

**COPING WITH WEIGHT CHANGE DURING THE LIFE CYCLE:
A QUALITATIVE STUDY**

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ABSTRACT

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Individuals can experience weight fluctuations during their life. This is associated with events, such as work, marriage, having children or social pressure. Weight change can affect health related quality of life and one's attitude and is a situation that needs to be coped with. Research in this area is limited, especially taking different life events into consideration and how individuals cope with weight change. Therefore, the purpose of this study was to examine how certain events are associated with weight change, how weight change influences health related quality of life and how individuals cope with the weight change. Five individuals were invited to participate in a semi-structured interview that assessed how certain events influenced their weight, how this affected them emotionally, physically and mentally and how they coped with the weight change. Data were obtained through individual, semi-structured interviews. Following prolonged engagement and transcription, the data were inductively analyzed and organized into emerging patterns and themes. In addition, the data were deductively analyzed. The findings revealed that weight fluctuations were triggered by significant single events or a combination of events. Results indicated that unintended gained weight could lead to decreased HRQL and intended weight loss could lead to an increased HRQL. Weight gain could negatively influence one's self-image while weight loss could increase energy levels and work as a motivator to lose more weight. Weight change did not only affect attitudes and HRQL but also the importance of the event that was associated with the weight change. Eventually depending on the chosen coping strategy - problem-focused or emotion focused - the individuals lost, gained weight or maintained the same weight. This study suggests that losing weight does not only lead to a better HRQL (e.g., increased energy levels) but also a different attitude, such a thinking that it is possible to eat those things that one ate before attempting to lose weight and in turn gaining weight again. All in all, there are many different ways that weight can be influenced, there are different ways that an individual can be affected and there are different ways of coping.

Keywords: Weight loss, weight gain, coping, health, attitude, events, qualitative study

1 INTRODUCTION

Obesity or being overweight is a problem of today's society (Kottwitz, Grebner, Semmer, Tschan, & Elfering, 2014). Weight gain can increase the risk for cardiovascular disease, high blood pressure, high cholesterol, osteoarthritis, stroke, sleep apnea, the disability to work, death at a younger age, somatic diseases and the experience of back pain (Koyanagi et al., 2015; Svärd et al., 2017; Williams, Mesidor, Winters, Dubbert, & Wyatt, 2015; Yiengprugsawan et al., 2017). Furthermore, change in weight can influence Health-Related Quality of Life (HRQL) (Laxy, Holle, Döring, Peters, & Hunger, 2014). HRQL is a multifaceted construct, which includes elements regarding social, emotional and physical well-being and evaluates self-assessed health (Roos, Laaksonen, Rahkonen, Lahelma, & Lallulka, 2014). According to Laxy et al. weight gain and weight loss can both have positive and/or negative effects on an individual's health. Weight gain can decrease but also improve mental health and weight loss can reduce the risk of getting a disease or dying at an early age but can also negatively affect social functioning and mental health (Dombrowski, Knittle, Avenell, Araújo-Soares, & Sniehotta, 2014; Milder et al., 2014). Therefore, it is important to make a distinction between intended or unintended weight loss or weight gain, for example losing weight because of having a disease and not because of intentionally losing weight can be seen as unintentional weight loss (Laxy et al., 2014). On a biochemical level, weight gain is a result from an energy imbalance in which there is more energy consumption than energy expenditure (Williams et al., 2015). However, often other factors contribute to weight gain, such as developmental, genetic, environmental and social aspects (Institute of Medicine, 2003).

Looking further, human beings go through their life in a certain order, which can be defined as the 'life cycle' (Levinson, 1986). During this life cycle, individuals experience transitions from - for example - pre-adulthood to early adult and during these transitions there can be a change in education, work, relationships and family, which in the present study will be defined as 'events' (Beal, Crockett, & Peugh, 2016; Deave, Johnson, & Ingram, 2008; Levinson, 1986). These events (e.g., work, education, relationships and family) can influence one's weight and are associated with weight gain or weight loss (Jackson, Steptoe, & Wardle, 2015; Kirkegaard et al., 2015; Monsivais, Martin, Suhreke, Forouhi, & Wareham, 2015; Pope, Hansen, & Harvey, 2017).

There are several ways a person can cope with weight change. Coping is defined as ‘constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person’ (Lazarus & Folkman, 1984, p. 141). According to Lazarus and Folkman there are two types of coping, emotion-focused coping and problem-focused coping. Emotion-focused coping involves regulating distress and is applied when the individual believes that a situation cannot be changed. Problem-focused coping is associated with looking for a solution to deal with the problem and solve it and is applied when the individual believes that the situation can be changed (Lazarus & Folkman, 1984). The influence that a certain event can have can be mediated by the coping response of an individual (Endler & Parker, 1990). Several quantitative studies have explored weight loss strategies among individuals who maintained or regained their weight, such as behavioral and cognitive strategies. These strategies can be categorized as problem-focused coping. For example, individuals who maintain their weight use more behavioral strategies to reduce their fat intake and participate in high levels of physical activity (McGuire, Wing, Klem, & Hill, 1999). Individuals who experience a lapse and use negative self-talk can experience a relapse. Cognitive strategies can be used to cope with lapses (Turner, Wang, & Westerfield, 1995).

The present study aims to explore how individuals cope with weight change during the life cycle. In this study, the life cycle is defined as a certain order in the life course of a human being (Levinson, 1986). Weight change is defined as intended or unintended weight loss or weight gain (Laxy et al., 2014). Furthermore, this study examines how events influence weight change and how weight change influences HRQL. Lastly, the participants will be asked to give future recommendations to those who might find themselves in the same situation. The results of this study can be used to educate people about how certain events can influence weight change and how they can cope with it. If people are aware of this and they have coping mechanisms then they might be able to prevent weight change or deal with the weight change more effectively. The research question is as followed: how are certain events associated with weight change during the life cycle, how does the weight change influence HRQL and how do individuals cope with weight change?

2 LITERATURE REVIEW

2.1 Transitions during the life cycle

Life course is a descriptive term, where the word ‘course’ is related to sequence, temporal flow and the need to study a life. To study the course of a life of an individual, one must bear in mind that there is stability and change but also balance and imbalance (Levinson, 1986). The concept of life cycle goes further than that of life course.

The definition ‘life cycle’ goes beyond a description or concept and is in its origin metaphorical. The word ‘cycle’ indicates that there is a certain order in the life course of a human being (Levinson, 1986). It can be compared to different seasons in a year like winter and summer but also the seasons during a day, such as morning, afternoon and evening (Levinson, 1986). Furthermore, there are seasons in love and illness. There is not a clear answer, regarding what the most important seasons are in the life cycle of an individual (Levinson, 1986). Levinson perceives the life cycle as a series of eras, each era making its own contribution to the bigger picture. He describes the era from birth to the age of 22 as the era of pre-adulthood, the era from the age of 17 to the age of 45 as the era of early adulthood, the era from 40 to 65 as the era of middle adulthood and the era from 60 years of age as the era of late adulthood. During these eras, individuals go through different transitions (Levinson, 1986).

Transitions can be described as ‘periods of change in our lives that seem to alternate with periods of stability’ (Merriam, 2005, p. 3). Levinson refers to these periods as the life structure of an individual, which is “the underlying pattern or design of a person’s life at any given time” (p. 6). The life structure is strengthened and sustained during stable periods and challenged and altered during periods of transition (Merriam, 2005). This change in life structure is related to life events and the roles that we adopt, such as worker, student and parent (Merriam, 2005). There are life events that are planned, for example marriage and life events that are unplanned, such as illness (Merriam, 2005). These life events can be seen as important moments in the life cycle that give form and guidance to a human’s life (Merriam, 2005). Life events that can influence one’s weight include work, education, relationships, neighborhood settings and parenthood (Beal et al., 2016; Deave et al., 2008; Levinson, 1986; Merriam, 2005; Shanahan, 2000).

