasive ideals, the attainment of which is thought to be reflected in individual bodies: a body that is thin and fit-looking is regarded as a healthy, cared for body, less vulnerable to ‘lifestyle’ diseases.

Interlinked with these ideals are current aesthetic body norms, in which beauty is equated with slim and tight bodies (Sassatelli 2010). Taking care of the body has become the moral duty of responsible ‘healthy’ citizens (Petersen and Lupton 1996) who ‘read’ their own and each others’ bodies as inscribing particular meanings and through their size confessing their pathologies (Murray 2009). In order to conform to these aesthetic and moral norms, bodies are worked upon through dietary regimens, exercise programmes and in general ‘healthy lifestyles’, which are hoped to keep the body in the desired shape or to mould it to get closer to the ideals (Crossley 2005, Crawford 2006). Although these bodily ideals increasingly apply to both genders, it is even today particularly women who are subject to the pressures of slender bodies, and discrimination and stigma when not conforming to the idealised thinness (Harjunen 2009). Slimming is more common among women than men (Wardle et al. 2004), and

during the past decades it has become normal for women to diet, irrespective of their weight (Germov and Williams 1996).

This study examines women working upon their bodies when following a slimming diet and using an internet-based slimming service, and discusses what kind of a slimming practice such services and their use produce. The study is inspired by practice-theoretical perspectives (Warde 2005, Shove et al. 2012) that share an interest in studying the ways in which practices of everyday life take shape, are carried out, and intersect with other practices of daily life. Practices are looked at as both entities and performances, which exist ‘outside’ individual actors, but are enacted, modified and discarded by individuals who are carriers of the practice or its ‘practitioners’. Practices consist of both doings and sayings based on which they are recognizable to others. Concepts such as understandings, procedures and engagements (Warde 2005), and meanings, materials and competences (Shove et al. 2012) are integral in theories of practice. Recently practice-theoretical approaches have emphasized the role of eating as one of the key practices of everyday life that configure daily rhythms and social life (Halkier 2010, Warde 2013). At the same time, everyday practices are consequential in terms of bodily health and well-being, and efforts to eat healthily and control weight play an essential role in taking care of the body.

From a practice perspective, slimming can be conceptualised as a practice comprising meanings and understandings related to bodies and ways of shaping the body; practical competence and learning by doing slimming and engaging with it; as well as the material world in which slimming is enacted, consisting of the bodies themselves, foods, various slimming products and tools; and the social and physical settings of

doing slimming. Online slimming services provide a novel kind of a material tool that, to use a term adopted from social studies of technology, ‘scripts’ (Akrich 1992) slimming. The concept of script implies that the design of an object or a service incorporates a number of assumptions of the ways in which it is used and of the preferences, competences and tastes of its users. The object ‘configures’ its users and steers them to certain ways of thinking and acting, while preventing or discouraging alternative ways of doing (Ingram et al. 2007). Similarly, online slimming services demarcate the boundaries for acting towards weight loss, potentially transforming the meanings, required competences and materialities of slimming.

Online weight-loss programmes and their users have recently been examined in medical and nutritional studies which have concluded that engagement with self-monitoring tools is associated with success in weight control (Johnson and Wardle 2011, Postrach et al. 2013) and that visualisations of progress and physiological calculators are important for the users (Krukowski et al. 2008). However, these studies lack a social scientific understanding of the practice of slimming that is generated by the services and their use: little is known about the script of slimming constructed by the services, the meanings, materialities, and competences enacted when making sense of and using the services, and the ways in which the users integrate the various tools into their everyday social and material realities. This study aims to analyse online slimming services from a practice perspective, highlighting the script of use produced by the services, the meanings, materialities and competences enacted in use, and the appropriation of the services in everyday life.

Dieting and self-improvement through numbers

Slimming diets are one of the most recurrent means of striving towards bodily ideals. Indeed, surveys suggest that in western countries a large share of adults have slimmed down during their life or are deliberately trying to prevent weight gain. For instance, in 2006 as many as 38% of EU citizens thought they weighed too much, and 21% had been on a diet during the past year (European Commission 2006). In a Finnish study among the working-age population, 17% of men and 28% of women reported that they were trying lose weight (Helldán et al. 2013). Recently, debates on the best and healthiest ways to lose weight have been characterized by decreasing trust in expert knowledge and an increasing reliance on individual experiences and ‘listening to the body’ (Jauho 2014). In addition, instead of focusing on weight only, the current debates seem to promote a more comprehensive focus on healthy lifestyles, ideally achieved through a combination of various techniques of healthy diets and exercise (Jallinoja et al. 2009).

At the same time, slimming is increasingly commercialized and commodified into diet books and magazines, slimming competitions in reality TV shows, dieting courses, and personal trainers’ services. A more recent phenomenon is the proliferation of various internet slimming services with more or less detailed calorie counters, expert advice and peer support. The two services that are the focus of this study are part of this trend, both including bodily measurement sections, food diaries with detailed recordings of all foods eaten, exercise diaries, expert articles, and discussion groups for the users to take part in. The services thus provide both individualized records focusing on calorie intake and consumption, and support by experts and the peer community.

