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# **FROM RULES TO LIFESTYLE – UNDERSTANDING WEIGHT MANAGEMENT DURING THE LIFE COURSE**

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ACADEMIC DISSERTATION

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# ABSTRACT

This doctoral thesis focuses on long-term weight management. In Western countries, the current obesogenic (obesity-promoting) environment is believed to play a key role in the rapidly increasing prevalence of obesity. The behavioral factors that support weight management, for example, active exercising and a healthy diet, are well-known and recognized, but people still struggle with their weight. Further, weight management is seen as demanding, and is generally linked to adequate self-control, disciplined behavior, and various eating restrictions. However, some people have succeeded in weight management. The present dissertation focuses on learning from their experiences, knowledge, attitudes, and behaviors.

This thesis aims to study 1) lifelong weight maintainers' perceptions of successful lifelong weight management and the factors that they regard as significant for success; 2) the perceived influence of the life course on weight management: how earlier experiences and social connections modify an individual's current behavior and choices; 3) how individuals with different weight maintenance histories employ various culturally and socially available and common weight management explanations in their sense-making.

This thesis consists of three sub-studies, two of which focused on lifelong weight management and one on both lifelong and long-term (after significant weight reduction) weight management. The qualitative data were gathered through theme interviews. In Sub-studies I and II, the 39 participants (referred to in the present thesis as lifelong weight maintainers, LMs) were men and women from two age groups (30–45 and 55–70 years). They had maintained a medically determined normal weight (BMI 18.5 to 24.9) throughout their lives. Sub-study I used a data-based thematic approach to yield results. Sub-study II used a life-course approach, and its thematic analysis was both data and theory based. In Sub-study III, the 40 participants were from two groups. Group 1 consisted of 20 LMs who had belonged to the older age group in Sub-studies I and II. Group 2 consisted of 20 former PREVIEW intervention study participants (referred to in the present thesis as weight-loss maintainers, WMs) who had lost at least 8% of their initial weight during the intervention. They had maintained the required weight criteria (a gain of less than 5% of their weight after weight loss; weight at least 5% below baseline weight) for three years. This sub-study used critical discursive psychology (CDP) as the theoretical and methodological framework.

The thesis interprets successful weight management as a lifelong journey. A lifestyle that supported weight management was developed during this journey via an individual weight management pathway. Several factors, such as micro- and macro-environment and personal characteristics, shaped the weight management pathways and thus influenced the creation of the lifestyle. The results of Sub-study II indicated that childhood played a crucial role in this process: food-upbringing and childhood family had influenced the LMs' current diet and active lifestyle and their attitudes and

choices, resulting in a flexible and permissive relationship with food and exercise. Constant learning described the LMs' pathways: New routines had become habitual practices through active repetition, which seemed to simplify weight management. High perceived self-efficacy was also vital for success: The LMs had learned to trust their ability to cope with challenging life events, and possessed skills for adjusting their lifestyle to altered situations. The findings of Sub-study I showed that flexible, permissive, and conscious self-regulation guided both the eating-related and weight-related behaviors of the LMs. It was also crucial to be aware of the balance between eating and energy consumption. The LMs mentioned certain routines (e.g., regular eating and exercising, a healthy and vegetable-rich diet, sufficient meal sizes) that characterized their lifestyle and promoted weight management.

The results of Sub-study III indicated that the dominant cultural weight-centric discourses and constructions were reflected in the sense-making processes of the LMs and WMs. The WMs in particular, using the *following instructions* repertoire, reiterated the typical narrative of Western culture that stresses control and disciplined behavior as essential for weight management. In contrast, the LMs mostly employed the *lifestyle and personalized routines* repertoire, emphasizing customized needs and the routinization of weight management practices. Further, the accounts in the *everyday challenges* repertoire linked unsuccessful weight management to external factors, thus allowing participants, particularly WMs, to negotiate blame and avoid being judged as lacking personal responsibility. Finally, the understanding of weight management seemed to be related to different weight management histories. The normative weight discourses placed the LMs and WMs in different positions, which may explain their different need to justify their moral acceptability and use of the repertoires.

In contrast to the general comprehension of weight management, the results of this doctoral dissertation offer a novel way of seeing and understanding weight management as a lifestyle that has developed over the life course and that does not require extreme exercise or fasting periods but an enjoyable way of living and taking care of oneself. These findings encourage public health policies to invest resources into developing a long-lasting, health-promoting lifestyle already at an early stage of life. This thesis also highlights the need to change the narrative and the way of thinking related to weight management. Weight-centric framings should be replaced with morally neutral language that focuses on lifestyle and wellbeing.

# TIIVISTELMÄ (FINNISH ABSTRACT)

Tämä väitöskirja tutki elinikäistä ja pitkäaikaista painonhallintaa. Lihavuutta tuottavan ympäristön on ajateltu olevan olennainen tekijä lihavuuden nopeaan yleistymiseen länsimaissa. Käyttäytymiseen liittyvien tekijöiden kuten aktiivisen elämäntavan ja terveellisen ruokavalion merkitys painonhallinnassa tunnetaan hyvin ja niiden ajatellaan auttavan siinä. Silti moni ihminen kokee painonhallinnan vaativana ja miltei mahdottomana. Tiukka kontrolli, riittävä itsekuuri ja syömisen rajoittaminen on tyypillisesti yhdistetty painonhallintaan länsimaaisessa yhteiskunnassa. Kuitenkin on ihmisiä, jotka onnistuvat painonhallinnassa. Tässä väitöstutkimuksessa haluttiin selvittää heidän kokemuksiansa, ajatuksiansa ja asenteitansa liittyen painonhallintaan.

Väitöskirjan tavoitteena oli selvittää 1) elinikäisten painonhallitsijoiden näkemyksiä siitä, miten he olivat onnistuneet painonhallinnassa ja mitkä asiat he näkivät tärkeiksi onnistumisen kannalta; 2) miten elämäntapaan liittyvät tekijät kuten menneet tapahtumat tai läheiset ihmiset ovat elinikäisten painonhallitsijoiden mielestä vaikuttaneet heidän nykyisiin valintoihin ja käyttäytymiseen; 3) miten painonhallintahistorialtaan erilaiset ihmiset hyödynsivät länsimaiselle kulttuurille tyypillisiä tapoja ymmärtää ja kuvata painonhallintaa ja miten he selittivät onnistumistaan.

Väitöstutkimus perustuu laadulliseen aineistoon, joka on kerätty teemahaastattelujen avulla. Tutkimus koostuu kolmesta osatyöstä: osatyöt I-II keskittyivät elinikäiseen painonhallintaan ja osatyö III tarkasteli sekä elinikäistä että pitkäaikaista painonhallintaa. Osatöiden I ja II osallistujat, 39 elinikäistä painonhallitsijaa, olivat naisia ja miehiä kahdesta eri ikäryhmästä (ikä 30-45 ja 55-70 vuotta). Lisäksi he olivat pysyneet lääketieteellisesti määritellyn normaalipainon rajoissa koko elämänsä. Osatyössä I käytettiin aineistolähtöistä temaattista analyysimenetelmää tulosten käsittelyssä. Osatyö II hyödynsi elämäntapanaikakulmaa ja sen temaattinen analyysi oli sekä aineisto- että teorialähtöinen. Osatyön III 40 osallistujaa oli kahdesta ryhmästä. Ryhmä 1 koostui tutkittavista, jotka kuuluivat elinikäisten painonhallitsijoiden vanhempaan ikäryhmään (n=20). Ryhmän 2 tutkittavat olivat entisiä PREVIEW-interventiotutkimuksen osallistujia, jotka olivat laihduttaneet vähintään 8 % heidän alkuperäisestä painostaan ja säilyttäneet sen jälkeen tälle tutkimukselle tarvittavat painokriteerit kolmen vuoden ajan (enintään 5 % laihdutusjälkeinen painonnousu ja kokonaisuudessaan vähintään 5 % laihtuminen alkuperäisestä painosta). Kriittistä diskursiivista psykologiaa käytettiin teoreettisena ja metodologisena viitekehysnä osatyössä III.

Tämän väitöstutkimuksen tulokset antoivat uutta tietoa elinikäisestä ja pitkäaikaisesta painonhallinnasta. Onnistunut painonhallinta näyttäytyi matkana läpi elämäntavan. Tämän matkan ja yksilöllisen painonhallintapolun varrella elinikäisille painonhallitsijoille oli kehittynyt elämäntyyli, joka tuki painonhallintaa. Useat tekijät,

mikro- ja makroympäristöstä henkilökohtaisiin ominaisuuksiin, vaikuttivat onnistujien painonhallintapolkuun. Julkaisussa II havaittiin, että vanhemmat ja perhe, lapsuuden ruokakasvatus ja aktiivinen elämäntyyli loivat pohjan onnistuneelle painonhallinnalle. Lisäksi elinikäiset painonhallitsijat olivat painonhallintapolun varrella omaksuneet ja oppineet uusia taitoja, jotka helpottivat painonhallintaa. Toistojen kautta nämä taidot olivat muuttuneet sisäistetyiksi tavoiksi ja rutiineiksi. Heillä oli myös hyvä pystyvyydentunne liittyen painonhallintaan: elinikäiset painonhallitsijat olivat oppineet luottamaan kykyihinsä selvitä haastavissa elämäntilanteissa, ja heillä oli taito sopeuttaa elämäntyyliä muuttuneeseen ympäristöön. Julkaisussa I huomattiin, että elinikäiset painonhallitsijat suhtautuivat painonhallintaan joustavasti ja sallivasti, mutta olivat tietoisia syömiseen ja liikuntaan liittyvästä käyttäytymisestään. He mainitsivat heidän elämäntyyliin tyypillisiä tapoja (esim. säännöllinen syöminen ja liikunta, terveellinen ja kasvisvoittainen ruokavalio, sopivat annoskoot), jotka edistivät painonhallintaa.

Julkaisussa III havaittiin, että yhteiskunnalliset painodiskurssit ja puhettavat heijastuivat elinikäisten painonhallitsijoiden ja onnistuneiden laihduttajien merkityksenannossa. Varsinkin laihduttaneet henkilöt toistivat länsimaiselle kulttuurille tyypillistä puhetapaa, jossa painonhallinta nähdään kurista ja itsekontrollista riippuvaisena. Elinikäiset painonhallitsijat sen sijaan korostivat itselle sopivan elämäntavan ja rutiinien merkitystä onnistumisessa. Kaikki tutkimuksessa esille nousseet puhettavat tähdensivät yksilönvastuuta painonhallinnassa ja tältä osin toistivat länsimaiselle kulttuurille ominaista ymmärrystä. Painonhallinnassa epäonnistumista selitettiin arjen haasteiden ja ulkoisten tekijöiden avulla. Tässä puhettavassa vastuu asetettiin itsestä riippumattomiin tekijöihin ja näin ollen voitiin välttää mahdollinen arvostelu ja häpeän kohteeksi joutuminen, joihin painokeskeiset normatiiviset diskurssit asettivat varsinkin laihduttaneet henkilöt.

Tutkimus tarjoaa uudenlaisen tavan nähdä ja ymmärtää painonhallintaa: se näyttäytyi elämäntyylinä, joka on kehittynyt läpi elämänsä ja joka ei vaadi äärimmäisiä kuntokuureja tai paastoamista, vaan on nautittava tapa elää ja pitää itsestä huolta. Tutkimuksen tulokset kannustavat panostamaan terveydenedistämishjelmissä pitkäaikaisen terveyttä edistävän elämäntavan kehittymiseen jo lapsuudesta ja nuoruudesta alkaen. Lisäksi tutkimuksen tulokset painottavat tarvetta muuttaa painonhallintaan liittyvää yleistä narratiivia ja ajattelua. Stigmaa ylläpitävät painokeskeiset, haitalliset puhettavat pitäisi korvata vaihtoehtoisilla tavoilla puhua painonhallinnasta ja ymmärtää sitä. Niissä tulisi keskittyä elämäntapaan ja kokonaisvaltaiseen hyvinvointiin.

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# LIST OF ORIGINAL PUBLICATIONS

This thesis is based on the following publications:

- I Joki A, Mäkelä J, Fogelholm M. Permissive flexibility in successful lifelong weight management: A qualitative study among Finnish men and women. *Appetite* 2017; 116:157-163.
- II Joki A, Mäkelä J, Konttinen H, Fogelholm M. Exploration of Finnish adults' successful weight management over the life course: a qualitative study. *BMC Public Health* 2020 (1)12.
- III Joki A, Venäläinen S, Konttinen H, Mäkelä J, Fogelholm M. Interpretative repertoires of long-term weight management: negotiating accountability and explaining success. *Psychology & Health* 2022; Feb 24; 1-23.

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# ABBREVIATIONS

BMI	Body mass index
CDP	Critical discursive psychology
kcal	kilocalories
LM	Lifelong weight maintainer
PREVIEW	Prevention of diabetes through lifestyle intervention and population studies in Europe and around the world
WHO	World Health Organization
WM	Weight-loss maintainer

# 1 INTRODUCTION

Obesity, defined as excessive fat accumulation, creates major public health problems at both the individual and population level (Guh et al., 2009). It is closely linked to an increased risk of several severe non-communicable diseases, such as cardiovascular disease, type 2 diabetes, hypertension, and several cancers (Bhaskaran et al., 2014; Guh et al., 2009; Wilson et al., 2002). Recently, its role in the serious consequences of infectious diseases such as COVID-19 has been discussed (Cava et al., 2021). Moreover, obesity is a risk factor for musculoskeletal disorders (Anandacoomarasamy et al., 2008) and is associated with lower physical and social functioning and poor life quality (Fontaine & Barofsky, 2001). It has also connected to mental health problems—encounters with weight stigma and perceived discrimination potentially play a mediating role in these associations (Emmer et al., 2020; Puhl, R. M. & Heuer, 2010; Williams et al., 2015).

In 2016, WHO estimated that worldwide, more than 39% of adults were categorized as having overweight (body mass index, BMI  $\geq 25$  kg/m<sup>2</sup>), and 13% of adults had obesity (BMI  $\geq 30$  kg/m<sup>2</sup>) (World Health Organization, 2022). The increase in the prevalence of obesity has been rapid, and currently, it seems that obesity is accelerating most significantly in low- and middle-income countries (Peng & Berry, 2018). In Finland, according to the FinHealth 2017 study, 72% of men and 63% of women aged 30 or over are reported to have at least overweight. One in four Finnish adults is categorized as having obesity (Koponen et al., 2018).

The current obesogenic environment (e.g., an environment promoting obesity) is considered to play a vital role in increased BMI and the prevalence of obesity: The availability of appetizing, energy-dense food is constantly increasing, and the need for physical activity has decreased at the same time as technology has been developing. So, the long-term positive imbalance between energy intake and energy expenditure leads to weight gain. Nevertheless, not everyone in the current environment develops obesity, which has inspired various research approaches, ranging from genetic and biological to sociocultural, to address these differences between individuals. It has been estimated that genetic factors explain 40–70% of the within-population variation in BMI (Goodarzi, 2018; Loos, 2009). Thus, genes have a strong influence on body weight, and they predispose individuals to weight gain. However, this does not mean that other factors that influence weight are insignificant. Indeed, genetic susceptibility to weight gain can be reduced by beneficial health-related behaviors such as exercising regularly (Li et al., 2010; Lin et al., 2019; Mustelin et al., 2009; Reddon et al., 2016) or making healthy food choices (Brunkwall et al., 2016; Qi et al., 2014; Qi et al., 2012). The new Current Care Guidelines for obesity highlight individualized lifestyle changes in the treatment of obesity (Working group set up by the Finnish Medical Society Duodecim and the Finnish Cardiac Society, 2020).

Alongside the rising prevalence of obesity, various weight management measures

(actions to influence weight stability) have become increasingly common. Public health institutions encourage maintaining a healthy weight and health-promoting messages and discourses classify obesity and overweight as problematic. Dieting and weight concerns are general and described as normative in Western societies. An increasing number of people control their weight, and according to systematic review and meta-analysis, annually, 42% of adults worldwide try to lose weight, and 23% try to keep their weight stable (Santos et al., 2017). Correspondingly, the FinHealth study found that in Finland, 65% of women and 43% of men aged 25–74 had tried to lose weight at least once, and 35% of women and 22% of men reported that they were trying to lose weight at present (Koponen et al., 2018). However, information about the exact number of people currently maintaining their weight in Finland is unavailable.

Population studies have looked at the factors associated with weight variation. Regular physical activity (Fogelholm & Kukkonen-Harjula, 2000; Jakicic et al., 2019) and a prudent diet pattern, including a high intake of fruit and vegetables, fish, and whole grains, are connected to less weight gain (Fardet & Boirie, 2014; Fogelholm et al., 2012). On the other hand, at the population level, dieting attempts and intentional weight loss have been associated with subsequent weight gain (Field et al., 2010; Kärkkäinen et al., 2018; Sares-Jäske et al., 2019b). Dieters with a medically determined normal weight (BMI, between 18.5 and 24.9) appear to be at a greater risk of future weight gain in comparison to non-dieters with a medically determined normal weight or dieters and non-dieters with initial obesity (Dulloo et al., 2015; Sares-Jäske et al., 2019a). Finally, the prevention of weight gain after weight loss seems to be associated with similar behaviors to those in the prevention of first-time weight gain, namely regular eating, a vegetable-rich, low-energy diet, flexible eating restrictions, and an active lifestyle (Paixão et al., 2020; Varkevisser et al., 2019).

Even though the main factors for preventing weight gain are well-known and the means for supporting weight-loss weight maintenance are widely recognized, the number of people with obesity/overweight is accelerating globally. This indicates that it is not enough to merely identify the abovementioned foods or eating habits that correlate or associate with less weight gain, and then advise people to use them. Instead, we need to understand the factors underlying the actual weight management activities—why a person chooses certain foods or activity patterns or why one is unwilling or unable to exercise. Moreover, due to the commonness of weight concerns and people's interest in controlling their weight, it is extremely important to understand how these weight management behaviors are constructed and what factors drive them.

This doctoral dissertation aims to answer the above questions with a rarely used approach, namely by investigating the experiences, strategies, and attitudes of individuals with medically determined normal weight and by examining the sense-making processes of individuals with different weight maintenance histories. Such an approach is important because it may provide information on weight management approaches that can be further utilized to develop novel and perhaps more successful interventions for individuals with obesity or overweight. Moreover, this research also

aimed to increase insights into the sociocultural factors involved in lifelong and long-term weight management by focusing on the explanations and views related to weight management. This thesis concerns human nutrition, and more precisely, the public health nutrition field, but the theoretical and methodological frameworks of the research were inspired by approaches typically used in health sociology and health psychology. The aim was to obtain tools for analyzing the data and interpreting the results of this qualitative study. However, the research questions were related to themes that are topical in public health nutrition.

The present thesis consists of three sub-studies (I–III). Sub-study I examined LMs' views and thoughts on their lifelong weight management and how they perceived the requirements to manage weight in the current obesogenic environment. It aimed to obtain an overall picture of lifelong weight management from the individual perspective. Sub-study II focused on LMs' pathways from childhood to adulthood. Its purpose was to clarify the perceived influence of earlier experiences, social connections, and other elements of the life course perspective on LMs' current behavior. Finally, Sub-study III concentrated on both LMs and WMs and compared their explanations of weight management. Its intention was to widen the scope of this thesis to cover cultural and social aspects, which are also relevant parts of the life-course approach and are linked to the general ways of talking and viewing weight management. The patterns giving meanings to both successful and unsuccessful weight management provide a background for the routines and practices that people adopt and that are deemed socially acceptable.

## 2 WEIGHT MANAGEMENT

### 2.1 DEFINITION

There is no exact or general definition of weight management or weight maintenance in the literature. However, these concepts are thought to refer to individuals' capacity to maintain a stable weight over time (Jauho et al., 2016; Lindvall, K. et al., 2010; Winik & Bonham, 2018). In everyday discussions, more established practices such as healthy eating and dieting for losing weight are used to describe weight management/maintenance (Jauho et al., 2016). However, the Current Care Guidelines for obesity divide the treatment for obesity into two phases: weight loss and weight management (Working group set up by the Finnish Medical Society Duodecim and the Finnish Cardiac Society, 2020).