The next section describes how these life events are associated with weight change. It is important to note that these life events do not necessarily occur separately but that they can overlap, since eras (as discussed above) are partially overlapping as well.

2.2 The association between life events and weight change

2.2.1 School

Pope et al. (2017) investigated the weight course of students during college, using anthropometric measurements and surveys. They found that there is an increase in Body Mass Index (BMI) during college. Overweight and obesity is related to lower overall academic achievement and depressive symptoms (Odlaug et al., 2015). The cause of the weight gain remains unclear. It is not explained by measurements regarding lifestyle behaviors (e.g. meeting dietary and physical guidelines) and it is also not clear whether the weight gain was consistent during college or that a majority of the weight gain occurred at a certain time. Pope et al. did not find factors contributing to weight gain during college and whether weight gain was consistent throughout college.

However, Fedewa, Das, Evans, and Dishman (2014) found a contributing factor, using a systematic review and meta-analysis as their methodology. The meta-analysis revealed that young adulthood is an important time because of the changes in the environment (socially and physically), the work and stress that are related to becoming more independent and moving away from the parents. However it is not confirmed that these factors cause weight gain during college. Weight gain is significantly higher after the first 12 months during college compared to the first 12 months (Fedewa et al., 2014). Fedewa et al. indicated that college duration is associated with weight gain but failed to discuss in depth how college duration is related to weight gain and how individuals can cope with these changes in order to prevent this.

Teasing at school can also lead to a change in BMI (Feeg, Candelaria, Krenitsky-Korn, & Vessey, 2014). Teasing is defined as “a specific type of peer victimization that is characterized by a range of verbal taunts about personal or social factors including appearance, performance, social behavior, academic achievement, or family background” (Jensen & Steele, 2014, p. 249). In their study, Feeg et al. used anthropometric measurements and surveys. As the results indicate, teasing is associated with change in BMI but it is not clear whether change in BMI leads to teasing or that teasing leads to change in BMI (Feeg et al., 2014).

The articles discussed indicate that being in college is associated with an increase in BMI and weight gain and that specifically college duration is associated with weight gain (Pope et al., 2017; Fedewa et al., 2014). However it is not clear how other factors influence weight gain during college. In addition, teasing is associated with change in

BMI but it remains unknown whether teasing leads to change in BMI or that a change in BMI leads to teasing (Feeg et al., 2014).

2.2.2 *Work*

Monsivais et al. (2015) aimed to examine the impact of job loss, retirement and maintaining employment on weight change, using two population-based, longitudinal data sources. The results of this study indicate that job loss is associated with more weight gain compared to individuals who stay employed or retire. Monsivais et al. did not find any contributions of diet, smoking and physical activity to excess weight gain. The article points out that it might have failed to find a contribution of diet due to limitations of food frequency questionnaires.

In contrary, Hughes and Kumari (2017) found a contribution of smoking and job status on weight, using interviews and surveys. They examined associations between unemployment and BMI. They found a connection between individuals who were unemployed and smoked to being underweight, while those who were unemployed and did not smoke were more likely to be obese. These results were more evident for jobseekers who came from lower-income households, who were men and who have been searching for a job for a longer period. Compared to the study of Monsivais et al., Hughes and Kumari found a contribution of smoking to weight change. However Hughes and Kumari looked at being unemployed - defined as “being in the labour force and available for work, but currently without work” (The Thirteenth International Conference of Labour Statisticians, 1982) while Monsivais et al. looked at job loss.

Furthermore, Kottwitz et al. (2014) found how being employed can lead to a higher BMI, using interviews and surveys. Kottwitz et al. specifically focused on how social stressors and job control influence BMI.

They found that increased job demands at work (e.g., high work speed or time pressure), a decrease in job control (e.g., independently organize one’s own work) and social stressors (e.g., being in conflict with a colleague) are associated with an increase in BMI.

The studies presented (Hughes & Kumari, 2017; Kottwitz et al., 2014; Monsivais et al., 2015) give an indication of how job status and work circumstances can influence weight. However, they do not clarify how individuals can cope with their weight change.

2.2.3 Relationships with significant others

Jackson et al. (2015) investigated how the health behavior of one partner can influence the health behavior of the other partner. Using interviews and questionnaires they examined if people are more likely to make a positive health behavior change if their partner also makes a positive health behavior change. Apparently, a partner who was constantly healthy was related to a higher chance of the other partner making a positive change regarding smoking and physical activity. However, this positive change had no significant effect on weight loss. Also, having a partner who makes a positive change to their behavior was related with a higher chance of the other partner to do so as well. A limitation of the study was that it was not clear if couples who both changed their behavior did so at the same time or that one partner started first and that the other partner followed.

When looking at marital status and weight, married men have a higher chance of being overweight/obese in comparison to single/casually dating and committed dating/engaged young adult males, while there is no difference for women (Berge, Bauer, MacLeHose, Elsenberg, & Neumark-Sztainer, 2014). According to this study, it seemed that marital status can influence weight for men only and not women. Berge et al. used data from the Eating and Activity in Teens and Young Adults (EAT) Project. Berge et al. did not explain if there is a difference among different age groups, the length of the relationship and the status of the relationship (positive or negative). Furthermore, it was not clear whether the health behavior of a young adult influenced the certain type of relationship he or she wants to be in or if the relationship status influences the health behavior.

Teachman (2016) found as well that marital status is associated with weight. In his study he used data from the National Longitudinal Study of Youth (1979). He suggested that married respondents are heavier than either never-married or divorced respondents. The next question one can ask is how exactly the transition from being not married to being married influences weight. More specifically, how does getting married influence weight?

Prichard and Tiggemann (2014) examined wedding-related weight change among women, using questionnaires. According to the results, brides gain weight six months after the wedding (Prichard & Tiggemann, 2014). In addition, there is no evidence that there is weight loss among brides-to-be prior to the wedding (Prichard & Tiggemann, 2014).

Prichard et al. (2015) examined the relationship between weight and Body Mass Index (BMI) of brides-to-be and their fiancés. They found that the height, weight and BMI of the brides-to-be were all related with those of their grooms. For example women who reported weight gain also reported having partners who experienced weight gain as well. This could be related to the finding of Jackson et al. who found that a partner who makes a positive change to their behavior was related with a higher chance of the other partner to do so as well. This in turn could lead to similar changes in weight among partners (Prichard et al., 2015). Moreover, having a partner who is larger protects women against having the feeling to lose weight for the wedding, despite their own size (Prichard et al. 2015).

2.2.4 Parenthood

Pregnancy is another factor that influences weight change. Kirkegaard et al. (2015) examined the influence of maternal behavior, such as maternal characteristics, maternal dietary intake, exercise, sedentary activity, smoking habits and breastfeeding on weight change from pre-pregnancy to seven years after delivery using interviews and questionnaires. Behavior performed while being pregnant such as leisure time exercise, less sedentary activities, breastfeeding and a healthy diet were associated with a lower long-term gain in weight. However, is weight gain during pregnancy actually a concern, since it is inevitable?

This issue was examined by Heery, McConnen, Kelleher, Wall, and McAuliffe (2013), who conducted a qualitative study among twenty-one second-time mothers whose first infant was macrosomic (high birth weight delivery). The results indicated that women were not concerned about gaining weight during pregnancy, since they knew that this cannot be avoided (Heery et al., 2013). Pregnant women recognized that prenatal weight gain and pregnancy is different for each woman and therefore weight gain recommendations would be too restrictive and stressful (Heery et al., 2013). Heery et al. only included women with a history of macrosomia. Therefore, it is not clear what the view is of women without a history of macrosomia. These women may look differently at being pregnant and gaining weight since they have not been giving birth to a baby high in weight. The next question is whether the weight of parents is influenced once the baby is born.