From a nutritional science perspective, measuring food intake is not a new invention. As Mudry (2009) has noted, for more than a hundred years debates on food have employed a discourse of quantification, in which eating becomes a question of scientific determination of what and how much to eat for optimal nutrition. Calories as a way to measure nutritional needs were invented in the late 19th century (Mudry 2009), and some decades later the North American public came to know dieting based on calorie counting through physician Lulu Hunt Peters' (1918) popular book *Diet and health*. In nutrition research, calculative systems such as food diaries, 24-hour recalls and food frequency questionnaires have been used for decades and are today standard tools in dietary assessment and medical weight loss counselling (e.g., Duodecim 2013). Among the public, one of the most widely known commercial dieting programmes is Weight Watchers, which is based on a food diary and a simplified counting system in which the energy and nutrient content of foods is expressed as 'points' to be consumed in each day. Cressida Heyes (2006: 128) notes that the Weight Watchers' counting system entails a 'self-construction of a docile body through attention to minutest detail'.

As well as being part of the long history of calorie counting, internet-based slimming services share some features with the push towards 'everyday analytics' (Pantzar and Ruckenstein 2015), 'quantified self' (Swan 2013), or 'voluntary self-tracking strategies' (Lupton 2013), encompassing an array of technologies that enable continuous monitoring of individual bodies, such as exercise, stress, and sleep. Advanced health monitoring appliances and mobile technologies now promote collecting and tracking information about one's body not only for personal self-reflection but also for the peer community to see and discuss. While the quantified self movement is best known for promoting advanced measurement devices attached to the body and sharing the data

with self-tracking communities, less technical methods of self-tracking, such as diet and exercise monitoring, may appeal to larger populations possibly with less enthusiasm for collective sharing. The users of the weight-loss services in this study register their eating and exercising activities into the programme, which then transforms them into numerical and graphical representations and stores them for later reflection. Similarly to other everyday analytics techniques, these weight-loss services contribute to the vision of bodies as malleable, administrable objects, envisaging self-improvement via numbers and calculation, and implying new conceptualisations of bodies and health (cf. Lupton 2013, Pantzar and Ruckenstein 2015). However, advanced self-tracking techniques and weight-loss services differ in terms of convenience: while in the former generating and storing the data is close to automatic, in the latter it is the responsibility of the user, a feature which, as it turns out in the analysis that follows, is crucial in the overall experience of the services.

Data and method

The study is based on semi-structured interviews with 20 users of two Finnish online weight-loss services, Kiloklubi (www.kiloklubi.fi) and Keventäjät (www.keventajat.fi). The author of this article was responsible for the data collection and the analysis. The informants were recruited by announcements placed onto the internet sites of the services. Due to the fact that the pages of the sites are continuously updated, the announcements were easily seen only for a few days' time. The announcement text explained that a study examining women's experiences and views on weight loss, health and bodies is searching for interviewees who hope to lose at least five kilos of their

weight, whose body mass index is at least 25 kg/m² and who are members in an online weight-loss service. Based on the ethical principles in social sciences laid out by the Finnish Advisory Board on Research Integrity (2009) ethical approval was not considered necessary and was not applied for.

Altogether 26 people indicated initial interest by email, but six of them dropped out when arranging for a suitable interview time. The 20 semi-structured interviews (12 with users of Kiloklubi, 8 with users of Keventäjät) were arranged at the National Consumer Research Centre (since 2015, Consumer Society Research Centre) in Helsinki in November and December 2012. The interviews were divided into four thematic areas: experiences and ways of using online weight-loss services, personal histories of slimming and reasons for the current weight-loss effort, ways of doing slimming, and descriptions and hopes concerning one's own body. The length of the interviews varied between 60 minutes and 2 hours 40 minutes. They were audio-recorded and subsequently transcribed verbatim into Word files.

After the interview, the informants filled in a two-page paper questionnaire which inquired about socio-demographic backgrounds as well as some basic information about weight loss targets and prior weight loss efforts. As a compensation, the informants were given a gift voucher worth 20 euros. In addition, they received a form required by the Finnish Personal Data Act (523/1999) describing what purposes the data were collected for and how the data were to be stored and protected.

In order to examine what kind of a position online slimming took in their lives on a longer term basis, the informants were contacted by email a little over one year later and

were asked to fill in a short online questionnaire inquiring about their practices of slimming during the past year. The survey included mostly open-ended questions in which the informants were asked to write down their experiences of using internet-based and other weight-loss services, ways of monitoring their eating patterns, and their current thoughts about slimming. All informants completed the survey, and they were compensated with two free tickets to the cinema. The responses were saved into Word files. This article is for the most part based on data generated in the interviews, but the online questionnaires are used in detailing on how the practice of online slimming changed within a roughly one year's period in the the informants' lives.