Similarly, the definitions of weight management vary among studies. A review of expert opinions and definitions of weight management suggested that the criteria for long-term weight maintenance in adults could be a weight change of < 3% of initial body weight (Stevens et al., 2006). However, primary weight management (actions to influence the stability of weight for preventing weight gain) has played a minor role in this field. Most studies have focused on secondary weight maintenance; in other words, they have examined how people who have lost weight have maintained this weight loss (Paixão et al., 2020). In this context, successful weight management is determined as maintaining an intended weight loss of at least 10% (Wing & Hill, 2001; Wing & Phelan, 2005) or 5% (Magkos et al., 2016; Ramage et al., 2014; Stevens et al., 2006) of initial weight over a year (Dombrowski et al., 2014). A systematic review identified and summarized the determinants of successful weight maintenance and defined success as the maintenance of intentional weight loss for at least six months (Elfhag & Rössner, 2005). Several other studies have also recognized the six-month period after weight loss as a turning point, as most individuals regain their weight, and thus success studies have preferred participants with a weight maintenance history longer than six months (Varkevisser et al., 2019).

In this thesis, weight management denotes actions to influence the stability of one's weight. Weight maintenance, on the other hand, is commonly used as a synonym for weight management, but this thesis views it as the outcome of managing weight. In short, practices such as eating enough fruit and vegetables and exercising actively are classified as weight management by the present thesis, but a healthy lifestyle and stable weight are considered to represent weight maintenance.

## 2.2 PREVENTION OF WEIGHT GAIN—PRIMARY WEIGHT MANAGEMENT

The prevention of weight gain lies at the heart of primary weight management, as it is thought to be easier than losing weight and preventing weight regain (Schwartz et al., 2017). Society's role is emphasized in primary weight management, as the responsibility is shared between individuals, families, health care, and society, whereas secondary weight management is considered an individual's responsibility (Chan & Woo, 2010). However, implementing effective evidence-based interventions targeting primary weight management is challenging (Panter et al., 2018). Consequently, successful primary weight management requires comprehensive cooperation between various stakeholders and actors in society. It has been suggested that governments should prioritize this in their policymaking: They should focus on strategies capable of reducing the unfavorable effects of the obesogenic environment on individuals (Swinburn et al., 2011). Again, as weight cycling is associated with weight gain and some evidence connects it to the detrimental effects on metabolic risk, it is even more significant to invest resources in primary weight management (Field et al., 2004; Mackie et al., 2017).

In the broader view, the foundations of a lifestyle supporting weight management are created already in childhood: Individualized dietary and lifestyle counseling seemed to have had promising effects on the prevention of weight gain among school-aged children (Hakanen et al., 2006). Adolescence and young adulthood can also be seen as critical periods of life in terms of obesity-related factors (LaRose et al., 2019; Nelson et al., 2008). It has been demonstrated that a decrease in physical activity at the same time as a reduction in the quality of diet (increased consumption of fast food and sugar-sweetened beverages and low consumption of fruit and vegetables) is connected to weight gain during this time frame (LaRose et al., 2019; Nelson et al., 2008; Winpenny et al., 2020). Moreover, the lifestyle patterns adopted at this stage of life seem to be long-lasting.

Generally, a health-promoting diet, regular mealtimes, and appropriate meal sizes are critical behavioral factors in weight management (National Nutrition Council, 2014). A high intake of vegetables, fruits, and berries has been associated with less weight gain (Nour et al., 2018). Similarly, as a high intake of meat, refined grains, and sugar-rich foods and drinks has been found to predict subsequent weight gain, a high consumption of dietary fiber, fish, vegetables, legumes, and nuts have been associated with protection from this (Fardet & Boirie, 2014; Fogelholm et al., 2012; Schlesinger et al., 2019). Adherence to a healthy Nordic diet reflecting Finnish dietary recommendations is also associated with long-term weight maintenance (Kanerva et al., 2018).

Meal frequency and meal timing are also relevant in terms of long-term successful weight management; epidemiological studies have associated irregular eating habits and skipping breakfast with an increased risk of weight gain (St-Onge et al., 2017). Some randomized controlled trials, however, have questioned the conclusion of the

importance of breakfast for long-term weight management due to conflicting findings (Sievert et al., 2019). Larger-sized portions, packages, and tableware are connected to increased food consumption (Hollands et al., 2015). Accordingly, if one uses smaller-sized portions, packages, or tableware instead of larger ones, the average reduction in daily energy consumption from food is estimated to be between 140 and 230 kcal. Reorganizing the physical environment of served foods, such as offering fruit and vegetables as separate components has shown to potentially promote healthy eating and to have favorable effects on weight management (Kongsbak et al., 2016).

In parallel with diet and eating, physical activity plays an essential role in primary weight management. A sedentary lifestyle with a decreased need for physical work, less leisure-time physical activity, and increased daily sitting time have been connected to weight gain (Swinburn et al., 2011). In contrast, a high volume of physical activity has proven to prevent or minimize weight gain among adults (Fogelholm & Kukkonen-Harjula, 2000; Jakicic et al., 2019). It has been suggested that these favorable effects are achievable by exercising 2.5 hours per week with at least moderate intensity (Jakicic et al., 2019). Moderate or high physical activity has also been found to be positively connected to maintaining a healthy weight, indicating a close relationship between physical activity and successful weight management (Brown et al., 2016).

In addition to Brown et al. (2016), Field et al. (2010) also observed in their prospective study that physical activity plays a vital role in long-term weight management. Accordingly, females who engaged in exercise five or more times per week gained less weight than their less-active peers during the four-year follow-up period (Field et al., 2010). Likewise, greater physical activity levels were associated with attenuated weight gain. However, this relation was only observed among women with medically determined normal weight; no association was found among their counterparts with a higher BMI, which further signifies the importance of primary weight management (Lee et al., 2010). In addition to assisting weight management, physical activity produces independent health-promoting effects. The Finnish and the international recommendations for health-enhancing physical activity for adults are moderate-intensity aerobic physical activity for at least 2.5 hours or vigorous-intensity aerobic training for 1 hour and 15 minutes per week, strength and balance training at least twice a week, and as much light physical activity as possible (UKK institute, 2019; U.S. Department of Health and Human Services, 2018).

To summarize, in terms of primary weight management, combining physical activity with dietary weight management approaches seems to provide the most promising results. Indeed, combining dietary methods (e.g., limiting portion sizes, avoiding snacks, and following low-energy and low-fat diets) and frequent exercise is an effective strategy to prevent weight gain (Field et al., 2010). Moreover, having more healthy behaviors (such as daily exercise and constant eating habits in everyday life and vacations) has been associated with less weight gain among 30-year-old women with medically determined normal weight than among their counterparts with more unhealthy behaviors (such as eating snack foods or rewarding oneself with food)



(Lindvall et al., 2015). Overall, a healthy diet that follows nutrition recommendations, together with regular physical activity promotes long-term weight maintenance.

## **2.3 MAINTENANCE OF WEIGHT LOSS— SECONDARY WEIGHT MANAGEMENT**

Due to the purpose of this thesis, I only included studies that have focused on weight-loss maintenance in the following literature review, thus excluding studies and data that have concentrated on mere weight loss. First, long-term weight management or weight loss via lifestyle changes is challenging but feasible (MacLean et al., 2015; Varkevisser et al., 2019). It has been estimated that approximately 20% of individuals who have successfully lost weight manage to keep the weight lost off for one year or longer (Dombrowski et al., 2014; Montesi et al., 2016; Varkevisser et al., 2019; Wing & Phelan, 2005). Even though it was not investigated in the present study, it is important to note that the interactions between human biology, behavior, and the obesogenic environment contribute to the challenges of secondary weight management (Hall & Kahan, 2018). It has been proposed that food intake is influenced by the negative feedback circuits regulating body weight, thereby resisting continued weight loss and further influencing long-term weight maintenance (Greenway, 2015). Martins et al. (2020) examined this theory of compensation in their recent review and questioned the idea that physiological adaptations to weight loss are drivers of weight regain and suggested alternative hypotheses that could explain relapses in obesity management (Martins et al., 2020). Thus, further research is needed on physiological and behavioral aspects to understand which factors promote weight regain.

In order to prevent further increase in obesity and overweight and to plan effective interventions, ideal weight-loss strategies have been actively investigated. A growing body of literature has identified several characteristics associated with secondary weight management (Elfhag & Rössner, 2005; Paixão et al., 2020; Teixeira et al., 2010; Varkevisser et al., 2019). First, greater initial weight losses were associated with a better likelihood of maintaining weight loss (Astrup & Rössner, 2000; Thomas et al., 2014; van Baak et al., 2003). Clinical trials have also found consistent results (Rissanen et al., 2003). However, some findings have indicated that larger amounts of weight loss have resulted in more weight regain (McGuire et al., 1999). A longer duration of weight maintenance has also been linked to better long-term outcomes: The longer the time since weight loss, the better the chances of sustaining it (McGuire et al., 1999; Paixão et al., 2020; Thomas et al., 2014; Wing & Hill, 2001). A recent review (Varkevisser et al., 2019), however, concluded that only weight history (describing weight cycling and history of weight loss) showed strong evidence of not being a significant factor predicting success in weight loss maintenance; other weight-related determinants (initial weight loss, duration of weight maintenance) showed insufficient evidence, as some studies have observed their predictive value in weight management, whereas others have not.

Second, physical activity is an essential part of secondary weight management (Elfhag

& Rössner, 2005; Paixão et al., 2020; Ramage et al., 2014; Varkevisser et al., 2019). Its role as the most consistent predictor of weight maintenance was stressed in a recent systematic review of studies that explored weight control registries (Paixão et al., 2020). The review was based on 52 articles corresponding to five registries, and identified correlates of weight loss maintenance. Several other studies have found that sufficient physical activity is important in the weight maintenance phase (Bray et al., 2016; Catenacci & Wyatt, 2007; Donnelly et al., 2009; Swift et al., 2018; Swift et al., 2014). It has been estimated that roughly 60 min of moderate-to-vigorous physical activity per day is needed to support long-term weight maintenance (Cox, 2017; Donnelly et al., 2009; Working group set up by the Finnish Medical Society Duodecim and the Finnish Cardiac Society, 2020). However, the exact amount is hard to determine due to insufficient evidence (Donnelly et al., 2009). According to cross-sectional and prospective studies, weekly physical activity of over 250 minutes improved weight maintenance after weight loss, but mixed and insufficient results of randomized controlled trials fail to confirm this association (Catenacci & Wyatt, 2007; Donnelly et al., 2009; Swift et al., 2018). Overall, high levels of physical activity have been associated with better weight loss maintenance than lower levels (Catenacci & Wyatt, 2007; Donnelly et al., 2009; Swift et al., 2018). Moreover, in terms of training type, the combination of strength and endurance training seemed to be the most efficient for achieving favorable long-term weight management outcomes (Rojo-Tirado et al., 2021).

Like primary weight management, combining exercise with dietary approaches benefits weight loss maintenance (Catenacci & Wyatt, 2007; Dombrowski et al., 2014; Paixão et al., 2020; Ramage et al., 2014; Varkevisser et al., 2019). A review of randomized controlled trials that compared diet and exercise interventions with diet alone concluded that the combined intervention led to a 20% greater sustained weight loss in a one-year follow-up than diet alone (Curioni & Lourenço, 2005). Another review that focused on metabolic adaptations promoting weight gain identified some factors that contributed to long-term weight loss maintenance; it suggested that the “high energy flux” state, when both energy intake and energy expenditure are balanced but higher, favored successful weight management more than the “low energy flux” state in which the energy balance was lower, and hunger was typically more pronounced (Melby et al., 2017). So, the research evidence supports the comprehensive approach, including diet and regular physical activity, for weight loss maintenance among adults.

Numerous studies have focused on the macronutrient composition of diets and searched for the optimal diet for weight loss and its maintenance (Bueno et al., 2013; Clifton et al., 2014; Johnston et al., 2014; Mansoor et al., 2016; Naude et al., 2014; Tobias et al., 2015). These meta-analyses have shown that instead of concentrating on the ideal diet composition (such as a low-fat/low-carbohydrate diet, high protein diet, or other popular diets), it is more important to pay attention to adhering to a particular diet (*ibid.*). Consequently, there will be various alternative weight management-promoting diets. Further, lower total energy intake and reduced portion sizes are obviously also connected to successful weight loss maintenance (Elfhag & Rössner,

2005; Paixão et al., 2020; Phelan et al., 2020; Ramage et al., 2014; Smethers & Rolls, 2018; Varkevisser et al., 2019). More specifically, an increase in fruit and vegetable consumption, a reduction of sugar-sweetened beverages and high-fat snacks, and increased consumption of dietary fiber have been associated with better maintenance of weight loss (Paixão et al., 2020; Ramage et al., 2014; van Baak, 2021; Varkevisser et al., 2019). A modest increase in protein content and a modest reduction in the glycemic index of the diet improved secondary weight management (Larsen et al., 2010). Despite the mixed results in the literature, according to the systematic review of weight control registries, regular breakfast consumption is positively associated with weight loss maintenance among successful weight maintainers, and the availability of healthy foods at home was reported to prevent weight gain (Paixão et al., 2020). Regular meal rhythm and slower eating have also been identified as helpful in long-term weight management (Beccuti et al., 2017; Hurst & Fukuda, 2018; Raynor & Champagne, 2016). Concisely, multiple dietary patterns effectively contribute to better weight loss management, so individualized eating patterns and a diet that considers personal preferences and is easy to adhere to are the best support.

Various psychological factors have also been linked to promoting successful weight loss maintenance. A meta-analysis of the determinants of healthy behavioral changes influencing secondary weight management identified higher levels of autonomous motivation, high self-efficacy, and good self-regulation skills as essential determinants for successful weight maintenance results (Teixeira et al., 2015). Autonomous motivation refers to the fact that the actions related to weight management are based on the individual's own will, needs, and values (Ryan, R. et al., 2008). High self-efficacy (confidence in personal ability to accomplish goals despite various challenges) and fewer perceived obstacles are also connected to motivation and success: People will not be motivated to achieve targets that they perceive as impossible to reach (Bandura, 1994; Ryan, R. et al., 2008). Self-regulation skills, in turn, indicate an individual's ability to regulate their emotions, thoughts, and behaviors, such as resisting desires and impulses and blocking unwelcome thoughts from one's mind (Baumeister, 2014). Overall, higher self-efficacy for weight management and higher self-monitoring of eating and of one's weight, such as recording foods consumed or regularly weighing oneself (Madigan et al., 2014), were associated with more favorable weight maintenance outcomes (Latner et al., 2013; Montesi et al., 2016; Paixão et al., 2020; Phelan et al., 2020; Ramage et al., 2014; Varkevisser et al., 2019).

The literature on the relations between restrained eating and weight management has been conflicting, and it is unknown whether eating control is helpful or harmful for weight loss maintenance (Kontinen et al., 2018). Restrained eating means conscious control over eating in order to avoid gaining weight (Westenhoefer, 1991). Flexible eating restriction indicates the kind of eating and relationship with food that involves paying attention to the quality of food and portion size and making healthy selections without pursuing strict rules and absolute denial, whereas a dichotomous thinking style (all or nothing) represents rigid control (Linardon, 2018; Westenhoefer et al., 1999). An increase in flexible control over eating and a decrease in rigid control over eating seem to promote success in weight management (Elfhag & Rössner, 2005;

Linardon, 2018; Sairanen et al., 2014; Teixeira et al., 2010; Teixeira et al., 2005; Westenhoefer et al., 2013). Low levels of disinhibition (loss of control over eating) have also been associated with long-term weight loss maintenance (Montesi et al., 2016). Finally, positive body image seems to be linked to better weight loss maintenance (Teixeira et al., 2015): This refers to appreciating various body sizes and shapes and having the skills to nourish and otherwise care for oneself (Levine & Smolak, 2016).

Behavioral and lifestyle counseling have also shown positive results in terms of sustaining weight loss (Absetz et al., 2009; Dombrowski et al., 2014; Keränen et al., 2009; Lindström et al., 2006; Nurkkala et al., 2015). A systematic review of healthy strategies for successful weight loss maintenance stated that lifestyle interventions targeting dietary intake and physical activity showed long-lasting beneficial effects that helped weight management (Dombrowski et al., 2014). Finnish interventions have made similar findings, associating counseling or intensive dietary/exercise interventions with long-term favorable changes in diet and physical activity and improved eating behaviors (Keränen et al., 2009; Lindström et al., 2006; Lindström et al., 2003; Nurkkala et al., 2015).

In summary, several factors have been associated with long-term weight loss maintenance: behavioral aspects such as high levels of physical activity; eating a low-energy, low-fat diet; frequent self-monitoring; psychological/cognitive elements such as high self-efficacy for weight management and reduced disinhibition. Furthermore, environmental factors such as social support also seem to promote successful weight loss maintenance.

### 3 LIFE COURSE APPROACH IN THE CONTEXT OF WEIGHT MANAGEMENT

As this study aimed to obtain a broad understanding of weight management in people's lives, the life course perspective was chosen as its theoretical approach. Studying weight management at a particular moment or place in time risks overlooking the dynamic nature of people's behavior related to weight maintenance, such as the types of practices from which they choose and the contexts in which they make decisions in a changing world. To understand life as a process and not just an outcome, and how what happens at one point in the life journey influences what happens later, it is rational to approach this topic from the life course perspective.

The topic was also approached using qualitative methods. One characteristic of qualitative studies is their ability to capture people's thoughts and perceptions and to pay less attention to the researcher's preconceptions (Hammarberg et al., 2016; Korstjens & Moser, 2017). They seek answers to *how* and *why* a particular phenomenon, such as weight management, occurs in specific contexts. So, the combination of these two approaches, the life course perspective and qualitative methodology, which is also seen as appropriate (Faltermaier, 1997), are relevant in the context of the present thesis.

According to the life course perspective, which is a combination of different theoretical approaches and explanation models, it is sensible to understand people and their weight management-related behaviors by looking at their paths at different life periods (Elder & Giele, 2009; Wethington, 2005). This approach focuses on chronological age, relationships, common life transitions, and social changes that modify people's lives from birth to death. It observes the person's characteristics and living environment, both of which play a part in human behavior. In short, the life course perspective follows people's lives over time, and sees life as a trajectory or a pathway.

Elder and Giele (2009) noted five main principles in the life course perspective: 1. Human development and aging as a lifelong process, 2. Human agency, 3. Timing, 4. Linked lives, and 5. Historical time and place. The first principle highlights the relevancy of prior experiences and previous events in shaping individuals' current choices and behavior. In other words, we cannot expect behaviors in mid-life to be influenced by only present circumstances or expectations of the future; they are also influenced by experiences in childhood and adolescence. Several studies have observed that health beliefs and dietary and physical activity routines learned in childhood tend to continue in adulthood (Craigie et al., 2011; Kelder et al., 1994; Lau et al., 1990; Welch et al., 2009). Moreover, early adulthood seems to be the optimal time to adopt a lasting healthy lifestyle and to prevent weight gain (Nelson et al., 2008; Winpenny et al., 2020). Thus, due to the cumulative nature of the life course, it is crucial to explore life in its entirety, not just as single events.

The second component of the life course, human agency, emphasizes a person's role in making choices and selecting specific roles and positions to achieve their goal (Elder & Giele, 2009). However, it must be taken into account that an individual's actions and choices are related to the opportunities and limitations provided by their history and social circumstances. To clarify, individuals are not launched onto a free pathway; they follow a path resulting from complex interactions between human agency and changing cultural, social, and historical settings.

The next element of the life course, timing, represents normative expectations when a particular transition or turning point (major transition) occurs in the life course of an individual (Elder & Giele, 2009; Wethington, 2005). Life course transitions such as role shifts from adolescence to adulthood, transformations in family responsibilities, changes in place of residence, or other major life changes such as becoming a parent have been conceptualized as times that require adjustments to people's existing pathways (Elder & Giele, 2009; Wethington, 2005). These transitions are typically linked to the changes in personal health attitudes and practices resulting from changes in social connections or resources. Unexpected and stressful transitions such as illness or bereavement in particular may lead to substantial changes in routines and behaviors (Elder & Giele, 2009; Wethington, 2005).