Umberson, Liu, Mirowsky, and Reczek (2011) examined how parenthood impacts weight change of the parents, using interviews and questionnaires. Parents gain weight

faster than those who are non-parents (Umberson et al., 2011). There was greater weight stability among men and women without children (Umberson et al., 2011). In addition, the first-born baby causes rapid weight gain among parents (Umberson et al., 2011). Especially men and women who are older or younger than 27 experience accelerated weight gain (Umberson et al., 2011). Interestingly, smoking, psychological stress, financial stress and physical activity levels were not associated with change in body weight (Umberson et al., 2011).

The reciprocal effect of weight change in parents on weight change in children has been examined by Andriani, Liao, and Kuo (2015), performing a secondary analysis on the Indonesia Family Life Survey (IFLS). Parents who gain weight have children who are heavier in weight compared to parents who lose weight. This is however different between mothers, fathers, sons and daughters. For example, father's who experience a change in weight is correlated with a change in weight of school-aged daughters but not with school-aged sons. In addition, the weight change of a mother is correlated with the weight change of school-aged sons as well as daughters. A limitation of this study is the lack of other parenting variables that are not included in the study, like changes in the mood environment at home or discussions regarding nutrition and physical activity. For example, the study of Boutelle, Cafri, and Crow (2012) used variables that included parents reporting their way of parenting but also the child reporting the way that the parents parent. In this study Boutelle et al. conducted a 5-month family based behavioral weight loss intervention. The results indicate that the Body Mass Index (BMI) of parents is related to the BMI of the child. One unit decrease in the BMI of the parents is associated with a 0.272 reduction in the BMI of the child. The other parenting skill variables (besides BMI) did not seem to be associated with weight change in the children (Boutelle et al., 2012).

All in all, maternal behavior during pregnancy such as leisure time exercise and a healthy diet is associated with lower long-term weight gain (Kirkegaard et al., 2015). In addition, women who experienced macrosomia are not necessarily concerned about gaining weight during pregnancy as indicated by Heery et al. (2013). The research did not give additional information regarding how women who are not concerned about gaining weight during pregnancy experience long-term weight change after pregnancy. Also it is not clear how women without macrosomia look at weight gain during pregnancy. Furthermore once the baby is born there is a rapid weight gain among the

parents (Umberson et al., 2011). It also seems that the weight of the parents and the weight of the children are correlated with each other as indicated by Andriani et al. (2015). For example parents who gain weight have children with a higher number in weight than parents who lose weight (Andriani et al., 2015).

2.2.5 Neighborhood

The neighborhood that one lives in can also have an impact on the weight of an individual. Michael, Nagel, Gold, and Hillier (2014) aimed to investigate the influence of neighborhood change on changes in obesity among older women using longitudinal data geocoded residential addresses, longitudinal data on body mass index (BMI), anthropometric measures and questionnaires. Changes in neighborhood include variables such as distance to the park, distance to transportation and distance to the commercial area. Changes in the neighborhood did not change the weight among obese women over a course of 18 years (Michael et al., 2014). It might have been that there was a change (e.g. in physical activity) but that the duration or intensity was not great enough to see any change. Limitations of this study include that it was not possible to control for the amount of time the participants lived in the neighborhood before the start of the study. Also perceived neighborhood safety and social cohesion were not included in this study. Furthermore, the study only involved older women. Instead of experiencing changes in the neighborhood an individual might decide to change from neighborhoods.

Powell-Wiley et al. (2015) examined this issue, using questionnaires, anthropometric measures, and laboratory testing. They found that moving to a neighborhood with a higher socioeconomic deprivation is associated with gaining more weight than those who remained in the same neighborhood or those who moved to a neighborhood with a lower socioeconomic deprivation.

No information about dietary intake, food environment and physical activity levels were included in this study (Powell-Wiley et al., 2015).

A study that looked at food environment was the study of Laraia et al. (2017), using clinical data from the Kaiser Permanente Diabetes Registry and kernel density of healthful food venues. According to Laraia et al., enhancement in food surroundings is associated with weight loss among diabetic adults over a 5-year period. A limitation of this study is that it only included adults, with diabetes. Food surrounding enhancement is important since it can increase diet quality, which in turn can lead to less long-term

weight gain (Fung et al., 2015). This causal relationship between an increase in diet quality and less long-term weight gain is stronger for younger, overweight and obese participants than in older participants and those with normal weight (Fung et al., 2015).

In this section the influence of life events on weight change have been discussed. Pope et al. (2017) and Fedewa et al. (2014) demonstrated the association between duration in college and weight gain but did not find any other factors related to the weight gain. Also, teasing and weight change are related to each other (Fedewa et al., 2014) but it is not clear whether weight change leads to teasing or that teasing leads to weight change. In addition, Hughes and Kumari (2017), Kottwitz et al. (2014) and Monsivais et al., (2015) showed how job status and work circumstances are associated with weight change but they do not explain how individuals can cope with it. In addition marital status and having a partner is also associated with weight change (Jackson et al., 2015; Berge et al., 2014; Teachman, 2016). However the exact mechanisms behind weight change and how one can cope with weight change remains unclear. Parenthood is also associated with weight gain. Lastly, changing from one neighborhood to another and a change in the food environment is associated with weight change (Powell-Wiley et al., 2015; Laraia et al., 2017). The study of Powell-Wiley et al. had limitations regarding information about dietary intake, food environment and physical activity levels and Laraia et al. only included participants with diabetes. The next section will present how individuals can perceive weight change and how they can cope with it.

2.3 Transactional model of stress and coping

As discussed before, certain events can be associated with weight change and weight change can affect Health Related Quality of Life (HRQL). From the perspective of the transactional model of stress and coping, when an individual becomes aware of their own weight change then this can be seen as a situation that needs to be dealt with (Lazarus & Folkman, 1984). The extent to which an individual experiences stress regarding an event is determined by how much is at stake in terms of personal gains or losses (Lazarus & Folkman, 1984). Lazarus and Folkman describe stress as “Transactions that tax or exceed the person’s resources or the resources of a social system” (p. 307).

Primary appraisal is related to the stakes one has in the outcomes of an encounter and the susceptibility to the relevant encounter (Lazarus, 1991; Graham, 2015). If the encounter with the event is irrelevant for the individual, then the primary appraisal or primary evaluation may be that the event imposes no threat, will not do any harm, or will not cause future gains. Primary appraisal is related to the stakes one has in the outcomes of an encounter and the susceptibility to the relevant encounter (Lazarus, 1991; Graham, 2015). There are three primary appraisals: goal relevance, goal (in)congruence, and goal content (Lazarus, 1991). Goal relevance is associated with that if anything is at stake there is a possibility for emotion to occur in the encounter. Goal (in)congruence is identified as whether the encounter is perceived as harmful (threatening) or beneficial (a challenge). Perceiving an encounter as a challenge is based on the thought that the encounter will bring future gains, which can trigger pleasant emotions like excitement or enthusiasm. Perceiving the encounter as a threat is based on the assumption that the event will cause future losses, which can trigger unpleasant emotions like fear or irritation (Li, Chen, & Lai, 2018). Threat appraisal can decrease daily energy intake among individuals who are obese or overweight (Mirkarimi, Mostafavi, Ozouni-Davaji, Eshghinia, & Vakili, 2016). Furthermore, unpleasant emotions (e.g., anger and sadness) can increase impulsive eating (Macht, 2007). Lastly, goal content is needed to make a difference between various emotions, such as guilt and shame. This is related to the type of goal that is at stake, for instance, a moral value (Lazarus, 1991; Lazarus & Folkman, 1984).