Nearly all informants (16) had been on a weight-loss diet at least three times before or were continuously slimming. For two informants, this was the first time of dieting. At the time of the interviews, their weight-loss targets varied between a few and 53 kilos (average 23 kg). Their social backgrounds varied in terms of age, education, and occupation, but as a whole, they can be characterised as mostly middle-aged, relatively educated and quite well-off. They were 21–66 years old (average age 42), and fourteen had either a higher or a lower academic degree. Eleven informants were working in leading, higher or lower clerical positions, five were blue-collar workers, two students and two retired.

The scripting of slimming in the services was analysed by a close examination of the contents of the services, the author testing the diaries by using them herself for a short period of time, and studying the feedback provided by the services. The interview transcripts and the survey responses were read through several times taking notes and developing a categorization of themes inspired by both practice-theoretical concepts

(such as meanings and experiences of slimming, skills that slimming requires, reflections on food and the body) and topics that came up in the interviews (such as the focus on calculation and learning healthy lifestyles). Notes and interview transcripts were compiled into a table format in which the categories were placed in columns and informants in rows, making it easy to arrange the data both column- and row-wise. The cells in the table included both author's notes and quotations from the interviews. The table was then analysed by identifying the meanings, materialities and competences related to using online weight-loss services. In the following, quotations from the interviews are identified by the number of the interview and the number of the page in the transcription.

Findings

How the services script slimming

Both of the online services examined for this article are maintained by large Finnish media companies, MTV and Sanoma Media Finland. A one year subscription to Keventäjät ('Lighteners') costs 79 € (shorter periods are relatively more expensive), whereas Kiloklubi ('Kilo Club') is free of charge. On their Internet pages, both services advertise themselves as easy-to-use weight loss help: 'Kiloklubi offers tools for weight loss, feedback on your lifestyle, expert help' (<http://kiloklubi.fi/>; 23.8.2013); 'Join Keventäjät! Only a few minutes a day is enough. Easy tools. Best experts to help you. Thousands of recipes. (<http://www.keventajat.fi/>; 23.8.2013). In the following, I will

briefly look at how the two services script slimming, i.e., what kind of a material environment and conditions for slimming are created and how users are configured.

Before starting the use of the service, the user has to register and create a personal profile. The details of the profile vary somewhat between the services, but both include gender, age, height, current weight, weight reduction target, everyday activity level, and exercise profile. Lighteners allows the user to define a time schedule for reaching the target weight, whereas in Kilo Club, the programme sets a weekly weight loss target of 300–800 grams described as a ‘healthy pace’, and determines the time required to reaching the total target. Based on the profile, the programmes calculate a personal recommendation for the daily intake of energy. The services thus construct slimming as a question of a daily energy balance which depends on gender and age but also on individual bodily characteristics, activity level, and weight-loss targets.

In both services, a core element is a food diary which the user is encouraged complete on a daily basis in order to monitor not only energy intake but also the nutritional quality of the diet. Both services promote eating proper meals at regular times, including breakfast, lunch, dinner, and some healthy snacks. Favouring fruit and vegetables, eating enough fibre and avoiding too much sugar are the basic principles of both services. However, while Lighteners draws strictly on established nutrition science represented by the national nutrition recommendations, Kilo Club allows for more individual variation, most notably in permitting higher variation in fat and protein (25–65% of total energy from fat and 15–35% from protein) compared to national recommendations (25–40% from fat and 10–20% from protein, see National Nutrition Council 2014).

In the food diary, the user records the volume (in grams or number of pieces) of foods eaten at different meals of the day by selecting items from a pre-defined list including thousands of foods. The programme then calculates the calories and the percentage shares of carbohydrates, fat, protein, and alcohol of total energy intake, and compares these to the personalized recommendation. Lighteners also counts the gram amounts of vegetables, fibre, salt and water, divides fat into soft and hard fats, and presents bar charts comparing the actual shares of energy nutrients to those recommended. Kilo Club presents coloured illustrations – green, yellow or red balls –, depicting whether the user has reached the daily targets for vegetables, energy, goodies and fibre. By clicking the ball the user sees a verbal description of what the colour means and further instructions for performing better.

In addition, the services include a measurement section for weight (weekly) and waist circumference (weekly or monthly). Based on the measurements, the programme generates a chart showing past development and the current distance from the target. In addition, the use of an exercise diary is recommended, making possible a more exact calculation of calorie consumption. A recipe section instructs on preparing healthy low-calorie meals, expert articles and ‘success stories’ offer knowledge and motivational support, and finally, discussion groups enable interaction with other users.