Indeed, certain life events are associated with weight gain, and others with weight losses (Nelson et al., 2008; Ogden et al., 2009; Smith & Holm, 2011; Winpenny et al., 2020). Interestingly, a specific life event, for example, illness or relationship breakdown, may result in weight gain for some people at a particular stage of life, but the outcome might be the opposite at a different time of life or for other people (Ogden et al., 2009). However, in their cross-sectional study, Ogden et al. (2009) found that weight loss events shared some characteristics: They were positive, and more controllable and predictable than the life occasions related to weight gains. More specifically, reduced control over food and eating and increased opportunities to exercise more were linked to weight loss events. In contrast, reduced opportunities to regulate food intake and physical activity were linked to weight gain periods. Similarly, weight loss maintenance had a poorer likelihood of success when at least one life event reducing physical activity was experienced in everyday life (Gavin et al., 2019). Finally, also among children, life course transitions such as crises and challenges in family life have been connected to weight variation (Häkkinen et al., 2020; Shankardass et al., 2014).

Thus, to return to the main principles of the life course perspective, the concept of "linked lives" calls for attention to the interdependence of human lives and how they are mutually connected on several levels (Elder & Giele, 2009; Wethington, 2005). This principle emphasizes that relationships can both support and control an individual's behavior. For instance, family members may model the lifestyle environment by influencing each other's health habits and behavior. Marital status is associated with weight, as married people are more likely to weigh more than their unmarried peers (Dogbe et al., 2021; Schoenborn, 2004). The connections

between parents and children are also relevant. In more detail, parental BMI and education, as well as family structure, are associated with childhood overweight and predict weight status in adolescence (Duriancik & Goff, 2019; Juonala et al., 2020; Parikka et al., 2015). Similarly, health practices can be affected by social networks such as work colleagues or friends. Especially for young people, positive role models and support at school seem to play a vital role in promoting a healthy weight (Babey et al., 2015). Social support is also considered to play an important role in secondary weight management (Elfhag & Rössner, 2005; Karfopoulou et al., 2016; Montesi et al., 2016; Varkevisser et al., 2019).

Finally, the last principle, historical time and place, indicates that everyone is part of a certain cohort (Elder & Giele, 2009; Wethington, 2005), i.e. an individual born during a certain era reaches adulthood, lives through midlife, and becomes aged according to historically specific standards of family patterns, employment and financial circumstances, sociocultural values and beliefs, eating norms, and epidemiological environments in which certain diseases are or are not key risk factors. In other words, children in the early 20<sup>th</sup> century were raised in a different historical context of professional dietary advice than those currently receiving food education. Similarly, the body ideal and the practices linked to achieving it have varied in the respective eras.

In the present era (starting at the end of the twentieth century), individuals in Western countries live in a world in which they face concerns over an *obesity epidemic*, which is often repeated in the national media, and maintaining a stable weight is recommended (Gard & Wright, 2005). Also, cultural pressure for a lean body influences people's health behaviors and is linked in complicated ways to individuals' experiences of their bodies and weight (Stanford et al., 2018; Throsby, 2007; Tischner & Malson, 2012b; Tischner, 2013). Thus, it is essential to understand that social discussions and cultural definitions guide people's thinking and understanding and thus influence their perceptions and activities. To rephrase this, the social and cultural meanings attributed to weight and weight management and broader social norms and policies shape individuals' decisions and behaviors. They are also reflected in the varied ways of talking, and like with any other socially significant phenomenon, weight management and the meaning ascribed to it are constituted through various social and cultural discourses (Edley, 2001; Locke & Budds, 2020). This means there are different ways of talking about weight management, and as speakers, people need to choose which of the several competing discourses giving meanings to and explaining weight management and its successful accomplishment to use.

Nevertheless, some constructions or ways of meaning-making are easier to employ, as they have become culturally dominant, even so-called common sense—they are things that we are used to expressing in a certain way. Briefly, as discourses guide how we see the world and act within it, it is essential to pay attention to the meaning-making of individuals. The chosen discursive approach used in this thesis enabled studying the social and cultural environments and contexts within which weight management occurs. Hence, it reinforces the life-course approach, which is also used in the present thesis.

In summary, the present thesis's framework views weight management as a constructed activity in which previous experiences and contexts in the life course offer a starting point for understanding an individual's existing weight management decisions and strategies. The three sub-studies cover the various elements of the life course approach and thus contribute to completing the thesis's aim to see weight management as a more coherent whole.



## 4 SOCIOCULTURAL CLIMATE OF WEIGHT MANAGEMENT

### 4.1 WEIGHT-CENTRIC HEALTH DISCOURSES

In recent decades, public health and health promotion policies and programs in Western cultures have focused on obesity prevention and urged people to maintain a healthy weight (Frederick et al., 2016a; LeBesco, 2011; Ulijaszek & McLennan, 2016). As a result, people constantly monitor their weight and lifestyle practices and are willing to regulate them to prevent weight gain (Hervik & Thurston, 2016). It is also common among individuals with no medical need to do so to try to lose weight (Gotovac et al., 2020; Sares-Jäske et al., 2019a). Further, women in particular practice dieting and exercising to fulfill society's demand to avoid overweight (Montani et al., 2015; Puhl & Heuer, 2010; Sares-Jäske et al., 2019a; Tischner, 2013; Tylka, et al., 2014).

In the context of the current rhetoric of the *war against obesity*, *obesity epidemic* or *weight-centered health promotion*, obesity and overweight bodies are labeled as problems and health risks (Blackburn & Stathi, 2019; Frederick et al., 2016a; Stanford et al., 2018; Tischner, 2013). These framings have dominated the reporting of and research on obesity and weight in past years (Stanford et al., 2018; Ulijaszek & McLennan, 2016). They have significantly influenced how weight and weight management are understood and dealt with in Western societies today. For example, they have produced ideas about what *normal* people should be, thus creating standards for weight management. They rely on medical discourse with roots in the energy balance model and construct overweight bodies as *ill* or at least *pre-ill*, thus posing them as objects that need to be worked on and cured (Rich & Evans, 2008). Moreover, individuals are considered personally responsible for their weight within these approaches (Blackburn & Stathi, 2019; Gotovac et al., 2020; LeBesco, 2011; Rich & Evans, 2005).

Further, these wider cultural constructions underline a slender body and thinness as a universal good, and weight loss as an appropriate way in which to achieve it (LeBesco, 2011; Rich & Evans, 2005; Tischner, 2013). They offer body images and body ideals to which people compare their own bodies and normalize the slender body shape over others, creating beauty standards that everyone should purportedly meet (Joy & Numer, 2018; Malterud & Ulriksen, 2011; Tischner & Malson, 2012a; Tylka et al., 2014). In Western countries, normative pressure to control one's weight and change one's body is especially prominent for women because appearance and health issues are highly gendered (Stice & Shaw, 2002; Tischner, 2013). Women's bodily presentation is substantially less flexible than that of men: The sociocultural body ideal for women is slim, whereas the ideal male body is typically characterized by muscularity (Lavender et al., 2017). Constant exposure to the unrealistic, thin, fit body as a norm may lead to body dissatisfaction and thus encourage unhealthy weight

control behaviors and perceptions (Berg & Larsson, 2020; Montani et al., 2015; Raffoul et al., 2018), such as extreme dieting or exercising, which are believed to produce the *right kind of body* (Bombak et al., 2019). To summarize, within these framings, weight management is seen as an individual's tool for preventing or treating obesity through behavioral practices, and everyone, regardless of their body size, becomes implicated in the need to be vigilant against weight gain.

At present, body size and weight are increasingly likely to be presented as a matter of health. In other words, the pursuit of health is often constituted as achieving an ideal body weight and shape. Practices such as dieting, previously presented as gendered practices of beautification (Wolf, 1991), have been re-packaged as means of health maximization. Health is, after all, understood as the primary component of an individual's wellbeing. Numerous post-structuralists and critical studies have established that weight and body size are conceptualized as the markers or the proofs of health, promoting a simplistic relationship between health and body size (Blackburn & Stathi, 2019; Dodds & Chamberlain, 2017; Frederick et al., 2016a; Harjunen, 2017; Rich & Evans, 2005). This vision of weight and health expects people to adopt lifestyle behaviors that protect them from weight gain and diseases. Moreover, in the light of the weight-centered discourses, health is the result of an individual's own choices concerning lifestyle, behavior, and attitudes, and people are judged by their body size as it is seen as a sign of the individual's success or failure (Crawford, 1980; Jiménez-Loaisa et al., 2020; LeBesco, 2011; Mansfield & Rich, 2013). These models portray people as rational, independent, and responsible individuals—the architects of their own lives, and the only ones responsible—who are willing to make rational choices.

In this sense, avoiding too much weight and achieving health are individual goals and obligations. Moreover, lifestyle choices are no longer regarded as merely the individual's personal choices but also as duties, and they are closely connected to the creation of the *proper citizen* concept (Crawford, 1980; Jiménez-Loaisa et al., 2020; LeBesco, 2011; Rich et al., 2015). So, to be a good or proper citizen, one is expected to fulfill the social standards and norms related to being healthy and not being an extra burden to society (Gard & Wright, 2001; Mansfield & Rich, 2013). In turn, failing to do so or appearing to fail to do so (as overweight is identifiable at a glance and is thought to reflect a negligent lifestyle), one's competence and status as a responsible citizen may decrease. Indeed, several studies have demonstrated negative consequences of linking weight and health (Gotovac et al., 2020; Täuber et al., 2018; Tylka et al., 2014). For example, a study of people with eating disorders demonstrated these harmful side-effects, as the participants rationalized their bulimic practices to pursue a lean body and a healthy weight and positioned themselves as responsible citizens (Burns & Gavey, 2004).

Consequently, weight is also understood as a moral issue. It is typical to accuse individuals who do not conform to society's weight and health ideals as lazy, or as having poor willpower, motivation, and self-control (Bombak et al., 2016; Emmer et al., 2020; Gotovac et al., 2020; Puhl, R. & Brownell, 2003; Puhl & Heuer, 2010). This kind of stereotyping of people with overweight or obesity creates grounds for moral

judgments and the culture of blame and gives space to stigma. In short, at an early stage of life, people learn and are taught the norms from which they differ or in which they engage, and construct their identities based on these norms through a socialization process (Goffman, 1959; Goffman, 1963). As the physical, social, and moral body all overlap today, one's body size and weight are typically seen as important parts of the evaluation of being the *right kind* of person, which is further closely connected to social acceptability and status. Additionally, the normative tendency and weight stigma influence individuals' behavior when they search for social acceptance (Guassora et al., 2014; Nolan et al., 2008). Thus, people are susceptible to trying to manage their body weight through a variety of practices, some categorized as healthy, and others classified as unhealthy.

Another problematic issue that maintains and reproduces stigma is related to the terminology of the medical interpretation of weight. The *normal weight* concept is generally used at the layperson and professional level to define and describe an optimal body weight in terms of health and longevity. BMI is the most frequently used method for determining weight status in clinical practice and is considered a standard and objective measure of health (Gutin, 2018). Adolphe Quetelet, a scientist, conceptualized BMI about 180 years ago, but the measure gained its current role as the primary method for determining weight status in 1972, when physician Ancel Keys identified it as a suitable method for describing relative weight (Gutin, 2018; Keys et al., 1972). Categorizing bodies that do not fit the normal weight range of BMI as abnormal and unhealthy and simultaneously labeling thinner bodies as normal and healthy supports the construction of overweight bodies as socially unacceptable and stigmatized. Thus, the medical weight-centered discourse has significantly contributed to the construction of normal body size and weight and the actual weight management activities that individuals adopt in their daily lives in Finland. However, being overweight is not considered negative in all countries and cultures: For example, African-American women perceive less pressure to be slim than Caucasian females in the US (Hebl & Heatherton, 1998; Padgett & Biro, 2003).

## **4.2 FRAMINGS THAT CHALLENGE THE DOMINANT UNDERSTANDING OF WEIGHT MANAGEMENT**

Some alternative and culturally untypical (non-dominant) interpretations of weight management allow us to construct body weight as beyond individual control, thus not attributing accountability to individuals but highlighting the multitude of reasons for obesity (Swinburn et al., 2011; Ulijaszek & McLennan, 2016). These competing frameworks highlight the importance of the socioecological and structural determinants surrounding weight management, such as socioeconomic status, education, and the physical and social environment. These alternative ways of understanding weight management have also been discursively identified in weight-loss studies in which patients and health professionals have both reiterated and resisted the moral discourse of weight (Blackburn & Stathi, 2019; Wiggins, 2009).

The obesogenic environment is considered a relevant element in developing and maintaining obesity (Lindvall et al., 2015; Medvedyuk et al., 2018; Puhl & Heuer, 2010; Townshend & Lake, 2017). Instead of suffering from poor self-control or willpower, individuals respond to their surroundings and opportunities, or the conditions of their lives. For example, the increased availability of energy-dense products and their intense marketing most likely play a role in excess energy intake and weight gain. A 10-year follow-up study also suggested that the more obesogenic environment in the US could be one possible explanation for the weight gain differences observed between Swedish and US women: Women in the US seemed to be more vulnerable to unhealthy habits than their Swedish counterparts (Lindvall et al., 2015). So, according to this logic, collective responsibility and governmental measures regarding food regulation and marketing are urged as an alternative to blaming individuals (Rich & Evans, 2005; Stanford et al., 2018; Ulijaszek & McLennan, 2016). Exposure to this view of weight as a complex issue with a multitude of contributors seems to have a positive influence on people's perceptions of weight-based prejudices (Frederick et al., 2016a; Frederick et al., 2016b; Puhl et al., 2005).

Body-positive approaches such as *Health at every size* and *fat rights* frameworks have challenged and criticized the dominant understanding of weight management (Bombak et al., 2019; Cooper, 2010; Harjunen, 2017; Tylka et al., 2014). The main principles underpinning these perspectives promote size and body acceptance, respect for natural body diversity and putting an end to weight discrimination and stigma. To sum up, the framings challenging the dominant understanding of obesity are linked to more positive beliefs and attitudes toward individuals with obesity and weight-based stigma than the prevailing medical approach (Bombak, 2014; Bombak et al., 2016; Frederick et al., 2016b).

## **5 UNDERSTANDING WEIGHT MANAGEMENT THROUGH QUALITATIVE APPROACHES**

In addition to identifying the predictive determinants of successful weight management, it is crucial that we understand why some people manage to adopt and maintain the necessary behaviors related to success while others do not. Quantitative studies that have focused on psychosocial factors in weight management, for example, have explored the underlying mechanisms of maintaining a stable weight (Teixeira et al., 2010; Teixeira et al., 2005). Qualitative research methods have also been used to obtain possible explanations for this issue. They can operate at an individual level and provide rich, in-depth information to help us understanding these factors more thoroughly (Hammarberg et al., 2016; Korstjens & Moser, 2017). Hence, this section summarizes the findings of qualitative approaches to weight management in studies exploring and describing weight management. Studies examining only dieting or losing weight were excluded.

### **5.1 EXPERIENCES OF WEIGHT LOSS WEIGHT MANAGEMENT**

A growing body of literature has focused on the experiences, strategies, and challenges encountered in secondary weight management. Interestingly, similar findings to those of quantitative studies are also emphasized in the qualitative field. Two notable systematic reviews focusing on qualitative studies recently examined successful long-term weight loss maintenance (Greaves et al., 2017; Spreckley et al., 2021). Both found that continuous monitoring was the key factor influencing successful weight maintenance, and it was most consistently mentioned throughout all the studies. Both self-monitoring and external monitoring were seen as crucial and necessary to keep maintainers on track (Greaves et al., 2017; Spreckley et al., 2021). The studies presented a variety of self-monitoring tools (Spreckley et al., 2021). Measuring portion sizes, calculating energy expenditure, and controlling energy intake were typically used to evaluate how much successful maintainers were eating or how active they were (Karfopoulou et al., 2013; Kwasnicka et al., 2019; McKee et al., 2013; Natvik et al., 2019; Natvik et al., 2018; Reilly et al., 2015; Sarlio-Lähteenkorva, 2000). Successful maintainers reported that they used specific tools such as tracking apps, food diaries, or food scales to stay in control (McKee et al., 2013; Natvik et al., 2019; Reilly et al., 2015).

Pre-planning was another crucial element of self-monitoring in successful weight loss maintenance. Maintainers clarified that they planned and prepared meals beforehand to control their regular food consumption and to ensure they could cope with challenging situations (Carrard & Kruseman, 2016; Karfopoulou et al., 2013; Kwasnicka et al., 2019; Pedersen et al., 2018; Reilly et al., 2015; Sarlio-Lähteenkorva, 2000). It was also characteristic for weight-loss maintainers to pre-plan events: They checked the menus and foods available to decide what to eat on these occasions

(Carrard & Kruseman, 2016; McKee et al., 2013; Metzgar et al., 2015; Reilly et al., 2015). Moreover, they had to have a clear picture of the components that helped maintain their weight loss: Clear everyday routines, such as shopping for healthy foods, choosing healthier or lower energy options from a menu, having precise eating times, or bringing regular exercise into daily routines, were mentioned as promoting weight maintenance (Carrard & Kruseman, 2016; Karfopoulou et al., 2013; Kruseman et al., 2017; Kwasnicka et al., 2019; Metzgar et al., 2015; Natvik et al., 2018; Pedersen et al., 2018; Reilly et al., 2015; Sarlio-Lähteenkorva, 2000). Regular weighing also played an essential role in success: Maintainers had developed strategies to react to situations in which they exceeded the acceptable weight range or if their clothes no longer fit them (Carrard & Kruseman, 2016; Karfopoulou et al., 2013; Kwasnicka et al., 2019; McKee et al., 2013; Natvik et al., 2019; Natvik et al., 2018; Reilly et al., 2015; Sarlio-Lähteenkorva, 2000).

Further, external monitoring was perceived as significant in weight loss maintenance as it made continuous self-monitoring easier. The participants appreciated the support, motivation, guidance, and attention they received from weight loss groups and group leaders (Metzgar et al., 2015; Natvik et al., 2018; Reilly et al., 2015; Sarlio-Lähteenkorva, 2000). Similarly, feedback from friends, family, and other close people encouraged maintainers to stay on track (Kwasnicka et al., 2019; Metzgar et al., 2015; Natvik et al., 2019; Natvik et al., 2018; Reilly et al., 2015; Sarlio-Lähteenkorva, 2000). The critical role of self-monitoring in successful weight loss maintenance was the topic of a systematic review conducted by Hartmann-Boyce et al. (2019). In line with other studies, this review found that constant self-monitoring and strong self-knowledge were essential for success. Successful weight-loss maintainers were actively conscious of their behavior related to factors that influenced weight: They calculated energy or monitored their emotions and thus became more skillful at understanding and controlling their behavior when corrective actions were needed (Hartmann-Boyce et al., 2019; Hindle & Carpenter, 2011). However, contrary to maintainers, regainers often reduced their self-monitoring after they had achieved their weight loss (Byrne et al., 2003; Chambers & Swanson, 2012; McKee et al., 2013). It is suggested that the negative experience of continuous self-monitoring, especially when the outcome of monitoring is expected to cause negative emotions and further possibly result in regaining, could be at least a partial reason for reduced self-monitoring (Chambers & Swanson, 2012; Reyes et al., 2012).

Enduring motivation was similarly important for success. The desire to improve one's health and life quality and to prevent weight-related illnesses was seen as an intrinsic motivator to maintain weight loss (Karfopoulou et al., 2016; Kwasnicka et al., 2019; Natvik et al., 2018; Reilly et al., 2015; Sarlio-Lähteenkorva, 2000; Welch et al., 2009). Successful weight loss maintenance was accompanied by changed self-concept (e.g., changes in the way one perceives oneself and how one is related to the world) and changed beliefs about weight management: A sense of being a new person with a greater sense of self-control and viewing weight management as an integral part of contemporary lifestyle were common among maintainers (Greaves et al., 2017; Karfopoulou et al., 2013; Kruseman et al., 2017; Natvik et al., 2019; Natvik et al., 2018;

Pedersen et al., 2018). In addition, extrinsic motivators played a relevant role in weight loss maintenance: Enhancing social acceptance and the wish to decrease stigmatization were mentioned as drivers to continue weight management (Epiphaniou & Ogden, 2010; Karfopoulou et al., 2013; Natvik et al., 2018).