Secondary appraisal includes whether the encounter can be handled and is associated with the different options and expectations for coping. There are three secondary

appraisal decisions: blame or credit, coping potential, and expectations in the future (Lazarus, 1991). Blame or credit is determined by whether there is an attribution of liability or responsibility for the harm, threat, of benefit and to the degree to which those individuals have control over their damaging or beneficial actions. Whether there will be pride, shame, anger or guilt depends on whether the blame or credit is aimed at oneself or to someone else. Coping potential is related to if and how the person-environment relationship can be altered for the better. It is related to in what sense an individual believes that he or she can deal with the event at hand and if the individual has sufficient amount of resources (Graham, 2015; Lazarus & Folkman, 1984). For example, when looking at trying to deal with gained weight, friend encouragement is associated with healthy eating and weight loss (Kulik, Valle, & Tate, 2016). Finally, future expectations is associated with what is expected to happen during the change, which is related to whether things will get better or worse (Lazarus, 1991). According to Lazarus and Folkman an essential principle of secondary appraisal is the degree to which a person feels whether something can or cannot be done to change the situation. According to Lazarus there are two ways of coping: problem-focused coping and emotion-focused coping. Problem-focused coping is associated with an analytic process, which mainly focuses on the environment. It involves cognitive and behavioral problem-solving strategies, such as looking for information about the problem, looking at the alternatives related to their costs and benefits, making a decision, undertaking action and following through (Graham, 2015; Lazarus & Folkman, 1984). Lazarus describes problem-focused coping as “planful actions to change the actual person-environment relationship by directly acting on the environment or on oneself” (p. 830). According to Conradt et al. (2008) people who use problem focused coping, are better at maintaining their weight. Emotion-focused is described as followed: “alters only what is in the mind in one of two ways, either by attention deployment (e.g., avoidance) or by changing the meaning of the relationship - for example, by denial or distancing, in which the distressing emotion associated with harm or threat is made moot” (Lazarus, 1991, p. 830). Emotion-focused coping is related to one or more of the following: hope, self-deception, optimism, denial, avoidance, distancing, isolating, blaming one-self and to act as if what happened did not matter (Lazarus & Folkman, 1984; Holahan, Moos, Holahan, Brennan, & Schutte, 2005; Graham, 2015). In addition, it can include person-oriented responses or task orientated responses, both used as distraction (Edwards & Holden, 2001). Individuals who experience gaining weight back after having lost weight

are more likely to use disengaging techniques, such as escape and avoidance (Conradt et al., 2008).

After coping, reappraisal takes place. Meaning that the individual evaluates and learns from the encounters and the used techniques (Lazarus & Folkman, 1984; Weesie, 2017).

Based on the above findings regarding stressor(s), primary appraisal, secondary appraisal and coping the following modified model is proposed:

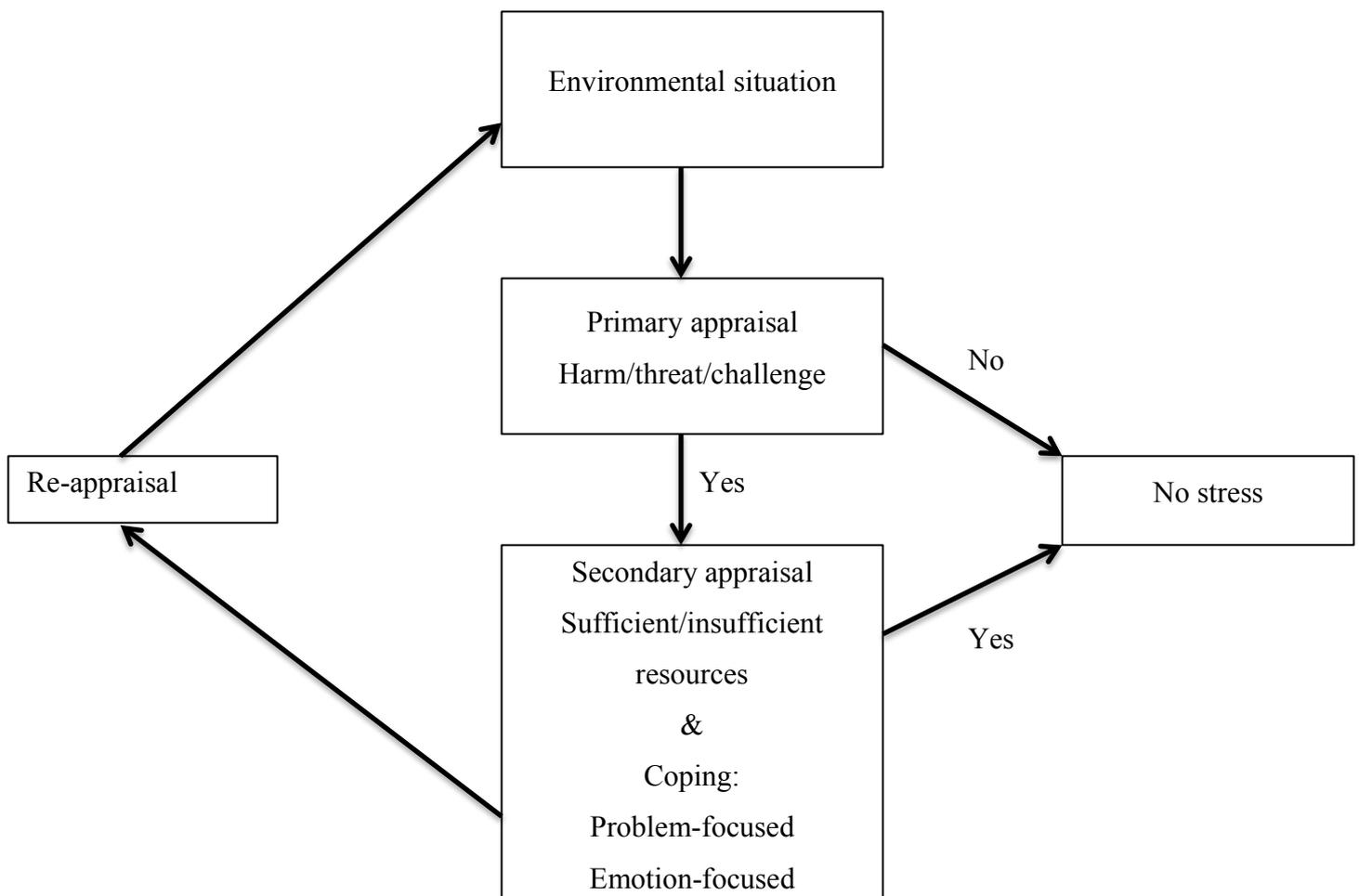


Figure 1. Transactional model of stress and coping (Lazarus & Folkman, 1984)

Note: “No” on the arrow from “Primary appraisal” to “No stress” indicates that when the environmental situation is not perceived as harmful, a threat or a challenge then the individual will not experience stress. “Yes” on the arrow from “Primary appraisal” to “Secondary appraisal” indicates that when the environmental situation is perceived as

harmful, a threat or a challenge then this will lead to the evaluation whether the person has the sufficient resources and which coping strategy the individual will choose. Lastly, “Yes” on the arrow from “Secondary appraisal” to “No stress” illustrates that when the individual has the sufficient resources and is able to successfully cope with the situation then this will lead to not experiencing stress.