As a whole the services script slimming as rationalised action towards a goal, and both the action and the goal are represented by numbers and charts. They configure users as active agents who think about food in terms of numerical descriptions of calories and nutrients, and constantly monitor their eating in order to lose weight in a nutritionally

optimal way. The script constructs users as ‘calculating selves’ (Miller 2001: 380) or ‘calculative agents’ (Callon 1999: 184), who are able to picture for themselves different ‘states of the world’, rank them, identify courses of action and choose the optimal one (ibid.). This calculative agent is expected to adopt an approach to eating which is based on, first, carefully choosing an appropriate combination and amount of foods; second, measuring the foods; third, filling in everything eaten into the diary; and fourth, familiarising oneself with the resulting estimation of energy balance and nutrition as demonstrated by the food diary through charts, figures, and numbers in different units of measurement, such as calories, grams and percentages. Furthermore, the calculative agent regularly measures her body, and records it in the service on a weekly basis. The next sections focus on the encounters between this script and the users, and look at the practice of slimming that develops in this interaction in terms of the meanings, materialities and competences related to the practice.

Meanings: liberal and communal slimming

While nearly all of the informants were experienced dieters and had tried a variety of aids to weight loss, they still found new and inspiring elements in the use of the online slimming services, as shown below. Particularly the middle-aged and older informants reflected on their earlier slimming experiences, and compared the ideologies and practicalities of different slimming systems. For them, the online services represented a liberation from the strict rules of most diets, because “it’s normal food, and in principle, you don’t have to give up anything and you can take it easy” (Int20, 1). The informants liked not being accountable to anyone but themselves, and noted that the services attended to this by providing the users a freedom to choose their own weight loss targets

and timeframes, to decide for themselves what to eat and how to exercise, as well as to develop their own routines of using the service. Compared to the Weight Watchers' 'point tables' which the majority of the informants were familiar with, and to the potentially embarrassing public weighing at the meetings, the online services allowed for more personal freedom in terms of how to eat as well as more privacy and less shame related to changes in body weight.

Although the services in this way offered a means for private and solitary weight loss projects, the services still had meaning as a communal practice of slimming. The informants felt they were part of a weight-loss community, even if they didn't actively take part in the services' discussion forums. Only a few informants actively read the entries in the discussions, and fewer still had ever commented on other users' messages themselves. For some, however, the discussion groups were an inspiration and a way of keeping motivated to keep on slimming. Similarly, expert articles and recipes were utilized only sporadically. Seemingly the mere knowledge that there was a large group of other users filling in their diaries and watching their weight was enough to evoke a sense of a community of 'practitioners of online slimming' around a single dieter. For the informants, the services afforded individual freedoms that other types of weight loss groups rarely did, while they still catered for a sense of collectivity in performing slimming as an online practice. Paraphrasing Parviainen (2011), this 'impersonal co-slimming' provided for individualised action guided by a standardised system, together with an experienced feeling of sharedness, without the repressive social control, shame and competition prevalent in many diet groups today.

Materialities: quantification work

As described above, the services construct a script of a slimmer who is prepared to use time for reporting their eating in detail, is interested in and/or motivated by numbers and visualisations, and is literate enough to be able to interpret the information correctly. This script of slimming as a calculative activity resonated with the informants' descriptions of their slimming and eating practices. In fact, their stories about their earlier slimming episodes, some starting in the early 1970s, revealed that they were familiar with counting calories, or points, as is the case in Weight Watchers. At the time of the interviews, the informants carried out the 'quantification work' required by the services in several interconnected ways, including planning their eating, developing strategies for registering the foods eaten, measuring their bodies, and making use of the visualisations generated by the services. In the following, these material aspects of slimming with the services are described in more detail.

First, the informants described how the services required them to time and plan the contents of their meals beforehand for best results. This was not always possible or was considered too demanding, so for instance when lunch was bought at work canteen, strategies such as using small plates or taking more salad than the main course were developed to ensure that the meal was nutritionally satisfactory and did not contain too many calories. Some informants filled in the diary several times a day, right after every meal, enabling them to attain real time feedback of the calories and nutrients eaten during the day, and to see how many calories they "had left" to eat in the evening and which nutrients were lacking. Others were not into this detailed optimization, and filled in the diary in the end of the day in order to check whether the daily targets had been met.

Second, the informants described how they realised that the services gave exact feedback only if the amount of all foods eaten was recorded accurately. This required weighing all foods, although some foods could be entered as number of pieces (such as ‘one banana, small’). For everything to be registered meticulously, one should either eat and cook simple foods which can be recorded ingredient by ingredient, eat food brands available in the services’ food list, or use ready meals with nutrition information which the users can enter into the system themselves. Those informants who regularly lunched at work canteen or restaurant found that they couldn’t evaluate the contents and volumes of their lunch in detail. Some settled for approximations, selecting an option from the diary’s food list that most closely resembled what they had eaten, while others turned to packed lunch prepared and weighed at home. The kitchen scale was typically in intensive use when starting to apply the food diary, and later, when the weights of familiar foodstuffs were remembered, the scale was used mainly for checking that “one’s eyes don’t lie”.

Third, the services quantified food but also bodies, and as instructed by the services, many informants regularly recorded both their weight and their waistline. The most important bodily measurement device was the person scale, which was considered an “objective” way of measuring weight and the informants agreed that seeing the numbers on the scale go down gave them a deep sense of gratification. The informants weighed themselves at least weekly – some did this on a daily basis or even several times a day – and entered their weight into the online system. For them, kilograms and the BMI score were important markers of changes in the body, giving support to Halse’s notion of weight and the BMI as a ‘virtue discourse’ (Halse 2009: 47).