Further, self-defined and tailored goals seemed to play a significant role in sustaining weight loss, as did activity goals such as scheduled gym or endurance training that engaged the person in regular exercise (Kruseman et al., 2017; Kwasnicka et al., 2019; Natvik et al., 2019; Natvik et al., 2018). A variety of eating goals were also mentioned: For example, weight-loss maintainers tried to eat plenty of fruit and vegetables and cut down on fats—some focused on overall food consumption whereas others mapped out food category- or macronutrient-specific goals (Kruseman et al., 2017; Kwasnicka et al., 2019; Natvik et al., 2018). The importance of having personalized goals seemed to help autonomy and success, particularly in situations when adjustments were needed due to expected or unexpected life events (Reilly et al., 2015; Sarlio-Lähteenkorva, 2000). Finally, externally defined goals such as the shared aims of weight loss groups benefitted weight loss maintenance, but they were not critical factors for determining success (Spreckley et al., 2021).

Greaves et al. (2017) suggested in their systematic review that weight-loss maintainers faced a psychological conflict or *tension*, when they needed to change their behavior to maintain weight loss. Accordingly, high levels of tension predicted relapse, whereas low tension was associated with maintenance. The sources of tension varied: The tendency to return to old habits and unmet needs increased tension. Negative attributions, such as seeing weight management as something rigid and rule-oriented, also seemed to increase tension (Greaves et al., 2017). Successful maintainers, in contrast to regainers, had learned strategies for managing tension. Self-regulation played a key role in this: Maintainers regularly weighed themselves, planned their actions to avoid impulsive actions, and flexibly restrained their behavior (Greaves et al., 2017).

As previously stated, maintainers actively managed internal and external influences, such as coping at social eating events, when they were stressed or when their mood was low. Finally, successful weight maintainers had found ways to develop automaticity in their behavior, which made weight management less of an effort (Greaves et al., 2017). Habituation of the new lifestyle, routinized self-regulation, and finding alternative, healthier ways to fulfill individuals' needs to manage stress or deal with emotions were seen as crucial.

Overall, the weight loss maintenance studies suggested that life after weight loss demanded constant self-monitoring such as pre-planning, constantly alertness, or staying on track. Further, it was vital to sustain motivation, protect oneself from one's surroundings, and to develop routines for successfully maintaining weight loss.

## **5.2 INSIGHTS FROM PRIMARY WEIGHT MANAGEMENT**

Although a growing amount of qualitative literature has explored weight management, little attention has been paid to primary weight management. However, some studies have examined individuals who have maintained their weight within the healthy BMI range (Byrne et al., 2003; Carrard & Kruseman, 2016; Chambers & Swanson, 2012; Kruseman et al., 2017; Lindvall et al., 2010; Reilly et al., 2015). These studies have investigated the attitudes, behaviors, strategies, and perceptions of lifetime maintainers and weight-loss maintainers. Some have also included regainers (individuals unable to sustain or achieve weight loss) and compared the issues related to successful and unsuccessful weight management (Byrne et al., 2003; Chambers & Swanson, 2012; Lindvall et al., 2010; Reilly et al., 2015). In addition, a few studies have focused on individuals with medically determined normal/ healthy weight: An Australian study examined women's descriptions of what promoted and what hindered maintaining a healthy weight (Welch et al., 2009), whereas Canadian research has examined the experiences of weight management among individuals with medically determined normal weight (Hernandez et al., 2016).

Interestingly, the primary strategies for weight management among the successful weight-loss maintainers and lifetime maintainers were similar, whereas the implementation of strategies varied between groups and individuals (Byrne et al., 2003; Chambers & Swanson, 2012; Kruseman et al., 2017; Lindvall et al., 2010; Reilly et al., 2015). In line with previous findings, planning and organizing were strategies used by both weight loss and lifetime maintainers. Some practices they reported were making time for exercising, pre-planning meals, keeping tempting foods out of the home, and only occasionally dining out (Carrard & Kruseman, 2016; Kruseman et al., 2017; Reilly et al., 2015). Women with a healthy weight also reported using similar practices for keeping their weight stable (Welch et al., 2009). Overall, maintainers had found a balance between eating and physical activity, which was also one of the strategies mentioned by individuals with a medically determined normal weight (Hernandez et al., 2016).

Despite the similarities in the lifetime maintainers' and weight-loss maintainers' strategies, these groups also had differences. Successful weight-loss maintainers were constantly vigilant in their diet and physical activity and saw rigorous control as necessary for success. In contrast, lifetime maintainers' attitudes were more relaxed, and they reported fewer controlled strategies and more spontaneous ways of life. Still, they needed to be aware of their behavior and paid attention to their diet, food intake, and food choices as well as physical activity (Byrne et al., 2003; Carrard & Kruseman, 2016; Chambers & Swanson, 2012; Kruseman et al., 2017; Lindvall et al., 2010; Reilly et al., 2015). In contrast, weight-loss maintainers had strict rules about foods they were allowed to eat or needed to avoid. They also controlled their behavior on special occasions (feasts, holidays) and might refuse to eat or at least control the quantities of good food that they ate.

In contrast, lifetime maintainers' food choices were guided by personal preferences,



pleasure, and taste, and they considered internal feelings and awareness to be sufficient for regulating their eating (Byrne et al., 2003; Kruseman et al., 2017). They also saw healthy food choices as automatic actions and did not routinely select poor foods. They considered exercising a source of pleasure and enjoyment and not just a tool to control weight (Chambers & Swanson, 2012; Kruseman et al., 2017; Lindvall et al., 2010; Reilly et al., 2015). Similarly, Hernandez et al. (2016) found that individuals with medically determined normal weight saw weight management as a healthy lifestyle with a combination of mindfulness related to eating and exercise and automatic processes integrated into their lifestyles and daily habits. They did not perceive weight management as problematic or difficult, and it did not dominate their thinking. In contrast, the Australian study found that women regarded maintaining a healthy weight as a challenging and laborious task with which they struggled (Welch et al., 2009).

In addition, primary weight maintainers rarely used self-weighing as a weight management strategy; they relied on the fit of their clothes or their reflection in the mirror (Byrne et al., 2003; Carrard & Kruseman, 2016; Chambers & Swanson, 2012; Hernandez et al., 2016; Reilly et al., 2015). They had a personal weight range that allowed acceptable weight fluctuations (Chambers & Swanson, 2012). When maintainers felt they had gained some weight, for example, after a vacation or Christmas, instead of using extreme behaviors such as restrictive days or applying specific control plans, they seemed to counterbalance their weight gain by natural means and went back to their routines (Carrard & Kruseman, 2016; Chambers & Swanson, 2012; Hernandez et al., 2016; Reilly et al., 2015). So, they made small modifications (such as more walking or cutting out non-routine snacks) to their usual behavior in order to lose the gained weight and then continued with their regular habits.

These results suggest that weight loss management needs more effort and several tactics compared to maintaining a healthy weight. Lifetime maintainers were more flexible in their behaviors, and their views on food and eating, weight, and body shape were less polarized than weight-loss maintainers' approaches. Moreover, lifetime maintainers relied on self-knowledge and their ability to adjust their actions, whereas weight-loss maintainers depended on rigorous behaviors and constant attention. To conclude, lifetime maintainers perceived weight management as a way of life.

### **5.3 DISCURSIVE VIEWS ON WEIGHT MANAGEMENT**

Again, as stated in the *Sociocultural climate of weight management* section above, weight-centric discourses consider individuals responsible for their weight. Thus, people feel they need to account for their weight or weight management practices to avoid possible moral accusations if they fail to meet weight or body standards. The vital role of life transitions in weight gain has been widely deliberated on in the literature, and individuals have viewed them as barriers to weight loss maintenance (Rogerson et al., 2016; Smith & Holm, 2011; Throsby, 2007). Some discursive studies have

investigated how people understand and explain their weight management. Smith and Holm (2011) and Throsby (2007) found that gender and social background influenced how individuals with obesity explained their weight gain. Generally, both men and women connected weight gain to particular transitions in their life courses. Women associated weight gain with the female biological lifecycle, such as pregnancy or menopause (Smith & Holm, 2011). They also underlined the importance of social relationships in weight management: Difficulties in intimate relationships were seen as leading to increased eating for comfort and subsequent weight gain. The main explanation among men was the transition from youth to adulthood: They saw education or working life obligations as taking time away from training, and thus resulting in weight gain (Smith & Holm, 2011). Men also described how challenges at work, financial problems, or injuries that limited their ability to exercise had challenged their weight management.

Weight loss surgery patients used normative discourses related to life transitions to explain why they had put on weight (Throsby, 2007). For instance, for men, the transition from school to working life meant that the masculine consumption of fast food and alcohol resulted in weight gain. Similarly, women's narratives stressed that life circumstances such as the death of a loved one or loneliness led to comfort eating, which in turn promoted weight gain (Throsby, 2007). These normalizing discourses enabled participants to effectively minimize the moral accusations of being responsible for their weight gain and to portray themselves as having acted like any other individual would have in the same circumstances. In short, linking special life situations or responsibilities to weight gain allowed individuals to *excuse* their weight gain using biological factors or other external influences and to place the responsibility outside of their control, thus protecting themselves from negative evaluations.

A similar strategy for managing weight blame was identified among patients in weight management treatment groups (Wiggins, 2009). Patients provided accounts of their experiences of managing weight and how their attempts had failed for reasons beyond their control. For instance, they explained that they had been overweight since the day they were born, far before their own actions could have been involved in weight gain. They also constructed weight as a personal characteristic similar to age or height, or portrayed weight gain as a consequence of medication, shifting the accountability for weight to innate or external factors (Wiggins, 2009). These findings are in accordance with data on weight loss surgery patients: Their narratives resist the construction of body size as an individual moral failure (Throsby, 2007). They also relied on biological explanations or referred to the role of illnesses or injuries as contributors to their weight history. Again, these discursive resources place the individual's responsibility outside their own control.

Finally, one discursive study identified weight gainers' and weight losers' descriptions of lifestyle changes (Jallinoja et al., 2008). Accordingly, the participants shared the general view that individuals are held responsible for their weight and health. More precisely, they emphasized the critical role of self-control and self-regulation in maintaining healthy habits and weight. The participants reported that they had used

self-control to balance healthy and unhealthy choices: to avoid external temptations such as overeating good foods and to motivate themselves to continue new, more beneficial practices such as regular exercising. Moreover, weight losers in particular portrayed a healthier lifestyle as something routinized and unproblematic, of which people were in charge. Another study that examined men's weight loss stories underlined modified eating practices, tracking physical activity, and weight monitoring practices as vital for keeping their weight stable (Couch, D. et al., 2014).

In summary, the information gathered through discursive approaches highlighted the central role of both self-control and individuals in successful weight management. Simultaneously, when failing to succeed, people felt they were forced to account for their failure and typically negotiated the reason as being outside of their control.

## **6 AIMS OF THE THESIS**

As I have presented in the previous sections, the usual treatments for and actions to prevent obesity that typically emphasize behavioral factors and actions related to weight, food, and exercise have not solved the problem of the increased prevalence of obesity. So, below the surface, other aspects must be intervening in lifestyle behaviors and everyday life which shape, possibly even covertly, the selections and actions involved in weight and weight management. These elements (attitudes, thoughts, norms) have received much less research attention. Thus, we need to approach this topic from a novel angle to better understand weight management.

The research objectives of this thesis were as follows:

1. To explore why individuals who have always maintained a medically determined normal weight believe they have succeeded in lifelong weight management and which factors and behavioral issues they regard as significant for their success.
2. To study the perceived influence of the life course on weight management: how earlier experiences and social connections affect an individual's current behavior and choices.
3. To describe how individuals with different weight maintenance histories employ various culturally and socially available weight management explanations in their sense-making.

The main idea is that we need new approaches to obtain novel, meaningful insights into successful weight management. To understand weight management more deeply, we have to study the entire life course, and give voice to those in whose views and experiences we are interested. As primary weight management has received considerably less research attention than secondary weight management, I believe there is much to learn from lifelong maintainers regarding their attitudes, knowledge, health beliefs, and behaviors concerning diet, exercise, and lifestyle. Further, even though literature on the cultural understanding of obesity and weight is accumulating, the topic remains insufficiently studied. It is crucial to recognize the patterns in people's meaning-making related to weight management, as they may be highly informative in terms of the actual weight management methods and attitudes that individuals assume in their everyday lives.

Consequently, this doctoral dissertation contributes to expanding the biomedical understanding of weight management by examining successful weight management from the life course perspective.

Moreover, as this thesis approaches weight management from a fresh, positive viewpoint it includes only successful individuals. Finally, looking at positive behavior

in relation to weight maintenance offers an alternative to the typical narrative of the factors influencing obesity.

## 7 DATA AND METHODS

This thesis study consists of three different but interconnected sub-studies (I–III) conducted in Finland. Sub-studies I and II used data that I collected in 2012 through thematic interviews. The results of these two sub-studies were then utilized in the data collection of Sub-study III in 2017–2018. Therefore, this thesis is based on two distinct data sets, which were utilized in three sub-studies. The studies were reviewed by the Ethical Review Board of the Humanities and Social and Behavioral Sciences at the University of Helsinki (Sub-studies I–II) and the ethics committee of Helsinki University Hospital (Sub-study III). All the participants provided oral (Sub-studies I–II) or written (Sub-study III) informed consent, were aware of their right to withdraw from the study, and were guaranteed anonymity.

### 7.1 PARTICIPANTS

#### 7.1.1 LIFELONG WEIGHT MAINTAINERS (LMS)

The participants in Sub-studies I–II were 39 individuals with a medically determined normal weight, men and women from two age groups (age 30–45 and 55–70 years). They had maintained a medically determined normal weight throughout their lives. The women had gained some weight during pregnancy but had returned to a medically determined normal weight range after delivery. All these LMs were from the metropolitan area of Finland.

I used purposeful sampling method to find study participants. This technique enables the selection of individuals who are experienced in the studied phenomenon, and who thus, in the present thesis, could illuminate lifelong weight management (Hammarberg et al., 2016; Moser & Korstjens, 2018). I started by recruiting participants from two workplaces, the Public Works Department of the City of Helsinki and the parish union of Helsinki. I sent an invitation letter by email explaining the research and the participation criteria to my contacts there and asked them to forward it to potential participants. Then, I contacted each appropriate and interested candidate and provided detailed information about the research. After collecting information in the interviews, I asked the participants to suggest other potential future participants from among their social contacts— i.e. I used the snowball sampling method—to recruit more participants (Moser & Korstjens, 2018). I also promoted the study in my social networks. Consequently, only 10 of the final 39 LMs worked in either the Public Works Department or the parish union of Helsinki, as I managed to reach participants from various employers, including the private sector.

The inclusion criteria (Sub-studies I–II) was men and women within the age range of 30–45 or 55–70 years, and maintenance of a medically determined normal weight (BMI, between 18.5 and 24.9) throughout one’s lifetime (early adulthood to present

age). Two participants were excluded after the interviews as they reported a weight gain period during their adulthood. The final number of participants was determined by saturation: The data were saturated when new analytical information no longer arose (Hammarberg et al., 2016; Moser & Korstjens, 2018). Indeed, at some point during the interviews, I noticed that the main themes and categories frequently reoccurred. New interviewees offered no novel discussions but repeated the same topics that the previous interviewees had already presented. However, I conducted a few interviews after this to confirm that data saturation had been reached. In addition, to guarantee data richness, I ensured that enough informants of each age and gender group were included.

### **7.1.2 WEIGHT-LOSS MAINTAINERS (WMS)**

Sub-study III used both research data sets and had 40 participants, 20 from each of the two groups. To obtain appropriate data for comparing participants according to their weight maintenance histories, the older age group of LMs were selected for Group 1. Group 2 consisted of WMs who had been at least overweight, had lost weight, and had maintained their weight loss for three years (Fogelholm et al., 2017; Raben et al., 2021). The WMs were recruited from among the participants of the PREVIEW intervention study, which aimed to determine a favorable lifestyle for preventing type 2 diabetes (Fogelholm et al., 2017; Raben et al., 2021). The WMs had followed a low-energy diet for two months and had lost at least 8% of their initial weight during that period. They had then successfully maintained both of the required weight criteria for this study for almost three years, which were:

1. A gain no more than 5% of one's weight after weight loss
2. Weight at least 5% below one's baseline weight

The applicable candidates were invited from PREVIEW's end-of-study assessments. Successful maintainers received an information letter and a consent form, and if they agreed to participate, they signed their informed consent, thus allowing me to contact them. Thirty-one individuals met the criteria, 20 of whom agreed to participate. Eight people were unwilling to participate, and the study excluded one person who had cancer and two appropriate candidates as enough participants had already been interviewed. To conclude, Sub-study III examined men and women with different weight maintenance histories.

Table 1 presents the characteristics of the participants of Sub-studies I–III. The data were based on self-reports. However, the WMs' weight was measured during the intervention study. The LMs' average BMI was 22.6 (range 20.1–24.9) and the WMs' 28.6 (22.8–41.1). Most of the WMs (13 individuals) were in the BMI range of 25.0–29.9 at the time of the interviews. The WMs' average BMI before weight loss was 31.6 (range 25.5–43.1). Most of the participants were moderately physically active: Almost all the LMs and most of the WMs reported physical activity at least twice per week. The education level of the maintainers varied, but most of them had studied for at least 13

years. In addition, the physical abilities, occupations, family relationships, and childhood family background of the study participants varied, thus they can be considered a heterogeneous group of successful LMs and WMs.

**Table 1.** Characteristics of study participants

	<b>Weight-loss maintainers (WMs)</b> (frequency)	<b>Lifelong weight maintainers (LMs)</b> (frequency)
<b>Gender:</b>		
Men / women	7 / 13	19 / 20
<b>Age:</b>		
Mean age (range)	64 y (51–74 y)	49 y (30–68 y)
<b>Education:</b>		
0-9 y	2	3
10-12 y	4	8
13 y or more	14	28
<b>Smoking/ use of snuff:</b>		
Yes	2	4
<b>BMI (kg/m<sup>2</sup>)</b>		
Mean BMI (range)	28.6 (22.8–41.1)	22.9 (20.5–24.7)
BMI between 18.5 and 24.9	2	39
BMI between 25.0 and 29.9	13	-
BMI between 30.0 and 34.9	3	-
BMI > 35.0	2	-
Mean BMI (range), before weight lost	31.6 (25.5–43.1)	-
<b>Leisure-time moderate-to-vigorous physical activity:</b>		
4–7 times/week	8	11
2–3 times/week	7	24
Once a week or less frequently	5	4

## 7.2 DATA COLLECTION – INTERVIEWS

The data were gathered through semi-structured theme interviews (Appendix 1: Interview guide). The semi-structured format was used to guarantee that all areas were covered while allowing flexibility to follow the interviewee’s story (Bernard & Ryan, 2010; Moser & Korstjens, 2018). In other words, a list of themes was used, but the interviews were not identical. Each interview was adjusted in terms of the interviewee: If a topic from the bottom of the interview guide came up at the beginning of the interview, it was discussed then. I also used different types of probing for improving data collection (Bernard & Ryan, 2010). For example, the *echo* probe or *tell me more*



probe encouraged interviewees to share nuanced narratives without being too strongly influenced by the interviewer.

For developing the interview themes, I used the results from previous weight loss and weight maintenance studies. I also added a childhood theme to the WMs' interview guide as this had emerged in Sub-studies I–II. In the interviews, we discussed the participants' relationship with food and eating; I asked them to define successful weight management and what factors they believed were linked to their weight and weight management. We also covered their health behavior and I encouraged them to talk about any topic they considered relevant in terms of weight management. Overall, it was even better if the interviewees brought up the discussion topics themselves, as this increased their involvement in creating the data.