The last section of this literature review will explain the association between weight change and Health Related Quality of Life (HRQL).

2.4 The association between weight change and health related quality of life

As discussed before, certain events can be associated with weight change and weight change in is associated with changes in one’s health. Health Related Quality of Life (HRQL) is a multifaceted construct, which includes elements regarding social, emotional and physical well-being and evaluates self-assessed health (Roos et al., 2014). HRQL can be seen as a subjective assessment of one’s own life, regarding positive as well as negative aspects (Zubritsky et al., 2013). Changes in weight can affect the HRQL of an individual. Weight gain is associated with declines in physical functioning, poor overall health, poor emotional well-being, lower levels of energy, getting a disease, hip osteoarthritis, blurred vision and death (Pan et al., 2014; Yiengprugsawan et al., 2017; Zheng et al., 2017). Weight loss is associated with declines in mental health and poor emotional health (Milder et al., 2014; Yiengprugsawan et al., 2017). According to Pan et al. and Svärd et al. (2017) those who are overweight and obese experience improved physical functioning when losing weight but experience a decline in physical health when gaining weight. Zheng et al. indicated that weight gain of at least five kilos is related to major chronic diseases, for example type 2 diabetes, cancer and cardiovascular disease. On the other hand, Döring, De Munder, & Rasmussen (2015) demonstrated that individuals who have normal weight at baseline but have moderate weight gain (5 kilos or less) do not have increased risks of problems in any of the HRQL domains. When looking at weight gain or weight loss it is important to be aware of the reason for the weight change, such as intentional or unintentional weight change (Milder et al., 2014). For example, weight gain can lead to improvements in mental health even though it can also have many negative consequences, as discussed before (Laxy et al., 2014). Also, individuals with normal

weight at baseline who lose weight can have an increased risk of reporting problems in HRQL domains and have a lower EQ-5D index scores compared to those who maintain their stable weight (Döring et al., 2015). Furthermore, it should not be assumed that changes in weight causes changes in HRQL. For example, perceptions about HRQL can influence how an individual looks at HRQL. Such perceptions can come from different social norms and cultural perceptions (Milder et al., 2014). For example, Kuwait families with young children who are diagnosed with diabetes tend to disagree with the diagnosis and look for a second or third medical opinion (Kalyva, Abdul-Rasoul, Kehl, Barkai, & Lukács, 2016).

Based on the above findings about HRQL and weight change, the following modified model is proposed:

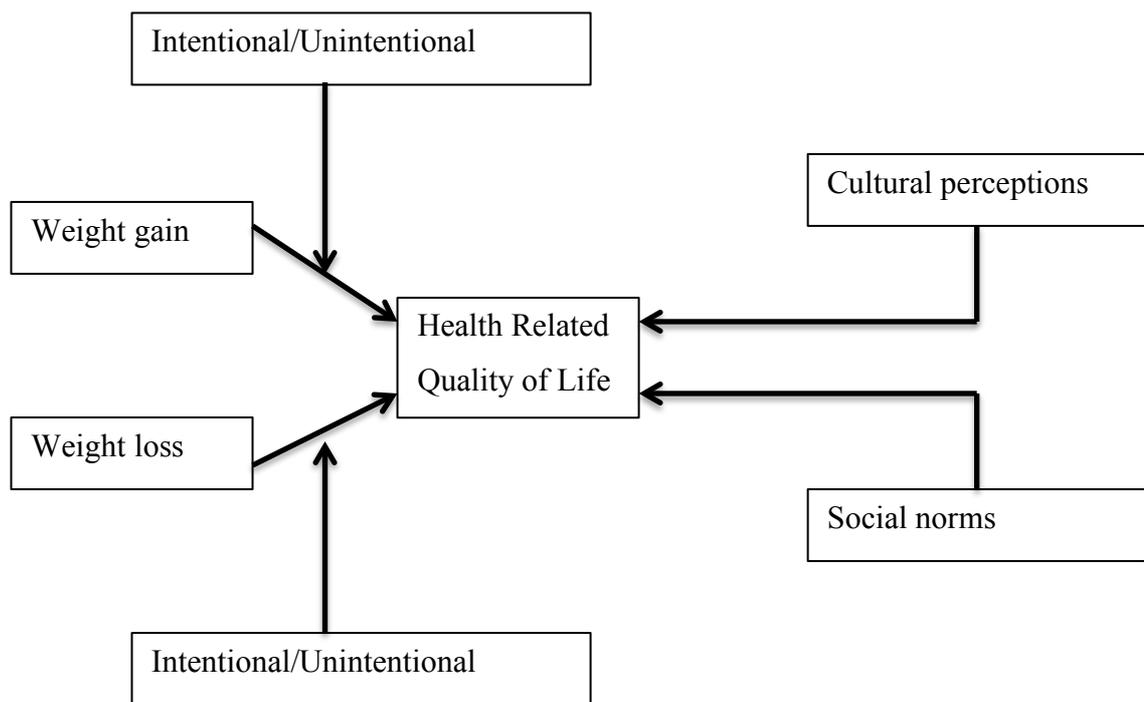


Figure 2. Health Related Quality of Life (HRQL) weight change model (Laxy et al., 2014; Milder et al., 2014).

The literature discussed points out that individuals go through a certain cycle during their life and that they experience certain life events. Some of these life events include work, school, relationships, neighborhood and parenthood and these events are associated with weight change and in turn weight change can influence Health Related Quality of Life (HRQL). In addition, individuals can perceive this weight change as a situation that needs to be dealt with. However, it is not clear how individuals can cope with weight change regarding these life events. Also, are there other life events that can affect one's weight?

3. PURPOSE OF THE STUDY

The purpose of this study was to document the experience of individuals who went through weight changes at different moments of their lives, how the weight change influenced their health related quality of life and how they coped with the weight change. More specifically, five individuals from Estonia told their stories, explaining how certain events influenced their weight, how this affected them emotionally, physically and mentally and how they coped with the change in weight.

4. METHODS

4.1 Participants

This study used a snowball sampling strategy. In total five participants, three female and two male with an age between 40 and 50 years ($Mdn = 47$) were interviewed for this study. The researcher knew all the participants prior to conducting the interviews and therefore knew that they would fit the criteria to participate in the study. Criteria of this study included having gained weight and/or lost weight during ones' life and any attempt to lose the gained weight or gain the lost weight.

4.2 Materials

A demographic form was made, which included questions about marital status, pregnancy, work and weight loss/gain attempt(s) in the past. The demographic form was filled in prior the to interview. In addition, an interview schedule was developed (see Appendix) based on the life events that influence weight change (Jackson et al., 2015; Kirkegaard et al., 2015; Michael et al., 2014; Monsivais et al., 2015; Pope et al., 2017), the transactional model of stress and coping (Lazarus & Folkman, 1984) and the influence of weight change on Health Related Quality of Life (HRQL). The interview questions covered three main areas: 1) critical aspects that influenced weight and how it influenced the weight (e.g. How did the event affect your weight?); 2) how the weight change affected HRQL (e.g. How did the weight change affect you emotionally, physically and mentally?); 3) how the individual coped with the weight change (e.g. How did you cope (deal) with this/ what did you do regarding the weight change?).

4.3 Procedures

The study was conducted in Estonia during July and August in 2018. Access to the sample of this study was possible through personal contacts. Participants were contacted individually and those who agreed to participate were scheduled for the interview. The interviews were held at a quiet place, mutually agreed. Prior to the interview questions, the participants signed the informed consent, which included the purpose of the study and the rights of the participant.

During the interviews, notes were made for the purpose to ask more in depth questions to the participant later on instead of interrupting the participant while talking. To keep the anonymity of the participants, pseudonyms have been used instead of their names.