Fourth, the food diary and the measurement sections generated numbers and graphics that gave the informants a particular material representation of both the food they ate and their bodies. The computerised programme transformed the realm of eating into nutrients and energy values, and by so doing, made the science of nutrition tangible and concrete. The usefulness of seeing how the foods eaten turned into numbers was almost invariably unquestioned, and the informants were inspired by the illustrations, curves and bars the services produced. As one of the most engaged users explained:

” [...] I could see that I’m beginning to do it right, all these calories and the diaries. And [...] the [weight] curve shows that you’re getting closer to the target. [...] And what can be more thrilling than looking backwards, you can look at least half a year, and damn, you can see all the numbers there.” (Int1, 12)

This calculative approach was by some informants described as “rational” and suitable for those like themselves who “like numbers” (Int1, 5), and the diary helped to get “a better knowledge of how one’s nutrition is numerically” (Int8, 5). However, many tried to eat less than the programme suggested, either because they had not lost weight as fast as they had wished, or because they suspected that the programme overestimated their daily energy needs. Although this implied that the programmes were unable to take into account individual differences in metabolism, the informants did not question the scientific basis of the services. Numbers were real and convincing, and the informants trusted both the numerical description of their diets and the doctrines of healthy nutrition that the services advanced (cf. Mudry 2009).

However, the generally favourable position towards the diaries was not shared by everyone: one critical informant recalled that when she started using the service, "I had the kitchen scale [available] all the time and I weighed every gram of every food, and I marked every piece I put in my mouth, and [...] I thought that if this won't cause an eating disorder, then nothing does, so I think it's a totally sick system" (Int9, 1). Indeed, this criticism is in line with Heyes' (2006) notion of organized diet programmes such as Weight Watchers requiring so much attention to food that it resembles the compulsive behaviours of eating disorders. In summary, then, the food diary seemed to present a perspective on food that was either fascinating and informative, encouraging engagement with online slimming or frustrating and annoying, thus discouraging any committed use of the service.

Further criticism towards online slimming was presented by those with small children, for whom it was a challenge to reconcile family care through food with the services' calculative approach to eating. Similarly, diary-filling had proved thorny when visiting relatives or friends, going to a party, or making a holiday trip. As one informant noted, "[w]hat you do [in terms of eating], it's mathematics, you can calculate it and think of it from that perspective, but the challenging thing is the social part and the restrictions that it brings" (Int8, 22). Offending other people by refusing the food prepared for them was an unappealing option, and when needed, the informants were mostly ready to sacrifice the calculative practice for sociability. In these situations, they recorded their eating in a "strong realistic" manner (Int6, 7), made rough approximations, or kept a "day off" (Int20, 2). In these accounts, it was rather social well-being than health that was emphasised, and it was stressed that indulgence can be allowed in moderation, as

‘negotiated pleasures’ (Jallinoja et al. 2009), which one can enjoy without guilt and which do not destroy the weight loss project as long as the regime of ”sensible” eating is not threatened.

Competence: learning and internalising

In contrast to their earlier slimming episodes during which many informants had lost weight but sooner or later regained it, the current monitoring of the diet was constantly described as part of a permanent *lifestyle change* rather than (only) slimming. The informants hoped to “learn” the skill of sensible and “right” eating that would carry them beyond the anticipated difficulties of preventing weight regain, a competence that would denote mastering one’s body: being in control of cravings, able to listen to the body’s needs, and respond to them in a way that advances its health and well-being. This was something that the informants felt they had not mastered before, but they were, in varying degrees, hopeful that they were on their way to new selves who would have this capacity. As one of the informants noted, ”I haven’t thought about this as a diet [...]. My lifestyle was totally, catastrophically wrong. For me this is a lifestyle change” (Int8, 9) (cf. Heyes 2006). For these informants, if they were successful, a ‘healthy lifestyle’ could lead to a more permanent self-transformation and an end of the ‘liminal state’ of fatness (Harjunen 2009, 63). Indeed, as Heyes (2006, 137) has noted, weight-loss businesses ‘exploit not only the desire to produce an appropriate body (with all the symbolism that adheres to it), but also the sense of self-development, mastery, expertise, and skill that dieting can offer’.

In this process, the use of the food diary was an indispensable aid for most informants. They constantly referred not only to the usefulness of seeing the individualised and detailed information of their diets in the food diary, but also of “internalising” the information so that eventually they could succeed in becoming skillful practitioners of sensible eating. The programme was trusted because “it teaches the right food habits” (Int5, 2) instead of recommending “500 calories a day and the awful powder soups” (Int19, 4). As noted above, instead of dictating what to eat or providing a ready model menu to follow, the food diary encouraged the user to find her own personalized weight-loss diet through constant deliberation of nutrition and calories. For the informants, having to choose for themselves – which they framed as a freedom – was one of the key elements of enabling learning and internalising in the long term.