First, I conducted three pilot interviews before interviewing the LMs and two pilot interviews to test the interview guide targeted at the WMs. The pilot interviews were not included in the analysis. The actual theme interviews lasted from 45 minutes to 2 hours and were conducted in different settings, based on the participants' preferences. A digital voice recorder recorded the interviews, which were subsequently transcribed verbatim. The data for Sub-studies I–II totaled 463 pages and for Sub-study III, 454 pages. The interviews, transcriptions, and analyses were conducted in Finnish.

## **7.3 ANALYTICAL APPROACHES**

### **7.3.1 THEMATIC ANALYSIS**

Qualitative research covers a broad range of approaches with widely varying concepts, assumptions, and analytic rules to provide in-depth descriptions and interpretations of the research topic (Bernard & Ryan, 2010). Qualitative content analysis and thematic analysis are analytical methods that search for themes and patterns across qualitative data (Braun & Clarke, 2006; Hsieh & Shannon, 2005; Tuomi & Sarajärvi, 2018). Their main characteristic is the systematic process of coding, examination of meaning, and description of the researched phenomenon through the creation of themes (Bernard & Ryan, 2010; Tuomi & Sarajärvi, 2018). According to Hsieh & Shannon (2005), content analysis aims to provide knowledge and understanding of the phenomenon under study. Braun and Clarke (2006) have described thematic analysis as a method for identifying, analyzing and reporting patterns and themes in qualitative data.

The Finnish methodological literature presents qualitative content analysis and thematic analysis as quite similar in terms of conducting analyses and some views consider thematic analysis a part of content analysis (Alasuutari, 2011; Ruusuvoori et al., 2010; Tuomi & Sarajärvi, 2018). Tuomi and Sarajärvi (2018) have suggested that the typical difference between these two analysis methods is related to the way in which the analysis is described. For example, in thematic analysis, it is common to use *thematic maps* to search for the broader level of themes, whereas in the interpretation

phase of content analysis, *coding books* and tables are utilized. So, clear definitions and procedures have been widely called for to conduct content and thematic analyses, as various ways have been previously used (Braun & Clarke, 2006; Hsieh & Shannon, 2005; Wilkinson 2000).

During this thesis process, I deepened my knowledge of qualitative methodology and learned that the thematic analysis approach presented by Braun and Clarke (2006) is quite similar to the approaches used in Sub-studies I–II. Even though the analysis method was called content analysis in Sub-study I, the phases were similar to the stages in Braun’s and Clarke’s thematic analysis guide. The steps of the thematic analysis in Sub-study II followed the same procedure. However, the concepts and references used in reporting did not agree with the form of the thematic analysis presented by Braun and Clarke, as they were more influenced by the literature related to content analysis (Bengtsson, 2016; Hsieh & Shannon, 2005). Despite this, I decided to call the analytical approaches used in Sub-studies I–II thematic analysis in this thesis. It is a synthesis of different concepts adopted from qualitative analysis literature that follows Braun’s and Clarke’s thematic analysis procedure.

Thus, thematic analysis was used to yield the results of Sub-studies I–II. This analysis method is ideal for great amounts of textual data that need to be changed to a set of themes or patterns describing the perceptions of participants (Braun & Clarke, 2006; Hsieh & Shannon, 2005; Tuomi & Sarajärvi, 2018). It is especially useful in research fields with limited data, and when a summary or overview of the studied phenomenon is required (Wilkinson, 2000). Moreover, thematic analysis is compatible with different types of theoretical and epistemological approaches and thus provides a flexible and practical research tool for obtaining rich, detailed knowledge of weight management (Bengtsson, 2016; Braun & Clarke, 2006; Hsieh & Shannon, 2005; Tuomi & Sarajärvi, 2018). The epistemological assumptions adopted in Sub-studies I–II viewed the data mainly from the realist perspective (Braun & Clarke, 2006; Tuomi & Sarajärvi, 2018; Wilkinson, 2000). In short, the participants’ talk and statements were taken as evidence of their cognitions and the data as a route to people’s experiences. However, it was acknowledged that actual reality and the way in which people see reality is different, so the reported experiences and meanings were taken as reflecting individuals’ insights of reality (Krauss, 2005). These assumptions influence the interpretations that can be made from the data: A realist approach assumes a straightforward relationship among meaning, experience and language, and thus in Sub-studies I–II, the individuals’ views, beliefs, and attitudes were considered facts that described successful weight management (Braun & Clarke, 2006; Wilkinson, 2000).

As the knowledge on lifelong successful weight management was insufficient, the thematic analysis of Sub-study I aimed to obtain an overall picture of the studied phenomenon and thus provided a detailed description of the entire data set. The form of thematic analysis was data-based, as the themes and patterns within the data were identified inductively (Braun & Clarke, 2006; Moser & Korstjens, 2018; Tuomi & Sarajärvi, 2018). This meant no pre-existing coding frame and that the data guided the

coding and categorization. In contrast, the thematic analysis in Sub-study II was both theory and data based. It focused on examining weight management from the life course perspective and on finding detailed and nuanced information on that particular topic. So, this theory-based form of thematic analysis tended to focus more on the detailed analysis of certain aspects of the data, and weight management was explored in relation to the life course view and self-efficacy (Braun & Clarke, 2006; Moser & Korstjens, 2018; Tuomi & Sarajärvi, 2018).

For the systematic data analysis, I used Atlas.ti software for assistance. First, I entered the transcribed data into the program. Then, I familiarized myself with them. As I had interviewed all the study participants and transcribed the interviews, I had some prior knowledge of their contents. After carefully reading and re-reading them, I coded the text quotations that contained relevant information on the research questions. As the coding in Sub-study I was data based, the text quotations were first grouped into 18 initial codes, which then, after evaluation and discussion with the researchers, were combined into 10 larger categories. In the following phase, the coded texts were reviewed, and the findings were summarized in order to conceptualize the codes into meaningful subthemes. I used *mind-maps* to organize the codes into subthemes and themes. These above-mentioned stages of the analysis resembled phase 3 in Braun's and Clarke's (2006) analysis in which the different codes were sorted into potential themes. I also checked the coding separately for men and women and reported the differences and similarities identified for each gender. Finally, as in phases 4–5 in Braun's and Clarke's (2006) analysis, the essence of each theme was identified and the themes named, and the relations and similarities among the codes formed two subthemes—eating- and weight-related behaviors—which further formed the main theme of self-regulation, which described the weight management approaches of the LMs.

Technically, the thematic analysis of Sub-study II followed the same main procedure as Sub-study I. However, as it was both theory and data based, the initial coding process followed the classification of the life course perspective by categorizing the text quotations into three codes (childhood, adulthood, transitions). After systematically working through the entire data set and giving equal and full attention to each data item, we realized that additional codes were needed. It is typical in qualitative analysis to have to go back to the data and refine the coding and themes until the data within the categories cohere meaningfully together and various categories are clearly distinctive (Bernard & Ryan, 2010; Braun & Clarke, 2006). Braun and Clarke (2006) highlight that during phase 4, it is important to review the candidate themes and find a home for extracts that do not work in the existing themes. For securing the reliability of the analysis, a coding list that included accurate explanations of the codes and sub-codes was created and stored in Atlas.ti. Appendix 2 contains an example of a *coding book*. Then, after careful review and numerous rigorous coding rounds, the essence of each category was identified, and two main themes were formed: *Adoption of lifestyle* and *Maintenance of lifestyle*. Corresponding to Braun's and Clarke's (2006) analysis, the final stage of analysis involved producing the report: Choosing vivid extracts that captured the essence of the story's point was central. During this process, the

researchers discussed and evaluated the adequacy of the quotations in relation to the story about the data.

### 7.3.2 CRITICAL DISCURSIVE PSYCHOLOGY AS AN ANALYTICAL FRAMEWORK

Sub-study III adopted critical discursive psychology (CDP) as its theoretical and methodological framework. CDP is one of the approaches under the umbrella of the discursive methodologies rooted in social constructionism (Locke & Budds, 2020). One characteristic of these approaches is understanding language as versions of social reality rather than as an accurate representation of an individual's views or thoughts (Burr & Dick, 2017). CDP combines elements from both micro-analytical discursive psychology, which emphasizes the local use of discourses, and those from post-structuralist approaches, which focus on the macro level of wider discourses (Edley, 2001; Locke & Budds, 2020; Wetherell, 2007).

As CDP differs fundamentally from the epistemological assumptions adopted in the previous two sub-studies, it provided an entirely different understanding of the studied phenomenon (Wilkinson, 2000). As the previous analysis viewed language as simply a tool for conveying underlying beliefs and meanings, this approach considered talk and language as *action orientated* and explored the ways in which people constructed or expressed their attitudes or beliefs (Edley, 2001; Potter, 2010; Wilkinson, 2000). Context specificity is another central aspect of the discursive approach: Talk is seen as being produced interactionally in the immediate moment. In other words, in interview settings, for example, questioning may guide interviewees' responses in specific directions, regardless of their *true* opinions or views. In the group discussions, in turn, instead of seeing informants' responses as a transparent window to their beliefs, the responses may act as discursive tools in the conversations when the informants feel they need to manage interactional difficulties such the threat of being laughed at (Edley, 2001; Potter, 2010; Wilkinson, 2000).

CDP enabled consideration of how culturally and socially available explanations of weight management were employed in the interviewees' sense-making. The method emphasized the two-fold relationship between existing understandings and the speaking subject who draws upon discourses in their sense-making (Edley, 2001). As Edley (2001, p.190) stated, CDP considers people both the *products and producers of discourse*. Instead of highlighting only the power of discourses and viewing people as slaves of language, CDP also stresses the importance of speakers as active agents who draw upon specific discursive versions and the associated understandings for a reason (Edley, 2001; Locke & Budds, 2020; Parker, 2005; Potter, 2010). So, the analysis focused on how LMs and WMs employed common weight management explanations, how they negotiated their accountability for their weight management, and how they described their possibilities of succeeding in it.

The present study paid attention to two core analytic concepts of CDP—interpretative repertoires and subject positions. The concept of interpretative repertoire labels

discursive resources linked to the specific topic that can be used in everyday social interactions (Edley, 2001; Locke & Budds, 2020; Potter & Wetherell, 1987). Repertoires are described as relatively coherent ways of talking about object of interest. They serve as building blocks for conversations as they form the basis for cultural *common sense* concerning the subject (Edley, 2001). Generally, conversations are made up of quotations from various interpretative repertoires as people fluently draw upon available repertoires when they make sense of a particular phenomenon.

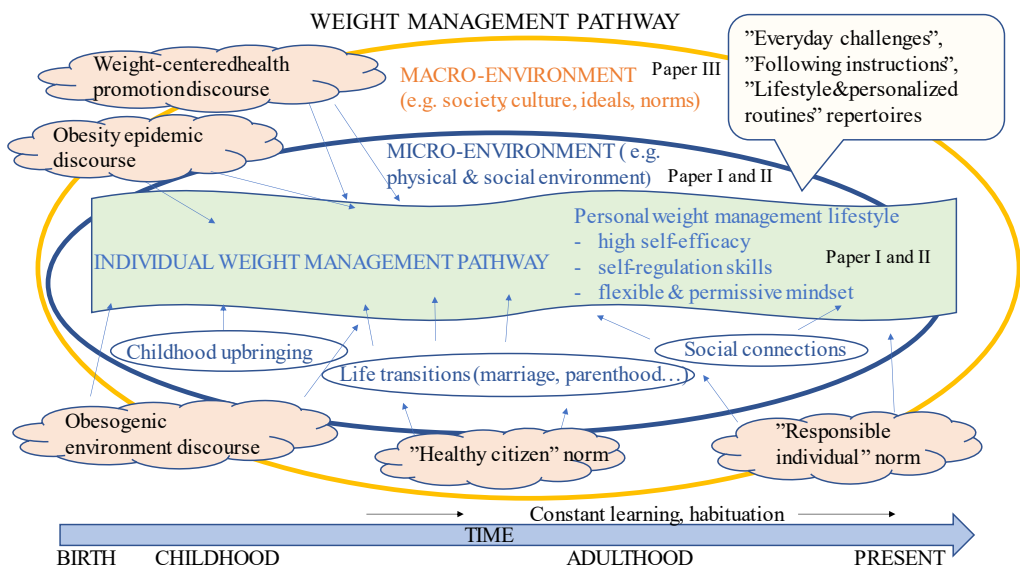
Subject positions, in turn, are discursively created *ways of being* (Edley, 2001). In discussions, people locate themselves and others in specific subject positions that are connected to particular rights and responsibilities. So, by speaking in specific ways, people construct identities for themselves and others. However, people cannot freely position individuals as they wish, as cultural history provides the identities that are assumed to be available (Davies & Harré, 1990; Edley, 2001; Locke & Budds, 2020; Potter & Wetherell, 1987). Furthermore, as the ways of speaking change within and between conversations because people typically employ different interpretative repertoires in their talk, and as it seems that people construct identities by negotiating with the subject position on offer, identities cannot be seen as fixed or unitary, but as multiple and in constant flux.

After familiarization with the data, in the first stage of the CDP-based analysis, I identified and coded the different ways in which the discursive object—successful weight management—was constructed in the text. Again, Atlas.ti software was utilized in the systematic analysis. Then, a more fine-grained analysis of individually coded extracts was conducted. The following phase focused on tracing the function of the talk: I examined each line of talk in its discursive context to determine what it enabled the speaker to accomplish (Locke & Budds, 2020). The next step involved determining the interpretative repertoires employed to account for successful and unsuccessful weight management. The researchers reflected on and evaluated the adequacy of the repertoires. Then, I focused on the positionings: I listed the subject positions that each repertoire enabled and observed the rights and responsibilities that were linked to the individual subject positions. In the final analysis phase, I paid special attention to the connection between repertoire and practice. For example, which societal or institutional practices the identified repertoires—*everyday challenges, following instructions, and lifestyle and personalized routines*—lent support to and gained support from (Locke & Budds, 2020).

## 8 RESULTS

In the following section, I describe and discuss the present thesis results in the light of previous studies. This gives a coherent, clear picture of the studied phenomenon. However, later in the discussion, I will continue considering the specific findings of this thesis and their implications. Furthermore, as the life course perspective served as the theoretical framework of this thesis, I have followed its principles in presenting my results.

The main interpretation of the present thesis was to understand successful weight management as a journey over the life course. Based on the results of the sub-studies of this work, Figure 1 shows how the individual weight management pathway developed over time and how encountered micro-and macro-environments, past experiences, and personal factors have shaped it. The weight management pathway is in the center of Figure 1. It is surrounded by the micro-environmental elements, such as childhood upbringing, life transitions, or social connections, which the participants of this study mentioned as important in terms of weight management. Further, the macro-environmental components, such as dominant cultural discourses or prevailing norms, seen as shaping individuals' pathways are also presented in Figure 1. The bottom of Figure 1 illustrates the main phases of the life course, beginning with birth and ending at the present time-point. Figure 1 also includes Sub-studies I–III, to emphasize their roles in the data collection and the elements of the life course perspective on which they focused and from which they provided information. However, it should be noted that the results overlap and intertwine, and Figure 1 illustrates them at the general level. The following chapters provide examples of the crucial parts of the individual's weight management pathway and explain them in detail.



**Figure 1.** The individual weight management pathway develops over time during the life course, shaped by encountered micro-and macro-environments, past experiences, and personal factors.

## 8.1 PRIOR EXPERIENCES AND EVENTS

In Sub-study II, the interviewees from both age groups of the LMs highlighted the central significance of childhood in creating a lifestyle that promotes successful weight management (Figure 1). In line with the first principle of the life course perspective, which underlines the influence of prior experiences on current behavior (Elder & Giele, 2009), food-upbringing formed the basis of the LMs’ current food habits. They reported eating familiar foods from childhood, and their meal frequencies corresponded to their childhood meal rhythms. Also, their uncomplicated food relationship seemed to have been born in childhood. Only minor differences emerged between the groups: The older participants reported that they had learned to appreciate food and were not willing to leave food on their plates, as their parents, who had experienced national shortages, had emphasized the value of food during their childhood. The younger participants were not so uncomfortable leaving food uneaten if they felt full. Moreover, all the LMs described that exercise had been a crucial part of their lives since childhood, so they had grown up with an active lifestyle (Sub-study II).

Women with a healthy weight described how their family background and what they had learned about food and an active lifestyle as a child played a key role in their current weight management (Welch et al., 2009). They described experiences that both promoted and challenged weight management. Some women talked about how they had learned healthy food and exercise practices from their childhood families, whereas others narrated how their practices and relationships with weight management had been shaped by negative views of food, poor dietary practices, or weight control

attempts in their childhood family (Welch et al., 2009). Sub-study II also found that not all the LMs' eating habits from childhood supported weight management. Nevertheless, in such cases, the LMs claimed to have created solutions and adjusted their behavior in order to prevent gaining weight. Similarly, Greaves et al. (2017) suggested that the successful weight-loss maintainers had learned strategies to avoid returning to old habits that hampered weight management.

Several other studies have observed that food-upbringing influences children's eating behavior and may have an impact on future adult weight (Couch, S. et al., 2014; Elfhag et al., 2010; Greenberg et al., 2010; Savage et al., 2007; Scaglioni et al., 2008; Vepsalainen et al., 2015). It has been shown that parents can affect the nutritional quality of their children's diet by supporting and modeling healthy eating, having *rules* for permitted and limited foods in the home, and having nourishing foods readily available (Couch, D. et al., 2014; Vepsalainen et al., 2018). Furthermore, in line with this study's finding that the lifestyle adopted in childhood seems to continue over time, there is some evidence that health beliefs and behaviors (Lau et al., 1990) and dietary and physical activity practices (Kelder et al., 1994) tend to continue throughout adulthood (Haynes et al., 2021; Kelder et al., 1994; Lau et al., 1990). Further, Haynes et al. (2021) and Telama et al. (2014) found that an active lifestyle developed early in childhood remained constant from youth to adult age. Kaseva et al. (2017) prospectively studied how parents' physical activity was associated with their children's activity levels, and found that the beneficial effect on offspring's lifestyle continued to at least middle age. Overall, the findings of this thesis, previous literature, and the assumptions of the life course perspective emphasize the centrality of childhood and earlier experiences in individuals' current behavior; thus, reinforcing their importance in developing and shaping the weight management pathways of LMs.

Elder and Giele (2009) suggest that human development is a lifelong process. In line with this idea, learning as a continuous process was relevant in the LMs' pathways (Sub-study II). Active habituation characterized their learning processes. Habits adopted in childhood had turned into routines and internalized behaviors through repetition during the life course (Figure 1). The LMs also reported having learned new behaviors in adulthood: The initially conscious decisions to change some behaviors to create a healthy lifestyle had changed into routines over time (Sub-study II). Further, routines did not need constant thought or work but happened automatically, which might explain the LMs' views that weight management was quite effortless.

Consistent with my results, others have also found that habitual routines and automaticity in behaviors seem to play a crucial role in secondary weight management (Greaves et al., 2017; Kwasnicka et al., 2019; Pedersen et al., 2018). Pedersen et al. (2018) described how long-term weight-loss maintainers relied on the habits and routines they had developed during weight-loss maintenance: Active self-regulation and planning had turned into habits that did not need constant thought. Similarly, routinely choosing healthy foods, reading food labels, and being active in everyday things such as taking the stairs instead of escalators without consciously thinking about it was typical for weight-loss maintainers (Kwasnicka et al., 2019). Further, Greaves et



al. (2017) concluded that adaptive learning from past mistakes and achievements enabled weight-loss maintainers to find the most suitable ways to sustain weight loss. All these findings are in accordance with the results of Sub-study II. In addition, healthy food choices and active lifestyles were automatic for primary weight maintainers, and habits were seen as assisting weight management (Hernandez et al., 2016; Kruseman et al., 2017; Reilly et al., 2015). Hence, the findings of this thesis support the relevant role of habituation in weight management and health behavior.