The length of each interview was between 30 and 50 minutes. All interviews were audio recorded with a Samsung Galaxy S7 phone. No incentive was provided to participate in the study.

4.4 Ethical issues

Knowing the participants beforehand might have influenced the interviews. For example, the participant might have gotten too personal, taking the interview into another direction or perceive the interview as a therapeutic session (McConnell-Henry, James, Chapman, & Francis, 2009-10). In addition, the participant might have had concerns regarding confidentiality (McConnel-Henry et al., 2009-10). In order to deal with these issues the purpose of the study was explained and the participants were reassured that the information from this study would only be used for research purposes. If the participant took the interview into a direction that was unrelated to the purpose of the study, the researcher proposed to talk about the issue after the interview.

4.5 Data analysis

Interviews were transcribed verbatim and pseudonyms were ascribed (Maria, Carlos, Alex, Emma and Carla) to ensure anonymity of the participants. According to Cohen, Manion, and Morrision (2007) qualitative data analysis involves “organizing, accounting for and explaining the data; in short, making sense of data in terms of the participants’ definitions of the situation, noting patterns, themes, categories and regularities” (p. 461). For the present study, the researcher and a fellow SportPro student - with experience in qualitative data analysis - worked to make sense out of what the participants shared during the interviews. Each interview was inductively analyzed and organized into emerging patterns and themes. It was deductively analyzed according to the events discussed in the literature review (e.g., school, work, relationships with significant others, parenthood and neighborhood) to see if these events were mentioned during the interviews. Lastly, the story of each participant was written according to the emerging patterns and themes.

5. RESULTS

The results below represent the 57 pages of single spaced text that were collected during the interviews. The demographic information revealed that all five participants had a period during their life that they were trying to lose weight and that they were all successful in doing so. The themes that became apparent during the data analysis as the events that influenced weight change are presented with the illustrative verbatim quotes. The main events were relationships with significant others, age, parenthood, seasonal changes, work and studying. Events that were mentioned less but still played a role were the army and social pressure. It is important to note that the army, social pressure and other events are not always directly related to weight change and there are other factors that also play a role. For example, the army does not directly lead to weight change but it is the context that plays a role in this. In addition, these events (relationships with significant others, age, parenthood, seasonal changes, work, studying, the army and social pressure) were not mentioned by all the participants. For example, one participant mentioned that parenthood was associated with weight gain while this was not mentioned by another participant. The participants each had a unique story of what events influenced their weight, how it affected their Health Related Quality of Life (HRQL) and how they coped with it. After the analyzes it became clear that 'attitude' and 'appraisal' were two factors that also played a role regarding the weight change. The results show how certain events influence weight change, how this can affect HRQL and how the participants cope with the change in weight. Lastly, each participant gives advice, regarding how to deal with weight change.

Maria

Maria who is 48 years old experienced weight change during her life. She was successful in losing the gained weight by doing yoga and joining the Weight Watchers program. She changed her job more than two times and is currently in a relationship. During the interview she mentioned that at one point during her life she realized that she had gained ten kilos after a neighbor told her that she looked pregnant. She did not know exactly how the weight gain had happened, since as she described 'life was good'. She explained that it might have been age and that a slower metabolism affected her weight. In addition, this weight gain was a big problem for Maria since it is important to be slim in her culture. She said the following:

Life was good, nothing changed. I don't know. Maybe the age, I was 35. Maybe metabolism went slower. I think that could be. Then I realized that if I don't do anything then after two years it's 20 kilos and so on. It's easier to lose 10 kilos than 20 or 30 kilos... All problems are mind made. But to my mind it was a big problem. In our culture it is important... you have to be slim in our culture to be acceptable. So it was a big thing for me yes.

It is clear that the weight gain was a problem. Not only was there the fear of gaining more weight and that it would be harder to lose, but also that it is important in her culture to be slim. Furthermore, Maria explained that different events have influenced her weight. One of these events were relationships:

I have lost weight because I just I couldn't eat. I can't eat, if relationship ends for example then I have to force myself to eat because I know that if I don't eat then my weight goes down and it's bad for my health and it's very bad for body to go like this you know, then you gain weight, lose weight. So then I force myself to eat.

Social pressure also influenced her weight. When Maria was younger she experienced social pressure due to the trend at that time that it was important to be slim:

And back in 80's it was very much in fashion to be very slim. You don't remember it, you don't know that but then those models, they looked like skeletons only. And there was ten or 20 years ago there was big scandal, which you don't know maybe, that models shouldn't be so slim after one model died. There were only bones and after that I think models are little bit bigger now than they used to be. It was very unhealthy how they looked, bones and skin only. So it was a great pressure because my weight now is 61 kilos and when I was fifteen it was 65. You know puberty and unhealthy food - Soviet time -, no awareness at all, healthy eating and the pressure was so big because of all those pictures and stuff they showed that you should be slim. So I had difficulties with my weight even then. It was even worse when I was in high school... when I went to University then I tried it to starve myself. I couldn't because I almost

fainted. I had to eat because otherwise I felt so bad. Other girls did it; they tortured themselves, they were starving. It was very bad in 90s, beginning of 90s.

Lastly, different seasons affect her weight. During spring and summer Maria loses weight or it is easier to maintain weight. In winter and autumn she tends to gain weight: “Then I've noticed that when it's spring and summer I lose weight or it's easier to keep weight but when it's dark you know, autumn, winter then I tend to gain weight”.

During the interview it became clear that the weight gain negatively influenced Maria's self-image, for example when she went out to buy clothes:

I remember the time when I was buying clothes according to how they hide my body. I choose the clothes that hide my body. That was very sad. Then I was thinking that it doesn't have to be like that it is not supposed to be like that you want to cover up yourself. I was quite young then, 30 something.

On the contrary, losing the gained weight had a positive impact, especially on her energy levels:

They say that the moment you lose 10% of your weight, when you lose 10% of your weight then your energy level rises two times or something like that and I felt that I was when I started to lose weight in Weight Watchers then I was I guess 67 then and when I lost six kilos I had so much more energy.

The two main coping strategies that Maria mentioned in order to deal with the weight gain were Weight Watchers and yoga. Weight Watchers helped to change her lifestyle instead of focusing on short-term solutions:

Weight Watchers helps you to change your lifestyle. It doesn't help; the short-term solutions don't help you with the weight. You have to change your style, how you live, the style you living. So Weight Watchers help you to eat normal way.

Weight Watchers helped Maria to pay attention to what she ate instead of telling her that she cannot eat certain foods at all: “What is very good is that they don't tell you that you can't eat chocolate at all for example. They help you to look what you eat”, Also, Maria found out how two products that look completely the same can have a large difference in nutritional value:

I went to store after that and I wanted to buy fish. Then I found two different products and for me it was the same which one I take. But in one there was 0.5 points if I looked at calories and fat. In other there was eight points because there was oil, mayonnaise, herring. It was half point versus eight points. I was so amazed and for me since then it was the same, I didn't think about it.

In addition, Maria explained that if you pay attention to these nutritional values long enough, it becomes a habit. In addition, it makes you conscious of how you eat:

You have to check up sugars, fat and calories. And then if you do it long enough and then you have those choices, for example if you are in restaurant or somewhere then you know that okay... and it stays. You do it like one year and it doesn't go away. In evenings I even calculate how many points I ate for example. It makes you very conscious how you are eating and that's what I do everyday. So Weight Watchers taught it to me.

Furthermore, there were gatherings that Weight Watchers organized every week. During these gatherings people could share their experience and this was very inspiring: “They have gatherings every week, once a week. And all the people who are trying to lose weight are together and they can share their experience and talk about it and that was very inspiring”.