In general, the informants shared very similar wishes for the future: “when you’ve internalised the teachings [...] then you can like eat the right way without thinking” (Int5, p. 23), or “I hope that ... I won’t have to struggle with it but it’s a normal way to live at that stage” (H14, 11). Notably, in these notions of a new, liberated future self (McGinty et al. 2013), the hopes for internalising focused on a new way of eating, and not on the calculative approach to eating promoted by the diary. Instead of hoping to learn calories, nutrients and appropriate portion sizes by heart, the informants dreamt of a future self who could eat without weight-related worries and anxieties.

The focus on learning and internalisation was related to the ways in which the informants reflected on the temporal position of the food diary in their lives. It was obvious that a meticulous recording of all foods eaten was not a practice that any of the informants had planned to carry out for the rest of their lives. “It would feel quite crazy

to use the programme from now to the eternity” (Int15, 20), as one of them said. The wish to learn and internalise can be seen as a solution to the obvious tension between the intended permanence of developing a healthy lifestyle and the temporary nature of committing oneself to the food diary. Some had planned a longer-term learning period in advance, not only when slimming but also after reaching the target weight, in order to better master themselves and their diets: “if you you stop [using the diary] too soon then maybe little by little you forget and then you start enlargening the portion sizes, because anything you don’t record, you don’t notice” (Int14, 8). Some trusted that a slow process of losing weight would produce permanent results: “I think if I keep on eating the amounts [of food] that they recommend for a year or a year and a half, then it will impress itself [in the mind]” (Int16, 16). Others not so confident about the permanence of the lifestyle change pondered on the possibility of going back to filling in the diary should they feel the need for guidance again.

Indeed, the follow-up survey among the informants conducted a little over a year later indicated considerable diversity in the longer-term practice of online slimming. The survey responses revealed the three kinds of practices that now prevailed: some informants still used the food and/or exercise diaries, filling them in either (almost) everyday or periodically; others had given up the diaries but occasionally glanced at articles or postings in the discussion forums; and still others no longer used the service. Although their interest in a continuous use of the services had clearly diminished, they noted that they had learned about the calories in different foods and the nutrient composition of their diets, and that the diary had helped to keep eating in control. However, for many constant diary-keeping had been too toilsome, and some had decided to try out novel, such as low-carbohydrate, diets. One informant tried to

“unlearn the diary in order to enable a normal life without counters” (Int1). Only one informant had reached her target weight (“the normal weight index”), some were little by little closing on their targets, quite a few were “stuck” in their current weight, and some had regained weight. Although many were disappointed at their success in losing weight, quite a few informants now wrote they were more “relaxed” and “forbearing” in their slimming than at the time of the interview. It thus seems that as they had anticipated, online slimming was for them a temporary practice that was carried out during a period of determined slimming and an effort to internalise a healthy lifestyle. However, the temporary practice had not released them from weight concerns, and even those who had not faced particular difficulties in continuing their weight loss efforts, noted that weight still “required constant attention” (Int15).

Discussion and conclusion

This study analysed the practice of slimming that emerges in the use of online slimming services consisting of food and exercise diaries, expert articles, recipes, and discussion forums. By examining two Finnish online slimming services and interviewing twenty women using such services the study investigated how the services script slimming and configure the users, and the practice of slimming that takes shape when users interact with the services. Due to the fact that the data were derived from interviews of a limited number of users, the results do not necessarily represent all potential practices of online slimming. Most importantly, the study does not cover the practices of people who are not active in using the services’ diary sections (but who may, e.g., contribute to discussion forums). It is also noteworthy that the majority of the informants had former

experiences of some form of calorie or 'point' counting, suggesting that the kind of online slimming described in this article may be appealing to people for whom numbers and calculation are already a familiar means of thinking of food and the body.

Furthermore, it is left to future studies to investigate whether men's practices of online slimming differ from those of women.

The study shows that the script created by the online services for weight loss include calculative rationalizations of, first, the food that is eaten, second, its nutritional qualities, and third, the individual body (cf. Lupton 2013, Mudry 2009). The services make slimming material and tangible through numerical and visual representations expressed in (kilo)grams, percentages, bars, charts, and colours. By so doing, they render food a means for health-oriented and individualised action rather than part of social and cultural practices of eating and 'induce individuals to think of themselves as calculating selves' (Miller 2001: 380), for whom weight loss is about numbers representing foods eaten, nutrients absorbed, and their own bodies.

Importantly, this script of slimming as calculative action was rarely challenged by the informants. The numerical representations of foods, nutrients and bodies were found appealing, and quantification was regarded as a reliable and effective means of controlling weight. The food diary acted as reflexive body technique (Crossley 2005), a means of 'taming uncertainty' that produced a feeling of being in control (Lupton 2013: 398). The informants also noted that the services liberated them from restrictive diets by letting them decide for themselves what, when, and how much to eat. It did not seem to bother them that the constrictions imposed by quantification made it a bounded freedom: the feedback from the diary was merciless and any deviations from the

predefined nutritional or energy limits (produced by algorithms hidden from the user) were disciplined with numbers and graphics revealing faulty performances (cf. Heyes 2006). The flip side of the freedom to choose was a continuous push for self-governance, self-monitoring and self-reflection.