## **8.2 MICRO-ENVIRONMENT—LIFE TRANSITIONS AND LINKED LIVES**

As demonstrated in Figure 1, the micro-environment (e.g., family, friends, work, life circumstances, physical environment) seem to play an essential role in shaping the individuals' weight management pathways. In accordance with the life course approach, the LMs mentioned that transitions such as marriage or divorce, pregnancies, or other major life changes caused adjustments to their characteristic lifestyle. Most of the transitions required concrete actions to prevent weight gain (Sub-study II). The LMs reacted to threatening transitions and managed to maintain their ideal weight through adaptations that suited them best. Changes in everyday life or physical surroundings also shaped the LMs' weight management-related practices and hence affected their weight management pathways. For instance, decreased energy consumption due to changes in work duties resulted in modifications such as reduced or lighter eating to adjust one's lifestyle to the new environment (Sub-study I–II). However, Sub-study II found that that some transitions were beneficial for weight management. For example, parenthood was mentioned as a significant milestone when habits and routines were revised and made healthier.

In contrast, women with a healthy weight saw motherhood and childcare as challenging for weight management (Welch et al., 2009). They described how their responsibilities as mothers had taken time and resources away from weight management practices: Now, they needed to plan how to include exercise in their daily schedule, whereas earlier it had occurred naturally. Also, women reported that due to constantly having to prepare food for the family, they had lost the passion for cooking they had once had (Welch et al., 2009). Several other studies have also found that people blame their weight gain on life transitions (Rogerson et al., 2016; Salemonsens et al. 2018; Smith & Holm, 2011; Throsby, 2007). Accordingly, unwelcome life events such as injury, divorce, or work life changes have been mentioned as issues leading to weight gain. However, other life transitions that could be considered positive, such as moving, new parenthood, or a new relationship, have also been seen as threatening weight management due to decreased resources (ibid.). Young women have described the transition into adulthood as challenging for weight management as it affects their food choices, eating habits, and other lifestyle issues (Sand et al., 2017). Therefore, it is interesting that the LMs in this thesis narrated success stories of life experiences that are typically presented as the cause of weight gain in most Western cultures.

In addition to life transitions, another relevant micro-environmental component influencing an individual's weight management pathway is social connections (Figure 1). Childhood family seemed to play a central role in adopting the weight management-promoting lifestyle of the LMs (Sub-study II). Consistent with the expectations of the life course perspective, the LMs emphasized that family relations during childhood had shaped their attitudes and choices, resulting in a lifestyle that supported weight management. The LMs' parents, as role models, shared their weight management-promoting lifestyle and were also responsible for the foods available and thus offered to their children. The mother's role was seen as crucial. The LMs also brought up that their social networks had been active since childhood, which might have influenced or guided their weight management pathways. Furthermore, the current social environment (family, spouses, friends) of the LMs was mainly favorable for their weight management.

The above result of this study agrees with those of previous quantitative studies, indicating that social support plays a critical role in secondary weight management (Elfhag & Rössner, 2005; Karfopoulou et al., 2016; Montesi et al., 2016; Varkevisser et al., 2019). In addition, qualitative approaches have detected that support is important in weight loss maintenance: Receiving support and positive acknowledgments from weight loss groups and group leaders, as well as from close friends and family seems to foster success (Kwasnicka et al., 2019; Metzgar et al., 2015; Natvik et al., 2019; Natvik et al., 2018; Reilly et al., 2015; Rogerson et al., 2016; Salemonsens et al., 2020; Sarlio-Lähteenkorva, 2000). Strong family support also seems to be an essential element in primary weight management (Reilly et al., 2015), which this study also concluded. Further, young women approaching adulthood have highlighted the vital role of parents in their lifestyle habits (Sand et al., 2017). Welch et al. (2009) confirmed this notion, as the women with a healthy weight saw lack of support as hindering weight management.

A systematic review and meta-analysis emphasized the importance of parents as role models and health promoters in influencing their children's food cognitions and choices (Yee et al., 2017). In addition, several cross-sectional studies have suggested that parents can influence their children's eating behaviors and health practices (Elfhag et al., 2010; Greenberg et al., 2010) and are also involved in the development of their children's food preferences and energy intake (Scaglioni et al., 2008; Ventura & Worobey, 2013). Based on the above-mentioned findings and the results of this thesis, I suggest that early social contacts play an essential role in shaping an individual's weight management pathway.

However, to understand why the participants in Sub-study II highlighted the central role of mothers in adopting a weight management-promoting lifestyle, certain aspects need to be taken into consideration. The *traditional* family has changed substantially since the participants in this study were children. At that time, the man was considered the family's breadwinner and the woman the caretaker and the one responsible for the family's diet and health (Goldscheider et al., 2015). Today, the mother's role as the one with the principal responsibility for the family's food and cooking has weakened, and

the father's role in food-related matters has become more significant (ibid.). Today's narratives might emphasize the equally relevant role of both parents. Thus, the indication of mothers' superiority over fathers cannot be read as the plain truth, and must be understood as having been produced in the specific context of that time. Current fathers' significance in the formation of lifestyle should not be underestimated.

### **8.3 PERSONAL CHARACTERISTICS—HUMAN AGENCY**

As Elder and Giele (2009) presented in the life course perspective, individuals are active actors who plan and make choices that shape their pathways within the constraints of their world. Sub-study II interpreted the LMs as having developed high self-efficacy in issues related to weight management during their weight management pathway (Figure 1). They considered themselves responsible for their choices and routines and highlighted their commitment to their lifestyle as well as the internalized practices they performed. They had also learned to trust their ability to cope with challenging life events and to adjust their lifestyles to the changing environment. Moreover, they were good at identifying weight gain risks and were ready to achieve and maintain set goals. These observations illustrate the importance of high self-efficacy in maintaining a healthy lifestyle.

Several previous studies have associated self-efficacy with successful weight management (Elfhag & Rössner, 2005; Latner et al., 2013; Phelan et al., 2020; Teixeira et al., 2010; Varkevisser et al., 2019). Many qualitative studies have also recognized its central role in weight loss maintenance and lifestyle change: Individuals have described having developed a belief in their ability to manage their lifestyle, to be in control, and to use personal skills and resources to achieve set goals (Hartmann-Boyce et al., 2019; Hindle & Carpenter, 2011; Kruseman et al., 2017; Kwasnicka et al., 2019; Natvik et al., 2019; Natvik et al., 2018; Salemonsén et al., 2020). Similarly, in primary weight management, practices mirroring high self-efficacy were typical among lifetime maintainers (Byrne et al., 2003; Carrard & Kruseman, 2016; Chambers & Swanson, 2012; Reilly et al., 2015). As presented by Bandura (1994), compared to people with low self-efficacy, individuals with high perceived self-efficacy pursue challenging goals with substantially more commitment and are more successful in achieving the goals they set. Based on the above, it was not unexpected that self-efficacy emerged from this study's data as a relevant element of success, and this finding strengthens the general view of self-efficacy as a key factor in successful weight management.

Additionally, long-term flexibility and conscious self-regulation characterized the weight management pathways of the LMs (Sub-study I). An uncomplicated relationship with food and eating was common among the LMs: They highlighted that they needed to be aware of their eating, but it did not dominate their thinking. Flexibility formed the core of their dietary choices in everyday life and on special occasions, and they regarded the entire diet as more essential than single food items. A healthy, vegetable-rich diet was typical for the LMs, but they also allowed themselves foods considered unhealthy. Moreover, regular eating, sufficient meal sizes, and

flexible eating restrictions along with moderate indulging described their routines. Regular exercise played a central role in their lives: They saw it as a source of enjoyment and well-being although they recognized that it assisted weight management.

The results of Sub-study I are in accordance with information on primary weight management, emphasizing flexible attitudes towards behaviors related to diet and exercise (Byrne et al., 2003; Carrard & Kruseman, 2016; Chambers & Swanson, 2012; Hernandez et al., 2016; Kruseman et al., 2017; Lindvall et al., 2010; Reilly et al., 2015). Namely, lifetime maintainers felt they needed to be aware of their diet and food choices as well as physical activity and to find a balance between eating and exercise (Byrne et al., 2003; Carrard & Kruseman, 2016; Chambers & Swanson, 2012; Hernandez et al., 2016; Kruseman et al., 2017; Lindvall et al., 2010; Reilly et al., 2015). Byrne et al. (2003) and Kruseman et al. (2017) also observed that personal preferences, pleasure, and taste characterized lifetime maintainers' food selections, and that they relied on internal cues and their ability to eat enough food. The LMs' strategies were identical to those of lifetime maintainers. Furthermore, the LMs of this thesis and the primary weight maintainers in the other studies all claimed that they enjoyed regular exercise and viewed it as a vital part of their lives (Chambers & Swanson, 2012; Hernandez et al., 2016; Kruseman et al., 2017; Lindvall et al., 2010; Reilly et al., 2015). The results of the present study are also consistent with the findings regarding secondary weight management, which highlighted the central role of self-regulation in success (Greaves et al., 2017; Hartmann-Boyce et al., 2019; Pedersen et al., 2018; Spreckley et al., 2021).

Further, medically determined normal weight appeared to be a valuable, worthwhile issue for the LMs (Sub-study I). They had determined a specific weight range for acceptable weight fluctuations and reported immediately reacting when they approached the upper weight limit. Reduced meal sizes, lighter eating, and diminished indulging and continuing with regular eating and active exercising were mentioned as responses to these infrequent occasions. They monitored their weight by the fit of their clothes and body image and saw regularly weighing themselves as unnecessary.

The findings of previous studies focusing on primary weight management match my results: Lifetime maintainers were willing to work to keep their weight stable (Byrne et al., 2003; Carrard & Kruseman, 2016; Chambers & Swanson, 2012; Hernandez et al., 2016; Reilly et al., 2015). Like the LMs, they rarely weighed themselves but relied more on their reflection in the mirror (*ibid.*). Moreover, their strategy of going back to their routines if they experienced a slight increase in weight reflected the LMs' approaches observed in Sub-study I (Carrard & Kruseman, 2016; Chambers & Swanson, 2012; Hernandez et al., 2016; Reilly et al., 2015). Individuals with medically determined normal weight in Canada (Hernandez et al., 2016) formed identical narratives to those of their Finnish counterparts (Sub-study I) when they described their reactions to when they thought they weighed more than was considered desirable. However, based on the LMs' and primary weight maintainers' opinions, it was unnecessary to constantly monitor their weight and important to focus on more mindful living.

Sub-study I examined gender-related issues in weight management. Generally, weight management seemed to be similar among men and women (Sub-study I). Nevertheless, some aspects varied slightly between genders. Women were more familiar with the weight management concept than men and saw weight management as guiding their food choices and behavior. For instance, they explained that exercising allowed them to more flexibly consume enjoyable foods and to have less eating restrictions. In contrast, men did not feel that weight management guided their food choices or eating habits but generally emphasized healthy eating and an active lifestyle to maintain a stable weight. In brief, their differences were associated with weight management knowledge and their concrete weight control practices and flexible approach to weight management were identical (Sub-study I).

Interestingly, a Swedish study investigating the predictive factors of primary weight management suggested that weight management may be more complex for women than men due to caregiving responsibilities and critical life events such as childbearing (Lindvall et al., 2013). Several other studies have also addressed these themes and speculated on their influences on weight management (Reilly et al., 2015; Smith & Holm, 2011; Throsby, 2007; Welch et al., 2009). However, it is essential to acknowledge another approach to interpreting the gender-related differences in weight management. Namely, normative pressures to monitor one's weight and transform one's body may be particularly salient for women because the constitution of femininity is more dependent on socially acceptable physical appearance than the construction of hegemonic masculinity (Tischner, 2013). More specifically, women have, both historically and currently, confronted substantially greater pressures of gendered body ideals, especially as the slim body is idealized as a key signifier of *femininity* (Tischner, 2013). A slim body is also equated with health and well-being in the current atmosphere of weight-centered discourses. Thus, the gender-related findings of Sub-study I are not so surprising, as they may reflect the influences of cultural expectations on people's thoughts and behavior.

## **8.4 MACRO-ENVIRONMENT—CULTURAL AND SOCIAL ELEMENTS**

As Figure 1 illustrates (p. 47), both the micro- and macro-environment (e.g., Western society with its prevailing ideals such as a thin and healthy individual and the norm of a proper citizen) contribute to shaping individuals' weight management pathways. Sub-study III focused on these macro-environmental elements and expanded the research to cover the understanding of both LMs and WMs. It found that they employed three interpretative repertoires to explain successful and unsuccessful weight management. First, the *everyday challenges* repertoire was used to describe how factors beyond their control, such as social relationships or life situations, had significantly hampered weight management. Among the WMs, this repertoire appeared to be a widely available sense-making resource for accounting for weight gain. In terms of its links with broader discourses, the *everyday challenges* repertoire is closely linked to and hence supported by the cultural discourse of the obesogenic

environment, which highlights the influence of surroundings, opportunities, or conditions of life on promoting weight gain (Townshend & Lake, 2017).

However, even though the obesogenic environment discourse had already been challenging the commonly heard weight loss mantra for several years (Swinburn et al., 2011), its role as a proper argument seems to be secondary. For example, first it seemed that the narratives in the *everyday challenges* repertoire, by reiterating this discourse, resisted individualized weight construction and assigned accountability to wider societal influences. However, a closer look indicated that these explanations were not as simple as descriptions of the participants' understandings of weight management. Instead, they could be read as a defense against the social blame in current society in which the public representation of obesity is not value free but rather a matter of discrimination and criticism. In other words, the participants in this study felt that they needed to justify their moral competence against potentially stigmatizing notions of personal responsibility for weight management.

Therefore, the use of the *everyday challenges* repertoire was linked to the participants' identity work. This repertoire enabled the WMs to negotiate with the dominant discourses that assign the moral responsibility for weight management to individuals. It allowed the subject position of a *victim* of forces beyond one's control (Sub-study III). In this position, the WMs managed to reject the potential accusations of lacking morals and being lazy and thus avoid blame and shame. Instead, in the LMs' narratives, the *everyday challenges* repertoire played a different role. Aligned with the normative discourses highlighting the importance of an individual's activity in weight management, the LMs tended to position themselves as *survivors* who, despite challenges, made the required changes to lose their extra kilos or stop weight gain. In addition, the LMs employed this repertoire less often than the WMs, for whom it worked as a discursive tool to defend against negative evaluation.

Similarly, Wiggins (2009) noticed that patients in weight management treatment groups felt they had to account for their weight gain by locating the blame outside their own control and relying on explanations, deflecting the failure onto factors such as medical conditions or individual characteristics. Weight-loss surgery patients used a similar strategy for managing weight blame, as they linked weight gain to life events or innate factors (Throsby, 2007). Further, a Norwegian study observed that individuals with overweight or obesity wanted to avoid being judged as lacking personal responsibility, and thus felt that they had to reveal the external reasons behind their weight gain (Salemonsens et al., 2018).

Second, the *following instructions* repertoire accentuated the importance of self-control or practices in successful weight management and was the most common repertoire employed by the WMs (Sub-study III). This repertoire framed regular monitoring and self-discipline as vital for success and constructed weight management as a tool for controlling one's body by external rules. The WMs linked successful weight management with regimented eating, such as avoiding foods considered *bad* or *unhealthy* or compensating for them through exercise. They constructed weight

management through the public health discourse that encourages food restrictions to sustain a healthy weight and orients the responsibility to the individual level (Churruca et al., 2017; Dodds & Chamberlain, 2017; Madden & Chamberlain, 2010). This construction enabled the participants to rationalize their disciplined eating habits.

Indeed, it is common in Western societies to dichotomize foods into good/healthy and bad/unhealthy categories and to form a relation between certain foods and healthy body weight (Churruca et al., 2017; Dodds & Chamberlain, 2017; Madden & Chamberlain, 2010). In this logic, healthy eating is typically presented as the opposite of pleasure, and individuals are expected to have enough control and self-discipline to resist temptations and make healthy choices to prevent weight gain (ibid.). Paradoxically, health-promoting messages provide rationality that supports restrictive food consumption and compensatory behaviors (Burns & Gavey, 2004; Churruca et al., 2017), which were also common in the *following instructions* repertoire. A discursive analysis of diet talk found that the older men with obesity portrayed their diet as something that needs to be obeyed and that they had to *do what the book says* (Seymour-Smith et al., 2020). Further, the successful weight-loss maintainers exploited similar descriptions as they reported being constantly vigilant of their diet and physical activity and stressed the significance of control for success (Byrne et al., 2003; Chambers & Swanson, 2012; Kruseman et al., 2017; Lindvall et al., 2010; Reilly et al., 2015). They also disclosed that they had strict rules concerning permitted and forbidden foods, which is parallel with the descriptions of the WMs.

Practices related to eating and exercise, food, and monitoring were another essential dimension of the *following instructions* repertoire. The WMs highlighted the central role of practices in their lifestyle change after the weight-loss intervention but emphasized control when describing their current successful weight management: They portrayed self-control as a tool for maintaining their new practices. In the LMs' narratives, the repertoire functioned as a response to hypothetical situations, such as when they were asked to provide weight management tips or imagine their reaction to weight gain. The LMs thus replicated the well-known versions of weight loss instructions widely used in health promotion discourses (Couch, D. et al., 2014; Dodds & Chamberlain, 2017; Rich & Evans, 2008). Based on this observation, it seems easy to use culturally dominant weight management discourses to describe situations with no personal experience.

Previous studies have demonstrated similar findings to mine. One study investigating men's weight loss stories observed that men reported behavioral strategies that assisted their lifestyle change (Couch, D. et al., 2014). Their stories detailed how they had modified their eating practices, for example, increased *healthy* eating and portion control, or how they had monitored their physical activity or weight practices to keep their weight stable. Moreover, a Finnish discursive study that explored accounts of experiences of lifestyle changes emphasized the central role of self-control in maintaining healthy habits and weight (Jallinoja et al., 2008). Equally, individuals with overweight or obesity who had participated in the Healthy Life Centre's lifestyle

courses claimed that *willpower and discipline* were essential for maintaining changes in diet and activity habits (Salemonsens et al., 2020).

Overall, the *following instructions* repertoire enabled two subject positions—a *self-controller*: a hard-working individual with strong agency, who enables success in weight management, and a *subject of control*: a rule-oriented person who characteristically follows instructions (Sub-study III). Interestingly, the latter position placed less emphasis on individual agency and more on the innate/natural ability to obey rules set by others and thereby shifted accountability partly to factors beyond their conscious control. The former position underlined the individual's active role in their success: The participants portrayed the *self-controller* as a dutiful citizen who wants to take care of themselves rather than increase the burden on society's health services.

The *self-controller* position gained support from the moral discourse of weight that presents control practices as central to body management and an individual's obligation (Fullagar, 2002; Tischner, 2013). It is not surprising that in the current individualistic culture that values a sense of independence and individual control and empowerment, the participants located themselves in the position of having agency, power, and control over their behavior. However, if they wanted to be seen as morally acceptable individuals, such as healthy citizens, the participants' only choice was to adopt practices consistent with the population goal and thus avoid being positioned as morally undesirable people. Guassora et al. (2014) noticed a similar strategy in their study: Patients in a clinical dialog on lifestyle issues took a proactive role in presenting and defending the self against shame by portraying themselves as accountable people capable of controlling their lifestyles. However, it is interesting that when drawing upon the *following instructions* repertoire, the participants of this study also positioned themselves as *subjects of control*.

As opposed to the *self-controller* position that was used to create the identity of a hard-working individual who put effort into keeping their weight stable, the position of an obedient *subject of control* shared the importance of following instructions to maintain a stable weight but highlighted the individual's role in the process to a lesser extent. Thus, in addition to reiterating the dominant understanding of weight management as an individual's responsibility, this position can be seen as resisting it, as it brought up other aspects such as personal factors, which may influence the issue.

Finally, the LMs typically employed the *lifestyle and personalized routines* repertoire to explain weight management success rooted in habitualized self-regulation, flexibility, and lifestyle (Sub-study III). The narratives in this repertoire highlighted individually customized weight management practices: being aware of one's routines and flexibly regulating them to maintain a stable weight. The LMs' narratives presented successful weight management as an integrated part of their daily behavior; they did not need to force themselves to engage, and the modifications were based on internal motivations and the participants' desires and values, and not on external instructions. Throughout the *lifestyle and personalized routines* repertoire, the



participants described their pursuit of a balance between pleasure and control in weight management. Contrary to the *following instructions* repertoire's dichotomous approach to food and eating, moderation and flexibility played crucial roles in this repertoire. The flexible approach worked as a counterargument to the control explanations and was often utilized to oppose the dominant understanding of weight management as being dependent on discipline and hard work. The *lifestyle and personalized routines* repertoire portrayed weight management as part of broader life management and an approach to caring for oneself and enjoying life.