Maria mentioned that yoga helped her to lose weight and being aware of what is going on in her mind and body. For example, before she started to do yoga she ate because she was sad but yoga has helped her to be less sad. In addition, Maria experiences less stress:

I was eating because I was sad but yoga helps me to be less sad. Before I started yoga then I comforted myself with food and then I gained weight. But after I started yoga, food is not such a passion to me anymore. And I have less stress. Yoga helps to listen to your body more and also to notice that what is going on in your mind and in your body and then you see that “oh I'm addicted to this now” or “now I'm sad and now that makes me want chocolate”.

Besides the fact that food is less of passion, it is now perceived as fuel. Also, Maria watches herself in certain situations when there is food:

For years it's been like fuel to car it's only fuel. And I feel very pleased and happy if I manage to get good food. Early it was when I was younger, I was like you know “you can't eat it, no I want to eat it now”. For example today I took those waffles outside, I decided not to eat them but then they were there then I just ate, but I'm always watching myself. Then I know that “move away from the table, don't take any more”. So I'm watching myself all the time, I didn't have that before.

The advice that Maria would give to others is that people should forget about short-term diets and instead change their lifestyle. Also, there might be psychological problems that lead to being overweight:

First of all I think that people should forget all about diets, short time diets. It's really bad. One reason why it's bad is that some people take another piece of cake thinking, “okay I will get fat now but then I do this diet again” and then they have this yo-yo effect you know. And when you are older then your skin doesn't do the yo-yo anymore with you, it looks awful. So forget about those short-term diets. Change your lifestyle; take care of your mental health. But I think the overweight; it's a psychological problem. So the eating is not even reason people are fat but the eating is already symptom of something else you know

She also mentioned that you should ask yourself why you eat the way you eat and what the reason is for being stressed or sad. According to Maria, dealing with these issues automatically leads to eating less:

You gain weight because you eat more, you eat too much. But you eat too much of some other reason. So before you change that, that you eat less you force yourself “eat less, eat less, eat less” but go further go “why you eat so much? What is the problem there? Don't you know that those things make you fat?” Or you are sad probably or you are stressed, “Why you are stressed? Why you are sad?” Deal with this and then automatically you eat less.

Also, there might be bad habits within the family that can lead to gaining weight, for example eating the wrong way:

Maybe there were bad habits in family that can be too. Sometimes you see four, five members in family, you see them on the beach or on the street, they are all fat. It's not in genes because husband and wife they don't have the same genes right. But they are both so fat. They obviously eat wrong way, wrong stuff.

Lastly, Maria mentioned that it is important to be friendly with yourself. For instance, sometimes it is fine to eat chocolate:

I think it's very useful to be friendly with yourself because people are too rough to themselves. They are friendly with their family and friends but not to themselves. They are beating themselves up and telling that “you shouldn't eat this, you shouldn't eat that” but I try to love myself more. Then I tell to myself “yes well you want that chocolate now so bad so let's have that chocolate now then and tomorrow we won't eat chocolate anymore” and then it's easier you know. You have to be friendly with yourself.

Carlos

Carlos who is 50 years and is currently working has had a period during his life that he was trying to lose weight. He was successful in losing the gained weight. He experienced weight gain while he was spending time in the army. At the moment he experiences weight gain and weight loss during different seasons and weight gain which he contributes to growing older.

Carlos indicated that when he went to the army he had nothing to do, that he ate very regularly and that he therefore gained weight. He said that he ate more just because he had the possibility to eat and it was just there, not thinking about that it can be bad to eat as much as he did. He also described that he understood what it means when you cannot get food and cannot eat, somehow that it was a survival instinct to eat whenever he had the chance. In addition when asking Carlos how it affected him mentally, physically, emotionally when he came back from the army and noticed that he had gained weight, he answered “not at all”.

The way that Carlos coped with his weight gain from the army was by monitoring his weight and going back to his old lifestyle that he had before the army. Another factor that affected Carlos and is still affecting him is his age. Carlos indicated that it is more difficult to lose weight when he gets older and that he is being more aware about what he eats and the amount that he eats compared to ten years ago. He said the following:

And when you get older, it's more difficult to lose the weight and that's why you need to be more careful what you are eating. But at the moment or in previous years I still eat what I like and what I want but maybe.... I try to do it in smaller amounts... so how to say... ten years ago I don't even was was thinking what I am eating, now I'm a little bit more thinking what I eat and what amount I eat. At the moment when you get older you are gaining a little bit weight every year, even it doesn't matter are you very active or less active but still you somehow gaining weight a little bit every year. At the moment it's not scary but you must be a little bit more careful because of your health, everything and still even if you want to do more exercises you have, I have feel I don't know last three years that there is limit what you can do. When I was 45 I even wasn't thinking

that there are some limit what I can do and what not but now I understand that there is a limit.

He also described that when he was younger he was more active and that he ate differently:

But then in the younger age you are more active. You have less possibilities to eat. Very nice and good food. And you don't have at least I didn't have so much time to eat good food long time. So you are eating what you are getting and you are running further. So I think there is a lot of... that's why also why I gaining weight in the older age. Because you can eat what you want, basically when you want and food what you like... so.... you can afford it, or how to say... in college you just eat what you get.

Carlos explained that during summer he is more active than during wintertime. He goes running and does racing for his work, which gets him more active compared to wintertime when he does not have any races. The weight change during the different seasons do not cause any stress to Carlos because he knows that if he gains weight during winter, that he will lose it in summer. He said the following:

How to say... I was running, moving a lot more around as ... it's because of racing what I was and I'm still doing. In wintertime we don't have any races but in summer time you will have a lot of races and then you get more active, what in the weekend what... or week around and that's why. You are eating more randomly in summer time and... and maybe you don't, yes you don't have much time to eat or you have less time to eat and I think that's it. And maybe our eating also... less food because it's summer time, it's warm, you have less time and... I don't know, that's it basically.

Carlos' advice to others is that it is important to monitor your weight and if it deviates from what it normally is then you must find a reason for that. It is essential to look at what is happening in your mind or body. He said the following: "I think that everybody needs to monitor their weight and if there are some... big bumps, you must find the reason for that, what is happening in your body or mind or whatever."

Alex

Alex who is 43 years old has changed his job more than two times and has experienced stress during his job. He has had a period during his life that he was trying to lose weight. There have been different events that have influenced his weight, such as his job and having children. Another event that was and still affects his weight is his age. For example, Alex explained that at one point his physical activity levels decreased, as he grew older: “But from 25 years of age and further on the life activity or the physical activity just goes down. Meaning that you don’t do sports so much as you’re used to do”.

Furthermore, things that Alex did not have when he was younger, - money and a car - affects his way of living in the present moment:

So, and that’s the problem that having money, having possibility to eat good things to your brain and delicious things to your brain, they require you more active way of life, but when we were younger, I didn’t have possibility to drive a car. I just had bus and trolley bus and I had to walk a lot. I had cold feet, I was depending on the weather and you felt cold and uncomfortable and no one drive me by a car so you had to walk quite longer ways and directions. So it’s... and now it’s vice versa. You have a car; you’re just sitting all the time.

In addition, because of his current lifestyle he has less time to exercise. For example, Alex spends a lot of time driving his car:

I just have this pedometer switched on all the time and it just shows me every time that you just, “well you have to move yourself, move your ass”. But what kind of moving I can do if I drive a car. It could be so that I drive a car five hours a day, like two and a half to one direction, two and half to another direction. In the morning you wake up, you do your kinda morning exercise, you drive a car then at customer office you just sit down, you sit there. Then you sit back to a car, drive home and then you are so tired you just eat some sweet stuff and then you go to bed and then you just gain your weight. And that’s the way how it is.