Although the services and their use produced a calculative practice of slimming, it was not calculative skills that the users of the services wanted to learn. In order to be able to make “wise choices”, they wanted to develop a better understanding of calories and nutrients in foods. However, their more fundamental and long-term target was to learn the skills of a lifestyle change, which meant internalising what was described as “sensible” or “normal” eating and living without calculation devices. The quantifying practice of slimming was thus opposed to a hope that reflecting on and performing weight loss would in the future occupy a smaller part in their lives than it currently did. In their hopeful but hesitant visions of their future selves (McGinty et al. 2013), they were ex-slimmers who had internalised a healthy way of eating, lived without food and exercise diaries and were liberated from thinking of weight and weight-conscious eating.

These visions were related to the constantly experienced problematic situations in which online slimming intersected with other practices of everyday life, typically with social relations and a sense of community of eating with the family, friends, or colleagues. These involved social engagements and practices not easily reconcilable with the calculative and individualised practice of online slimming. The intersections required the informants to develop ways of weaving online slimming into the time use and social fabrics of everyday life. Particularly in the long term, the coordination of practices had

proven challenging, which had resulted in many informants having given up determined slimming to focus on healthy lifestyles instead.

In conclusion, the results suggest that online slimming services and their use generate a practice of slimming centring in constant monitoring of food and the body, and act in the double role of a 'slimming device' with a focus on calorie control, and a 'learning device' instructing on nutritionally healthy eating. In the latter role, the practice of online slimming was intended to result in a long-term lifestyle change and new routines that would make calculation and constant monitoring unnecessary and the services redundant for their users. From a health promotion perspective, the findings thus suggest that although online food diaries may be difficult to incorporate into everyday life on a permanent basis, users may find them useful in providing information about the nutritional quality of their diets and help them develop competence related to healthy eating.

From a practice-theoretical point of view, the study suggests, on one hand, that the meanings, competences and materialities produced by online slimming services and their use are tightly linked with the calculative script embedded in the services, advancing the image of self-governing and rational slimmers. On the other hand, this script is challenged by those practices of everyday life that are not easily reconcilable with constant monitoring and recording of eating. As Halkier (2010: 177) has noted, it is exactly the 'do-ability' of activities at the intersections of several practices that has to be paid attention to when thinking of the ways in which eating patterns may be changed. Online slimming services are an example of a self-governed health practice that are in principle easy to take into use, but if people do not find a suitable place for them amidst

their existing practices, the services will not root into everyday lives on a long-term basis. This is not to say they leave people's lives without traces even when discarded: during the period of use the meanings, competences and materialities of weight loss and healthy eating may change and contribute to developing new ways of eating and practices of self-care.

Funding acknowledgement

This work was part of a larger project entitled 'Fatty foods and fat bodies. Diversification of ideals and practices in healthy eating' (2011–2015) funded by the Academy of Finland (grant number 251845).

Acknowledgements

I would like to thank the two reviewers for their very careful reading of this manuscript and my colleagues Piia Jallinoja, Mikko Jauho, Johanna Mäkelä, Hannele Harjunen and Timo Aho for their constructive and helpful comments.

References

Akrich M (1992) The de-description of technical objects. In: Bijker W E and Law J (eds) *Shaping technology / building society. Studies in sociotechnical change*. Cambridge, Massachusetts and London, England: The MIT Press, pp. 205-224.

Callon M (1999) 'Actor-network theory – the market test'. In: Law J and Hassard J (eds) *Actor Network Theory and after*. Oxford: Blackwell Publishers, pp. 181-195.

Crawford R (2006) Health as meaningful social practice. *Health: An Interdisciplinary Journal for the Study of Health, Illness and Medicine* 10(4): 401-420.

Crossley N (2005) Mapping reflexive body techniques: on body modification and maintenance. *Body & Society* 11(1): 1-35.

Duodecim (2013) Current care guidelines: Obesity. Working group appointed by the Finnish Medical Society Duodecim and the Finnish Association for the Study of Obesity. Available at:
<http://www.kaypahoito.fi/web/kh/suosituksset/suositus?id=hoi24010> (in Finnish, accessed 3 October 2014).

European Commission (2006) Health and food. Special Eurobarometer 246. Wave 64.3 – TNS Opinion & Social. Available at:
http://ec.europa.eu/public_opinion/archives/ebs/ebs_246_en.pdf (accessed 2 October 2014).

Finnish Advisory Board on Research Integrity (2009) Ethical principles of research in the humanities and social and behavioural sciences and proposals for ethical review.

Available at: <http://www.tenk.fi/sites/tenk.fi/files/ethicalprinciples.pdf> (accessed 16 September 2012).