Seymour-Smith et al. (2020) identified similar accounts in their analysis of interviewees describing how they had adapted diets to suit their own needs. Similarly, Salemonsens et al. (2020) noticed that lifestyle change was more likely to be accomplished if it was based on individual needs and values. Furthermore, Jallinoja et al. (2008) noted that it was important to be aware of one's routines and regulate them flexibly to maintain weight loss. Our findings are also in line with the results of a study that examined long-term and short-term weight maintainers (Pedersen et al., 2018). The study found that long-term maintainers had more self-regulatory strategies (planning, coping, recovering) than short-term maintainers (ibid.). Also, the desire to balance pleasure and control and see weight management as part of one's lifestyle was common in the accounts of the *lifestyle and personalized routines* repertoire. Correspondingly, in previous inquiries into the normative discourses on health, excessive obsession with eating and training was seen as harmful, unnatural, and even health threatening (Crossley, 2003; Gill, 2008; Pajari et al., 2006). Further, worry, concern, or guilt about food and eating were seen as counterproductive for weight management, whereas responding with pleasure or enjoyment to eating was related to more successful outcomes (Kuijer & Boyce, 2014). Similarly, in terms of physical activity, women who selected types of exercise that they honestly enjoyed ended up being more active than women who prioritized health or weight loss (Segar et al., 2011; Segar et al., 2008).

The WMs also exploited the *lifestyle and personalized routines* repertoire when they were forming a *lifestyle changes* narrative (Sub-study III). Their descriptions presented successful weight management holistically, as providing well-being, and portrayed flexibility and long-term regulation as the means to achieve it. The WMs also proposed that the need for active thinking and self-control had decreased with habit formation. Consequently, they presented an identity shift from that of a dieter/active self-controller to one that accepted a new, healthy lifestyle. In addition, the accounts of the LMs enabled an *effortless weight maintainer* position that was distanced from the common weight maintainer's stereotype of a *weight watcher*. The LMs portrayed their style of weight management as the preferred one as it enabled a *normal* life with the freedom to eat without constantly thinking about it. The *subject of active self-regulation* position was also produced through this repertoire. It emphasized the vital role of individuals in successful weight management.

A previous study that explored dieters' experiences after weight loss observed a similar identity shift from prior *restrained self* to *liberated individual* (Epiphaniou & Ogden,

2010), which the WMs presented in my study. It also reported a change in dietary habits from controlled and restrictive to healthier practices (Epiphaniou & Ogden, 2010) which is in line with my results. Further, the *effortless weight maintainer* position that the LMs drew upon could be seen as subverting the dominant construction of weight management. This aligns with the *ideal subject* presented in earlier weight management investigations that highlighted the significance of internalized routines and habit formation for achieving success (Byrne et al., 2003; Hernandez et al., 2016; Kwasnicka et al., 2019; Pedersen et al., 2018; Reilly et al., 2015). The ideology of healthism in turn supported the *subject of active self-regulation* position, which saw finding proper ways to succeed in weight management as an individual's duty (Blackburn & Stathi, 2019; Bombak et al., 2016; Gotovac et al., 2020; Tischner & Malson, 2012a). Thus, the participants reiterated the moral discourse of obesity by locating themselves in that position.

## 9 DISCUSSION

This thesis focused on a highly topical issue—successful weight management. The findings offer valuable, essential information on this vital topic. In this discussion section, I put together my ideas on the present thesis results, consider the methodological choices I have made during this thesis process, and finally, review the practical implications of my thesis.

### 9.1 MAIN FINDINGS

Based on the sub-studies of the present dissertation, I interpreted successful weight management as a journey over the life course. During this journey, an individual weight management pathway is developed through interaction with crucial elements such as childhood upbringing, family and friends, life situations, and broader social contexts, all of which have shaped the pathways of this thesis' participants. Personal factors also play a significant role in this process. More specifically, flexible, permissive, and conscious self-regulation form the core of success. It seems that the LMs had adopted a weight management-promoting lifestyle in childhood which they had adjusted over the life course. An uncomplicated relationship with food was typical for them, and exercise had always been an important part of their lives. Constant learning, routines, and high coping self-efficacy were interpreted as necessary for success.

My aim was not to construct an exhaustive representation of weight management that explicitly lists all the potential issues involved in developing the weight management pathway, but seeing weight management as an individual development pathway over the life course is a novel and useful approach. This model enables portraying weight management as an intricate process at the general level. But it is important to note that this thesis described the development of the weight management pathways of LMs. As I further discuss below, if my participants had been individuals with different weight management histories, other factors might have emerged from the data, as these pathways are individually constructed and may differ among people and lead to different abilities to manage weight.

Further, framings such as *obesity epidemic* and *weight-centered health promotion* discourses emerged from my data as dominant macro-environmental factors that shape people's understandings of weight management. The universal message of these constructions is that it is the individual's responsibility to take care of their physical health and the nation's financial health via weight control. Indeed, all the discursive constructions that my participants drew upon engaged in dialogue with Western societies' general assumption that people can affect their weight through eating practices and physical activity. In other words, a high BMI is the result of excess energy intake and can be *corrected* by weight loss through an energy deficit. Basically, this

simplistic scenario is true from the biomedical point of view; however, it places too much burden on the individual, in a matter that is multifaceted. Consequently, my participants were surrounded daily by these messages and ideals, which provided the backdrop for their understanding and behavior related to weight management.

Tischner (2013), Sagua (2013), Aphramor (2010), Rich and Evans (2005), and numerous other researchers have criticized the certainty or authority of the discourses around obesity that are repeated in the popular and academic press (Bacon & Aphramor, 2011; Throsby, 2007). The knowledge produced in them is taken for granted both in day-to-day discussions and in academic arenas. The *facts* about weight and obesity seem so clear and obvious to everyone that we rarely hear critical voices against them. So, it is not surprising that this prevailing understanding also materialized in the subject positions that Sub-study III identified. The participants needed to draw on different repertoires and take up contrasting positions in the context of identity work to help them represent themselves as successful weight maintainers with agency and control (*survivor*, *self-controller* and *subject of active self-regulation* positions) and to divert moral accusations (*victim* and *subject of control* positions). By employing these positions, they managed to reject the identity of an irresponsible person and present themselves in a positive light.

Furthermore, Sub-study III found that the participants' sense-making differed according to their weight maintenance histories. The WMs in particular reproduced the dominant frameworks that rationalized disciplined weight control practices. In contrast, the LMs' narratives differed from both those of the WMs and the culturally prevailing way of understanding weight and weight management. For instance, the LMs described how they had succeeded in tackling threatening transitions, whereas the WMs' explanations were in line with typical Western culture narratives presenting life transitions as the cause of weight gain. Moreover, the *effortless weight maintainer* position, according to which the LMs constructed an identity that is distanced from the typical representation of a weight maintainer, resisted the dominant construction of weight management as being dependent on control and emphasized internalized routines and habit formation for success.

Even though the interpretative repertoires draw broadly from shared sociocultural knowledge, various factors such as personal history, life experiences, living environment, and biology can affect how and why people exploit particular interpretative repertoires (Edley, 2001). For instance, the mean BMIs of the WMs and LMs differed, and most of the WMs would be currently categorized as at least individuals with overweight. Genome-wide association studies (GWAS) have identified over 300 single-nucleotide polymorphisms (SNPs) that have been associated with obesity measures (e.g., BMI and waist circumference) (Goodarzi, 2018). Further, the FTO (fat mass and obesity associated gene) is one of the most studied obesity-related genes, whose variants have been shown to increase the risk of obesity by influencing food intake and food preferences (Loos & Yeo, 2014). So, the genetic susceptibility to weight gain of these groups may differ, and might affect the actions required to keep one's weight stable, further reflecting on their talk and explanations.

For example, compared to the WMs, the LMs' view of weight management as quite effortless may have been due to their more favorable gene variants influencing their food intake and preferences in the current obesogenic environment. On the other hand, it has been shown that among individuals with an obesity-predisposing genotype in the FTO gene, the effect of FTO on obesity susceptibility is attenuated if they are physically active (Loos & Yeo, 2014). Further, other favorable lifestyle choices, such as making healthier dietary choices, have been associated with attenuated genetic susceptibility to obesity (Qi et al., 2014; Qi et al., 2012). Assuming that the WMs' genotype increases the obesity risk may explain why the WMs emphasized weight management practices as essential for success. Moreover, the duration of weight management (lifelong vs. three years) placed these groups into different positions. Since the beginning of their childhoods, the living environments of the participants may have varied, which might have affected their ways of making sense of and explaining their weight management.

On the other hand, in the atmosphere of contemporary western society, which idealizes slim body size (Tischner, 2013), the WMs and LMs were not in an equal position in terms of weight stigma. As the LMs' weight had always been in the *ideal* weight range, it can be assumed that they had not encountered social judgment. Instead, the WMs had been, and still were, potential targets of critique due to their weight and therefore under immediate threat of being judged by others. Further, as the boundaries of socially acceptable body size are stricter for women than men (Tischner, 2013), and as most of the WMs were women, the normative pressure to watch one's weight might have been emphasized in the WMs' talk patterns. Consequently, despite a similar result in terms of weight maintenance, these two groups are nevertheless positioned differently in relation to normative weight discourses. Thus, they may have distinct needs to negotiate their accountability for weight management and their possibilities of success.

Previous inquiries have demonstrated that people under constant threat of weight stigma are willing to present themselves as morally acceptable people and thus as adopting practices that are visible to the social environment (Guassora et al., 2014; Pajari et al., 2006; Puhl & Heuer, 2010; Salemonsens et al., 2018; Täuber et al., 2018; Tischner, 2013; Wiggins, 2009). This means that people want to concretely show others that they are *decent and acceptable* individuals in the light of the dominant weight-centric discourses. They then prefer tactics that are visible and can be implemented quickly (such as extreme dieting or training) over less evident and more time-consuming approaches (such as adopting new practices which might subsequently result in beneficial changes in weight) (Täuber et al., 2018). For instance, Täuber et al. (2018) concluded that the sense of weight stigma encouraged more other-determined and less self-determined regulation of dieting and exercising, which is in line with the observations detected in Sub-study III. So, based on the clarifications above, it is not so surprising that the WMs and the LMs exploited different explanations in their sense-making process.

An individual's micro- and macro-environment undeniably play a fundamental role in shaping their weight management pathway. As the findings of Sub-study III indicate,

individuals with different backgrounds and experiences react differently to the dominant discourses and to society's norms. For example, in the sense of weight-centric discourses, the WMs only choice was to adopt practices consistent with the population goal if they wanted to be seen as morally acceptable individuals, such as healthy citizens. In contrast, as the LMs were not obligated to justify their moral acceptability, they were able to make sense of their success more freely. However, even though LMs are not the primary targets of the weight loss directives presented in the popular media and public health policies, everyone is part of the healthy weight discourse, and this might have affected even the LMs' eagerness to take positions highlighting their role as active agents in their success.

## **9.2 METHODOLOGICAL CONSIDERATIONS**

I begin this section by focusing on the factors used to improve the reliability of this research. Then, I consider the methodological decisions made during this thesis process and their consequences. First, the key factors used for assessing the quality of the qualitative study were credibility, transferability, dependability, and confirmability (Bengtsson, 2016; Korstjens & Moser, 2018). There are several strategies for ensuring the credibility of studies, such as prolonged engagement, persistent observation, triangulation, or member check (Bengtsson, 2016; Korstjens & Moser, 2018). Though it was impossible to conduct pure investigator triangulation on the basis of the resources available for the current work, only one sort of investigator triangulation and persistent observation was utilized. Regular meetings and analytical sessions were held with the research team during the analysis process. All the researchers were able to familiarize themselves with the data, as several examples from the raw data were presented during the analysis. In addition, the core categories or interpretative repertoires were developed together through constant discussion, revision, and relabeling (Bengtsson, 2016; Korstjens & Moser, 2018). In addition, during the interviews, I encouraged the interviewees to freely and openly discuss and share their ideas and to provide examples of their statements, which may also have added to the study's credibility (Bengtsson, 2016; Korstjens & Moser, 2018).

Another criterion for assessing the trustworthiness of the results is transferability, also called applicability, which is used to evaluate a study's external validity (Bengtsson, 2016; Korstjens & Moser, 2018). It assesses how well the research findings could be transferred to a context outside the study situations. A transparent, detailed description of the participants, the methods used, and the research protocols enables readers to assess the applicability of the findings. This was provided in each article of the current thesis.

The dependability concept is also relevant when considering the reliability of results (Bengtsson, 2016; Korstjens & Moser, 2018). It is related to consistency: It indicates that other researchers would identify similar patterns and findings with comparable data if the research has followed the accepted standards of a particular design or method (Bengtsson, 2016; Korstjens & Moser, 2018). Indeed, it was interesting to see

the close corroboration of my results with the qualitative findings regarding primary weight management, the data for which were collected in different contexts such as Australia, Canada, England, Ireland, Scotland, Sweden, and Switzerland (Byrne et al., 2003; Carrard & Kruseman, 2016; Chambers & Swanson, 2012; Hernandez et al., 2016; Kruseman et al., 2017; Lindvall et al., 2010; Reilly et al., 2015; Welch et al., 2009). This may increase the trustworthiness of the findings of this study.

The term confirmability, in turn, refers to the aspect of neutrality and means that when the researcher is examining the data and making interpretations, they need to focus on the data as a whole and not just their own specific preferences and views (Korstjens & Moser, 2018). An audit trail is suggested as a strategy, to secure dependability and confirmability (Korstjens & Moser, 2018). Even though my resources were insufficient to cover external auditor examinations, I regularly recorded the reflective thoughts that arose, the preliminary codes and categories, and the decisions made during the research process. The paths of the results and the adopted analytical techniques were described and reported precisely in the articles. In addition, as is typical in qualitative research, I acknowledged my involvement in the interviews, analysis, and interpretation process (Korstjens & Moser, 2018). Indeed, I view the subjectivity of the researcher as a valuable resource that should be recognized and accepted. Subjectivity guides the whole research process, from the choice of the topic to selecting methodologies and interpreting data. One of the advantages of recognizing subjectivity is that it enables reflection on whether it has influenced the comprehension of the studied phenomenon. To ensure subjectivity in the interviews, I asked the participants to, for example, define the concepts and explain how they understood them instead of relying on my own understanding. I also made notes after each interview and reflected on my feelings about and perceptions of the interaction. In the analysis, I marked my thoughts and tried to reflect them in the data. My reporting took into account my involvement as the researcher.

### **9.2.1 PARTICIPANTS**

As the aim of my thesis was a deeper comprehension of lifelong weight management, the criteria for participation in Sub-studies I and II were a medically determined normal weight, gender, and age. Thus, the participants in Sub-studies I and II were men and women from two age groups who had always maintained a medically determined normal weight throughout their lives. When I started my study, these criteria seemed sufficient to find informants whose experiences and history I expected to yield meaningful data for the research questions. However, as socioeconomic status is known to be closely connected to health behavior, excluding it from the inclusion criteria may be considered a weakness of this study. The majority of the participants in Sub-studies I and II belonged to the highest education category (education of more than 13 years), and only three had studied less than nine years. Their socioeconomic background might have influenced the results of this study, and thus, different themes may have presented weight management if there had been more participants from the lowest education category. Overall, this may not be such a great problem, as the aim of a qualitative study is not to generalize the results but to increase the understanding of

the quality, characteristics, and meanings of the researched topic (Busetto et al., 2020; Moser & Korstjens, 2018). As this study included both men and women from two age groups and of various professions, it considered weight management from a relatively broad viewpoint. Still, I acknowledge that taking the participants' socioeconomic background into account in the participation criteria might have been fruitful.

For Sub-study III, the participants were chosen to represent different weight maintenance histories: Group 1 consisted of the older age group of LMs interviewed in Sub-study I, Group 2 were WMs who had lost weight and maintained this study's weight criteria for three years. The criteria (a gain no more than 5% of the weight after weight loss; weight at least 5% below baseline weight) were based on previous literature, which shows that for individuals with obesity, achieving at least a 5% weight loss seems to be sufficient for preventing and improving several conditions (Ryan, D. & Yockey, 2017; Working group set up by the Finnish Medical Society Duodecim and the Finnish Cardiac Society, 2020) and that for adults, a weight change of roughly 5% from initial body weight could be a feasible criterion for long-term weight maintenance (Stevens et al., 2006). In addition to the weight maintenance criteria, I wanted to include both men and women, thus, gender also guided the recruitment process. However, only a third of the selected WMs were men, and therefore, the women's narratives were highlighted in the data. This is most likely explained by the distribution of genders in the PREVIEW study, as 67% of its participants were women (Fogelholm et al., 2017). Also, similarly to Sub-studies I and II, most of the WMs belonged to the highest education category, which might have influenced the findings of the present thesis.

Another limitation that needs to be taken into account concerns the influence of the PREVIEW intervention on the participants studied in Sub-study III. The WMs participated in group counseling meetings (8–12 participants) following the procedure developed to change pre-diabetic individuals' dietary behaviors and physical activity approaches (Kahlert et al., 2016). These meetings were held in stages to most optimally support behavior change. During the preliminary stage, the main aim was to convince the WMs that they were at risk of severe illness, but that they still had a good chance of preventing the onset of type 2 diabetes by changing their behaviors. The primary goal was to motivate participants to start the recommended diet and physical activity guidance in the preparation phase. Self-regulation and self-control skills such as monitoring behaviors or resisting temptations to maintain weight loss were emphasized in the action stage. In the maintenance stage, the participants received support to cope with difficult situations. So, the psychological guidance that the WMs received during the intervention most likely modified their understanding of weight management and thus affected their sense-making when constructed as successful weight management.

Considering all the above-mentioned factors, the findings regarding weight management presented in this thesis are based on the subjective descriptions of particular individuals who were constructed as successful weight maintainers by this study. Classifying individuals who had always been in the BMI range categorized as



normal weight as *successful weight maintainers*, and individuals who had maintained their weight loss as *successful weight loss maintainers*, I undoubtedly repeated the dominant biomedical construction of weight and weight management. As an alternative, I could have interviewed individuals with stable weight at various BMI levels, which most likely would have led to different findings. However, this data would not have been any more or less valid, probably merely different. However, as the knowledge on lifelong weight management is still limited, this approach was justified, and I consider the participants appropriate individuals for this study.

### **9.2.2 SAMPLING**

I used a purposeful sampling method for recruiting the participants for Sub-studies I and II. As it is a useful and efficient method in qualitative research for identifying and selecting information-rich cases related to the phenomenon of interest, it was suitable for my study. Also, the snowball sampling technique, a form of purposeful sampling, improved the reliability of the current work: The participants were asked to suggest other individuals experienced in successful weight management from among their acquaintances (friends, relatives, colleagues). As the recommendations were based on their knowledge of their acquaintances, this can be considered as confirming the participants' self-reported weight and weight maintenance histories. Finally, to exclude systematic bias in selection, all the volunteer candidates who met the recruitment criteria were selected, and the researchers did not deliberately influence the selection process.

### **9.2.3 DATA COLLECTION**

As is common in qualitative approaches, the data of this thesis were created by the interviewer and the interviewees together. The interviewees' explanations and discussions were based on thematic interviews, which were further guided by the existing information on weight management, mostly gained from quantitative studies. The interview themes and questions undoubtedly guided the discussions and thus influenced the responses that were available for the interviewees. This needs to be taken into account when considering the validity of the results. Especially in Sub-study III, which focused on sense-making processes and the interviewees' explanations, the influence of the data gathering method was more relevant. If I had conducted narrative interviews, for example, instead of thematic ones, the accounts and identified repertoires might have been different and based more on the interviewees' constructions than the researcher's produced themes and interpretations.

Another aspect of research reliability that needs to be addressed here concerns the life stories that the participants produced in the interviews. As this thesis did not interview children or adolescents but utilized the life reviews of the LMs and WMs, the findings related to the beginning of the life course reflected how the participants viewed particular aspects of the past at this point in time. In other words, they cannot be seen as factual accounts, but as subjective descriptions influenced by the accuracy of memories of past events and circumstances (Giele & Elder Jr., 1998). Moreover, they

do not necessarily reflect how the past was seen previously. Indeed, according to narrative theory, people order their memories using coherent narrative structures and plots, and give their descriptions in a special cultural context, which further defines the stories that might possibly explain the phenomenon (Bruner, 2001). This is typical in narratives describing life transitions. For example, some special events or circumstances that might have been significant to the participants may have left indelible marks in their memories and are thus highlighted in their narratives. In addition, the LMs reported how they had adjusted their lifestyles to their altered life situations when needed. However, it might be that these adaptations were not actually as simple or easy as the LMs presented them at the time of the interviews.

Finally, there were several years between the collection of the two data sets, as the LMs data were gathered in 2012 and the WMs were interviewed in 2017–2018. This most likely influenced the results of Sub-study III, which examined how the LMs and WMs employed the various culturally and socially available and common weight management explanations. For example, in 2012, food and eating discourses and weight management discussions were inspired by low-carb diets such as the Atkins diet, and people were eager to limit the amount and types of carbs they ate, which was no longer so topical in the later data collection phase. Overall, the main messages in public health policies about the *obesity epidemic* discourse being dominant have remained quite similar in the last decades (Harjunen, 2004; Harjunen, 2017). Even though several critical studies and researchers have challenged the prevailing understanding of obesity and offered alternative frameworks for interpreting it since the 21st century, a broader and more critical debate on the topic has only emerged in Finland in recent years.

A body-positivity movement called *Vaakakapina (Ditch the scales)* emerged in 2017 in Finland, and since then, active discussion has increased. Today, *Health at every size* and other body-positivity movements are widely recognized, but these were still in their early stages in 2017–2018. However, as it is well-known that the climate of socio-cultural discourses guides the sense-making of individuals, it is possible that the slightly different emphasis on the obesity discussion influenced the explanations of the LMs and WMs. However, it was interesting that, despite the increased variety of available alternative discourses, the WMs employed repertoires that repeated the prevailing understanding of weight and weight management and highlighted control and disciplined behavior. On the other hand, the more prominent discussion on obesity, weight, and weight management might have prompted the WMs to use these repertoires in their sense-making.

#### **9.2.4 ANALYTICAL PERSPECTIVES**

Adopting two analytical approaches, namely thematic analysis and CDP, which have different epistemological assumptions, strengthened this work and offered a broader understanding of weight management. Since thematic analysis is seen as the foundational method for qualitative analysis and is suitable when a summary of the studied phenomenon is required, it was a logical choice to begin with this approach

(Braun & Clarke, 2006, Tuomi & Sarajärvi, 2018). Its flexibility in theoretical aspects in terms of the research questions, sample size, data collection, and approaches to meaning production advocated its use in this study. I could also have used it in Sub-study III, as originally planned. However, this thesis would then have missed some relevant information related to individuals' weight management behavior. By exploring the weight management discourses at play, and considering the cultural environments in which they are embedded and which enabled them, together with the practices that are produced within them, I came to understand weight management more thoroughly.

As opposed to Sub-studies I and II, which approached weight management from the realist perspective, the main interest of Sub-study III was to explore meanings and how prevalent or marginal they were, why people deployed specific ways of speaking, and what consequences this had (Gough, 2017). CDP was an appropriate method for analyzing both the macro and micro levels of the data on the participants' talk and thus offered a nuanced, richer understanding of weight management (Edley, 2001; Locke & Budds, 2020; Potter & Wetherell, 1987). Moreover, it enabled critical evaluation of the results of this thesis, as I could view my previous findings from this alternative perspective. For example, the LMs reported that they were physically active, had regular meal frequency, ate healthily, etc. Sub-study I concluded that these practices were essential for maintaining weight. However, reconsidering these explanations from the perspective of CDP, they could be seen as actions portraying the speaker as a responsible individual in current society, which assigns people with a moral obligation to take care of their weight and health.

In conclusion, the combination of thematic analysis and CDP, as well as the realist approach and the epistemology of social constructionists, revealed the complexity of this phenomenon and constructed an overall picture of weight management. Neither method alone would have led to the same understanding. First, with thematic analysis, the aim was to look at the phenomenon more broadly and understand the issues involved. Then, with CDP, the focus was targeted more specifically at the sense-making of this phenomenon, but the cultural elements were also taken into account. Thus, these approaches enabled a deeper understanding of the studied phenomenon. Further, CDP and other forms of constructionist approaches are most suitable for exploring interpretations and the meanings and negotiations related to them. However, as CDP rests on the assumption that discourses are tightly bound to their contexts and must be theorized in relation to their immediate local context, it is challenging via this method to obtain information that is easily transferable to the practice (Edley, 2001; Potter & Wetherell, 1987; Wilkinson, 2000). The realist perspective in Sub-studies I and II offered more relevant information in terms of practical implications.

### 9.3 FROM RESULTS TO PRACTICE

Through my research, I wanted to explore successful weight management from an individual's perspective: how the participants perceived weight management, what practices they related to it, and how they talked about it. Based on the data I obtained, I identified the following main points regarding public health. First, Sub-studies I and II showed weight management as a flexible lifestyle-based process that continued throughout life. Sub-study II emphasized the significance of childhood as a creator of habits and healthy lifestyles. So, these findings encourage paying more attention to food-upbringing and developing an active lifestyle to prevent obesity. It would be reasonable to provide nutrition and exercise interventions for parents in a favorable life situation, such as when expecting their first child. Currently, maternity and child health clinics offer regular meetings for families. One of the vast topics included in their program is healthy lifestyles for families (Finnish Institute for Health and Welfare, 2021). However, in light of the present thesis, it would be essential to invest more resources in services that offer positive experiences of food, eating, and exercise, and to support the adoption of a healthy lifestyle rather than just educating families about it. This is also supported by other studies focused on behavior change (Michie et al., 2011; Van Cappellen et al., 2018). As the results of this work showed, weight management pathways are influenced by several micro-environmental elements. Thus, in addition to families, nurseries and elementary schools also play a critical and relevant role in reducing health and welfare inequalities between children from different social backgrounds. However, as Berg and Larsson (2020) concluded, it is extremely important to consider the ways in which to promote health among school-age children in order to avoid increasing body weight dissatisfaction and dieting, which unfortunately, are already common among children.

Second, the findings of this thesis encourage public health promotion campaigns and health communication with children and adolescents to focus on general health and wellbeing instead of morally polarized issues such as weight and body size. This suggestion is based on the notion that weight is considered to represent an individual's morality and thus reflects their self and inner character (Täuber et al., 2018). In contrast, wellbeing is viewed as something that one may achieve through lifestyle. Therefore, the critique of weight is experienced as more personal than the critique of lifestyle/wellbeing. In the latter case, the criticism targets a person's abilities rather than their self. Further, it has been demonstrated that if people view their shame-inducing life situation as repairable, they are more likely to respond to it by constructing solutions (Leach & Cidam, 2015). In addition, as morality is perceived as challenging to repair, the patterns of talk stigmatizing a person's self are not fruitful in health promotion communications (Täuber et al., 2018).

Moreover, as an increasing body of research has shown, weight stigma and moral debates affect the acceptance and appreciation of a person's body and self (Malterud & Ulriksen, 2011; Salemonsens et al., 2020; Salemonsens et al., 2018; Täuber et al., 2018). Individuals who view their bodies as a target of hatred and as less acceptable than other people's bodies may thus see themselves as morally flawed in other people's eyes and

easily adopt solutions and behaviors (e.g., fad diets or extreme training) that present them as morally acceptable in the sense of weight-centered dominant discourses (Guassora et al., 2014; Leach & Cidam, 2015; Salemonsens et al., 2020; Salemonsens et al., 2018; Täuber et al., 2018). In contrast, using non-judgmental ways of speaking may lead to a positive, appreciative relationship with one's body and sense of worth, which may further motivate beneficial actions such as adopting health-promoting practices (ibid.).

Furthermore, it has been shown that positive health behavior experiences such as feeling good about eating healthily or exercising are associated with stronger intentions to continue and to engage with these practices in the future compared to feeling bad about one's progress (Reynolds et al., 2018; Van Cappellen et al., 2018). Also, there is evidence that guilt or worry about food and eating is not connected to healthier food choices nor does it motivate individuals to promote their health; it is related to less successful prospective weight maintenance (Kuijter & Boyce, 2014). Similarly, the findings of this thesis support the importance of a positive approach to lifestyle and weight management.

Therefore, I wish to raise the question of whether the term *weight management* (in Finnish *painonhallinta*) is a suitable expression to describe this phenomenon and a term to use in public discussion. As it is closely connected to dieting and weight loss practices in everyday conversation in Western societies such as in Finland (Jauho et al., 2016), and as it literally emphasizes that weight needs to be controlled or managed, it directs attention towards weight. It also expresses the idea that weight is something that people can manage and thus highlights the accountability of the individual. Further, based on this logic, success in weight management is similarly connected to medically determined normal weight or lost kilos, which was also the starting point of this study. Based on the lessons learned from the results of this thesis project, I wish to question the leading role of weight as an indicator of success. For instance, Hernandez et al. (2016) observed that some participants who maintained a medically determined normal weight were actually *under-nutritioned* in terms of dietary standards, as they limited their food intake to maintain their ideal weight. Similarly, Burns and Gavey (2004) noticed that women with eating disorders gained support from weight-focused health-promoting discourses when rationalizing their bulimic practices. These are merely some examples of numerous similar cases (Saguy, 2013; Tischner, 2013). Thus, information based on weight and body size representing successful weight management does not really describe an individual's health or wellbeing. Instead, I believe that the term *health-promoting lifestyle* could work well in replacing the expression *weight management*, as an *unhealthy* diet and sedentary lifestyle have harmful effects on people's health regardless of weight and body size. And the other way round, a health-promoting lifestyle is favorable to individuals of all sizes

Finally, understanding weight management as a permissive, flexible, and conscious lifestyle based on one's own desires and values instead of constructing it as a tool to gain the *ideal* body and weight and social acceptance helps reduce condemnation and harmful health behaviors. This is in line with previous weight management literature

that indicates that counter-moralizing dialogue and positive encouragement are connected to healthy lifestyle changes (Salemonsens et al., 2020; Salemonsens et al., 2018; Täuber et al., 2018). Consequently, I suggest approaching weight management holistically through morally neutral language, both in health communication and everyday life discussions. Further, obesity treatment programs should focus on finding ways to help weight loss maintainers adopt a view of weight management that emphasizes wellbeing and long-term lifestyle-oriented goals instead of crash diets and immediate results based on rigid self-discipline.

To conclude, each of us has the opportunity to contribute to changing the dominant, detrimental dialogue around weight and obesity in Finland. The first step is to understand the pervasive nature of weight stigma and to find the norms that maintain it. This has been already recognized, and a project called *Kohti eettisempää ja vastuullisempaa painopuhetta ja käytäntöjä* (*Towards more ethical and responsible weight talk and practices*) was launched in 2021 by the Prime Minister's office, the Finnish Heart Association, the University of Jyväskylä, and the Eating Disorder Association of Finland (Valtioneuvoston kanslia, 2021). The project aims to identify the forms of stigma and their occurrence and means through which to decrease weight discrimination.

I think the findings of this interdisciplinary research offer alternative discourses in terms of the rhetoric and practice around weight management, thus contributing to the essential work to promote a more ethical way of talking about weight. Further, as a nutrition researcher who has utilized qualitative methodology, I succeeded in engaging the medical and socio-cultural approaches to dialogue in this obesity and healthy weight arena and found novel ways in which to see weight management. Active communication and collaboration are needed with professionals in health care, research, and the media to release the full potential and change the narrative around weight and health.

## 9.4 IMPLICATIONS FOR FUTURE RESEARCH

Based on the present doctoral thesis, I suggest that the food environment should be taken into account in potential future directions for research on issues related to the development of weight management pathways. Recently, it has been actively debated whether regulatory interventions targeting different aspects of the food environment should be conducted to decrease food consumption in the current obesogenic environment. Different methods of influencing food choices such as taxing so-called *junk foods* and lowering the relative cost of healthy foods and thus *nudging* people towards healthier selections, and attention to food labeling have been suggested. Some have also been tested. However, although the literature on the experiences of using these methods is growing (Goncalves et al., 2021; Sisnowski et al., 2017), little is known about their efficiency. Further, there have been concerns about whether food labels emphasizing the unhealthiness of a food product could be harmful and predispose

individuals to more serious eating problems. These insights should be considered thoroughly before making decisions on public health policy in the obesity field.

Another important question for further studies on weight management is whether the approach used in weight-loss and weight management intervention is relevant. The WMs had participated in the PREVIEW intervention, which followed the stepwise process of behavioral change that highlighted physical activity and following a particular diet (Kahlert et al., 2016). Also, before the three-year weight maintenance phase, the participants had undergone an eight-week weight reduction phase on the Cambridge Weight Plan (Raben et al., 2021). So, it would be exciting to examine individuals who have adopted a non-weight-centric approach such as the *Health at every size* approach in their weight-loss and weight management process and to view their experiences and explanations.

Finally, as Sub-study III presented, individuals with different weight management histories employed different ways of speaking when they made sense of weight management. The LMs highlighted customized needs and the routinization of practices, whereas the WMs stressed control and disciplined behavior. Previous studies have suggested that weight-loss weight management becomes more comfortable over time (Wing & Phelan, 2005). It would be interesting to investigate how the duration of weight management is reflected in the use of cultural discourses. Specifically, studying the same individuals longitudinally during their lifestyle change would offer fruitful information on the lived experience of the weight change process and illuminate the causes and consequences of change. The longitudinal qualitative approach could focus on individual narratives and trajectories and capture the critical moments and processes involved in change. This kind of approach deserves more attention in future research.

## 10 CONCLUSION

This doctoral thesis explored LMs' perceptions of why they had succeeded in lifelong weight management. According to their descriptions, successful weight management was an ongoing process that needed permissive, flexible, and conscious self-regulation. Certain routines such as regular eating, a healthy and vegetable-rich diet, moderate indulging, and an active lifestyle supported weight management. Flexibility also characterized the LMs' behavior and was a foundation for success. It was also vital to be aware of the balance between eating and energy consumption.

This thesis also examined whether LMs perceived issues related to the life course pathways as influencing their weight management. It seemed that a lifestyle that supported weight management had developed over the life course. Childhood played a significant role in this process: Family relations modified the participants' attitudes and choices, resulting in a flexible and permissive relationship with food and exercise. Continuous learning described the LMs' pathways: New routines had become habitual practices through active repetition, which seemed to support keeping weight stable. Skills for adjusting lifestyle to altered environments were seen as essential, and the LMs showed a high level of coping self-efficacy.

Finally, this thesis studied how individuals with different weight maintenance histories utilized various culturally and socially available explanations when they made sense of weight management. The dominant cultural weight-centric discourses and constructions were reflected in the sense-making processes of the LMs and WMs. The WMs in particular reproduced the typical narrative of Western culture, in which weight management was seen as being dependent on discipline and self-control. The LMs' explanations emphasized the importance of lifestyle and personalized routines for success. Further, the explanations for not succeeding were linked to everyday challenges and external factors, thus allowing participants, particularly the WMs, to negotiate blame and avoid being judged as lacking personal responsibility.

In summary, weight management history seemed to be related to how people responded to cultural discourses and how these discourses guided their practices. These results may be interpreted as suggesting that a change in the narrative and thinking related to weight management is called for. Weight-centric framings should be replaced with morally neutral language focusing on lifestyle and wellbeing. Moreover, this thesis showed that success in weight management did not require continuous work and periods of fasting or extreme exercise but an enjoyable way of living with flexible routines, habits, and skills to improve an adopted lifestyle. To conclude, obesity treatment programs and health promotion interventions should focus on increasing the general wellbeing of individuals by engaging the participants in individually customized practices based on their desires, values, and internal motivations rather than on external instructions. It would be important to start with



small, feasible lifestyle changes and thus gain experiences of success, which would then further increase self-efficacy and motivation to continue with the new lifestyle.

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# APPENDICES

## Appendix 1. Interview guide

Theme interview: Successful weight management

Introduction of research theme, confidence

1. How would you describe your relationship with food?
  - a. What is your favorite food? What else do you eat?
  - b. Could you give an example of food memory/memories of your life?
  - c. What has your relationship with food been like over time?
  - d. What does food mean to you?
  - e. Which things affect your eating habits?
  - f. How do you feel about cooking? Baking?
  - g. How often do you eat at a restaurant? For what reason? What does it mean to you?
  
2. How would you describe your relationship with eating and eating situations?
  - a. Why do you eat? When do you stop eating?
  - b. How do you pace your meals throughout the day? Please describe this.
  - c. Please describe your ordinary day, including meals.
  - d. How do parties with buffets affect your eating?
  - e. How do holidays and weekends affect your eating?
  - f. How do your family/friends affect your eating?
  
3. What do you think of eating management?
  - a. How would you define eating management?
  - b. What is important in eating management?
  - c. Do you face any eating management challenges?
  - d. Do you feel you need to restrict your eating?
  - e. Do emotions affect your eating?
  - f. What do you think about diets?
  - g. How have you succeeded in eating management?
  
4. What does successful weight management mean to you?
  - a. How do you understand weight management?
  - b. What do you think is successful weight management?
  - c. Do you feel that you need to work on your weight management?
    - i. For what reason?
  - d. How do you see your weight?
    - i. What is your own ideal weight?
    - ii. How do you track your weight? Do you weigh yourself?
    - iii. What is your weight history, since childhood?
    - iv. What do you do if you gain weight?

- e. Could you describe your parents and your siblings' weight? The weight of your spouse and children?
  - f. How have you managed to stay at a normal weight? Which things have affected this?
  - g. Could you give an example of successful/unsuccessful weight management?
5. What facilitates weight management? What are the means for weight management?
- a. What do you think of exercise? What is its role in weight management? Why do you exercise?
  - b. What role do the people close to you play in weight management?
  - c. Name some concrete means for weight management.
  - d. Weight management and health behavior (nutrition, physical activity, smoking, use of alcohol)?
  - e. Do you face any health behavior challenges?
  - f. How do you think weight management affects your life?
  - g. Have you experienced adversities in your life?

## Appendix 2. Coding book

MAIN CATEGORY	CODES	EXAMPLE QUOTATIONS
ADOPTION OF LIFESTYLE	CHILDHOOD	"Upbringing is the main element that influences my food habits. I can't think of any other factors, I've noticed that I eat the same foods as I did in childhood. I also reflect on what my mom and dad taught me about food"
		"I've had an active lifestyle since childhood...I didn't spend time on the computer or play video games, but exercised frequently and ate regularly and most likely fairly well"
	LEARNING	"I hardly think about weight management anymore ...I don't feel at all that I should restrict my eating or my life or anything, because those patterns are now so internalized...but it didn't happen by chance...in the beginning, I decided to behave in a way that promotes staying at a normal weight...and now the routines just happen"
MAINTENANCE OF LIFESTYLE	TRANSITION	"When I was a young man, I ate differently, a lot of unhealthy processed foods, hamburgers and hot-dogs...when I had children, I changed my diet...now it resembles my childhood diet, which included plenty of healthy elements"
	ADULTHOOD	"...I am so routinized, and we have a basic set that we always eat..."
		"Well, my husband quite often eats chips on weekends, I typically take two handfuls, and then I quit...I make my decisions...of course, the environment has some influence on people's patterns, but I think, ultimately, you yourself are in charge of your eating"
ADJUSTING	"When I began this desk job, I noticed (from my body) that I didn't need to eat as much as I used to. My previous work had been physically harder, and at that point, I had to consciously "wake myself up" to realize that I would survive with less food...meals didn't need to be huge...in conclusion, I've always found the right balance for my needs in this kind of situation."	