Germov J and Williams L (1996) The epidemic of dieting women: The need for a sociological approach to food and nutrition. *Appetite* 27: 97-108.

Halkier B (2010) *Consumption challenged. Food in medialisised everyday lives*. Farnham and Burlington: Ashgate.

Halse C (2009) Bio-citizenship: Virtue discourses and the birth of the bio-citizen. In: Wright J and Harwood V (eds) *Biopolitics and the 'obesity epidemic'. Governing bodies*. New York and Abingdon: Routledge, pp. 45-59.

Harjunen H (2009) *Women and fat. Approaches to the Social Study of Fatness*. Jyväskylä Studies in Education, Psychology and Social Research 379. University of Jyväskylä, Finland.

Helldán A, Helakorpi S, Virtanen S and Uutela A (2013) *Health Behaviour and Health among the Finnish Adult Population, Spring 2013*. National Institute for Health and Welfare (THL), Report 21/2013. Helsinki.

Heyes C (2006) Foucault goes to Weight Watchers. *Hypatia* 21: 126-149.

Hunt Peters L (1918) *Diet and health*. Chicago: The Reilly and Lee Co. (Republished 2005 by Project Gutenberg EBook).

Ingram J, Shove E and Watson M (2007) Products and practices: Selected concepts from science and technology studies and from social theories of consumption and practice. *Design Issues* 23(2): 3-16.

Jallinoja P, Pajari P and Absetz P (2009) Negotiated pleasures in health-seeking lifestyles of participants of a health intervention. *Health* 14(2): 1-16.

Jauho M (2014) The social construction of competence: Conceptions of science and expertise among proponents of the LCHF-diet in Finland. *Public Understanding of Science*, published online 21 November 2014, DOI: 10.1177/0963662514558167.

Johnson F and Wardle J (2011) The association between weight loss and engagement with a web-based food and exercise diary in a commercial weight loss programme: a retrospective analysis. *International Journal of Behavioral Nutrition and Physical Activity* 8(1): 83-89.

Krukowski RA, Harvey-Berino J, Ashikaga T, Thomas CS and Micco N (2008) Internet-based weight control: The relationship between web features and weight loss. *Telemed J E Health* 14(8): 775-782.

Lupton D (2013) Quantifying the body: monitoring and measuring health in the age of mHealth technologies. *Critical Public Health* 23(4): 393-403.

McGinty HL, Dark-Freudeman A and West RL (2013) Health hopes and fears for the future in relation to health behavior and current health status. *Journal of Health Psychology* 18: 1509-1518.

Miller P (2001) Governing by numbers: why calculative practices matter. *Social Research* 68(2) 379-396.

Mudry JJ (2009) *Measured Meals: Nutrition in America*. New York: State University of New York Press.

Murray S (2009) Marked as 'pathological': 'fat' bodies as virtual confessors. In: Wright, J. and Harwood, V. (eds) *Biopolitics and the 'obesity epidemic'*. *Governing bodies*. New York and Abingdon: Routledge, pp. 78-90.

National Nutrition Council (2014) *Terveyttä ruoasta. Suomalaiset ravitsemussuosituksset 2014. [Health from food. The Finnish nutrition recommendations 2014. In Finnish.]* Helsinki: National Nutrition Council.

Pantzar M and Ruckenstein M (2015) The heart of everyday analytics: emotional, material and practical extensions in self-tracking market. *Consumption, Markets and Culture* 18(1): 92-109.

Parviainen J (2001) The standardization process of movement in the fitness industry: The experience design of Les Mills choreographies. *European Journal of Cultural Studies* 14(5): 526-541.

Petersen A and Lupton D (1996) *The new public health. Health and self in the age of risk*. London: SAGE Publications.

Postrach E, Aspalter R, Koller M, Longin R, Schulzke J-D and Valentine L (2013) Determinants of successful weight loss after using a commercial web-based weight reduction program for six months: cohort study. *Journal of Medical Internet Research* 15, 10, e219 <http://www.jmir.org/2013/10/e219/>.

Sassatelli R (2010) *Fitness culture. Gyms and the commercialisation of discipline and fun*. Houndmills, Basingstoke and New York: Palgrave Macmillan.

Shove E, Pantzar M and Watson M (2012) *The dynamics of social practice. Everyday life and how it changes*. London: Sage.

Swan M (2013) The quantified self: fundamental disruption in big data science and biological discovery. *Big Data* 1(2): 85-99.

Warde A (2005) Consumption and theories of practice. *Journal of Consumer Culture* 5(2): 131-153.

Warde A (2013) What Sort of a Practice Is Eating? In: Shove E and Spurling N (eds) *Sustainable Practices: Social Theory and Climate Change*. Abingdon: Routledge, pp. 17-30.

Wardle J, Haase AM, Steptoe A, Nillapun M, Jonwutiwes K and Bellisle F (2004) Gender differences in food choice: The contribution of health beliefs and dieting, *Annals of Behavioral Medicine*, 27, 2, 107-116.