Alex mentioned that certain eating behaviors which did not affect him when he was a child, do affect him now that he has grown older:

When you're used to eat you know candies or I don't know mayonnaise or I mean unhealthy food. When I was kid I was eating just white bread with soda and I was completely fine. I can't do this because, well I could but then it affects weight quite fast. So things which didn't affect you in earlier times, they affect you now, just because of this metabolism or whatever or what people have.

Furthermore, Alex mentioned that he started to gain weight in a company where there were many people who were big. He contributed this weight gain to four factors: stress, the environment, not getting enough sleep and travelling:

Related to work or job, it's... ah... this is yes, this is critical aspect number six is actually job, because depending on what kind of job you do... what happened to me, I started to gain weight in a company where we have quite many people with big bellies. And the big bellies were caused by... to my personal opinion by three factors. First stress, as a result of stress you eat quite a lot of candies and we were supplied with on every table we had a lot of candies, first stress. Then environment, I mean if everybody is around you is like big and you're the only thin guy then it's quite likely you also start to somehow to be alike. And third, because of the stressful work you don't get enough sleep because customer need your, whatever documents. You have to prepare them during nighttime. And then a lot of traveling.

Alex also described that he noticed that he started to gain weight when he had his first child. He mentioned that having children caused the routines that had been built up during the years to be changed into routines based on the needs of the children:

I got married and I have two kids, which means that first of all your daily routines that you build during these years, they are somehow turned upside down, because you can't anymore keep your routines but all the routines are based on what actually kids wanna do or... or what kids do actually.

Also, the eating behavior is affected by the children. For example, eating foods based on what the children eat:

And the two major aspects, first of all the nutrition, your nutrition depends on quite a lot on what they eat, well especially when they are like one year old or three years old. Second thing, if you have more than one kid then it might be so that you are dependent... your nutrition it depends on what one kid eats and the other doesn't. So you have to take care of two separate like two nutrition schemes. And also... I mean you always eat leftover basically. So this is because well you don't leave food on table, you eat everything. So you don't prepare food only yourself and you know how much, because sometimes it's, what happens, kids are hungry then you prepare meal and they say "no, we want something different", so you make it different and in order not to throw away everything to waste bin you have to actually consume the stuff. So this is like one critical aspect in addition to this.

Another aspect that is influenced by having children is the sleeping pattern. For instance, Alex mentioned not getting enough sleep:

What I noticed myself and this considers men, then they gain absolutely really fast weight when kids are just born. Because your sleep time, again is quite strongly affected. You don't get enough sleep. This is like fourth major aspect. Sleep time... you sleep when kid allow you to sleep and are the result... are the result quite a lot of men, they just sleep in different rooms... are the result, because you are not able to survive. And as I noticed that insufficient sleep time just may cause again later on like... it's considered as one factor to gain weight, okay.

Alex mentioned that gaining weight did not do anything to him physically, emotionally or mentally when he noticed that he gained weight after his first child:

I mean, nothing, because this is not important at that time. So this weight and nutrition and I mean the basic thing, you just wanna sleep, just simple thing.

And other I mean... what kind of car you have or nutrition or weight or how tall you are, it's not important at all, so.

Alex had different attitudes regarding gaining weight. Firstly, gaining weight meant more clothes. Secondly, it can give difficulties at work:

Well too many... well gaining weight means more clothes. So you just have to change your wardrobe, because you can't fit in your pants for example. If you want to sell yourself, because I work in the area of consultancy of training, advisory then compliance area then you, well if you're too big and look too unhealthy then it's harder to sell yourself. Just like trademark. Somehow you have to look like almost still normal, not like too much overweight.

Also, weight gain can make one self aware of the gained weight when there is a comparison with a picture from the past. Lastly, the weight gained did not support him to feel well but it was not something that would cause him any serious trouble. He said the following:

Well, one thing was I didn't want to weight more than my dad. So... and I didn't. And another thing is that you if you look at the picture. Actually sometimes it's really good to see picture from your youth time. Then you see how tiny you were and then you see actually how big you are right now. So the difference is quite something, quite something. So, and people tend always to look younger than they are so this also could be like one reason why I just try to somehow lose the weight.

To deal with the gained weight, Alex decided to go to the gym. However, at one point he realized that it is not only the work done in the gym that can help to lose weight but that food also plays a major role. He said the following:

And the reason was I was, well participating actively in a gym, so I visited the gym four, no not four... let's say three times a week. But the problem was that despite the fact and that, that happened like two years I think in a row... the scale didn't show me anything, I mean there was no movement. Or even I would

say I even gained weight and I understand that it may be so that the muscles may also add some extra weight but the problem was that after these two years or something I have one colleague who said that “you don’t go to the gym actually to lose weight, you have to... in order to lose weight you have to be in the kitchen”. And the gym is not for that reason. The gym is for... although the gym helps you to activate your body in a way that it burns whatever you eat even if it’s unhealthy food. It helps you to, you know, to keep the flame more intensive, but well everything starts from the kitchen. That’s the problem... well even for me I would say that it’s not the problems but it’s still an issue.

After this realization Alex decided to visit a consultant. This consultant gave him information and advice regarding his nutrition. The consultant played a major role according to Alex. He said the following:

Yes, I visited in a gym, I visited one girl who was this consultant, nutrition consultant. And first of all she asked me to prepare the back-data of nutrition for last week or week and a half. And when she saw, when I showed her, then she just made a big eyes and said “well yes of course what kind of weight loss you are expecting from this?”. Because I mean major food was pancakes with honey, milk and then potatoes and meat.... uhm, yes.

The consultant opened his eyes and gave him the knowledge that he needed to lose ten kilos:

Well she helped me to open my eyes, yes. And that was the... this external help was quite, I would say essential. Because without this help, without this knowledge, without this input I wouldn’t be able to lose like ten kilos. And the reason why I gained it, is just because of the habit, which is here (*points to the head*).

However at a certain point the results turned backwards for Alex. He thought that now he had lost weight that he could actually eat the things that he was not supposed to eat. This caused Alex to gain weight again. However, it did make him understand that losing weight should not be a goal but that it is important to change your attitude to your life and to food and that this causes weight loss. He said the following:

But the problem is that after I received this 84 or 85 kilos and ask myself “well why don’t I have this pancake now?”. And I had it and nothing happened. I mean then I took another one, I mean next day or next week, nothing happened. So you see I thought that maybe the miracle has happened so now I can actually eat what I was not supposed to eat.

And step by step you know the result turned backwards, so it’s... just because again the thing here (*points to the head*), to lose weight you can’t be as a... what I understood cannot not be as a major goal. Because if it’s like major goal it could be considered as a project. You reach certain goal and you think this is the goal, but the major thing is that the change, attitude to your life and to food and as a side result you lose your weight. If you think this way, it might be easier to consume the idea.

Alex’s advice is not to take weight loss as a project with a start and an end: “Well first of all, don’t take it as a project, which has start and end. Take it as a path. That’s one thing”. Also, it is important to find a good consultant:

And another thing is, find yourself a good consultant in a way the person who has some experience and also some empirical approach, because losing weight for one person... the methodology that works real well for one person probably might not be so fast phased for other one.

Furthermore, Alex explained that you need to ask yourself why you want to do this, since losing weight is not something that happens over night. In addition, the hardest thing to do is to change your habits:

You still somehow need to find yourself good reason “why do you do this”? Because one of the first reason was that it it’s not a project it’s a path. Then the

most, the hardest thing you have to deal with is, you have to change your habits, because gaining weight is not something that happened with two... one or two month or even maybe one year. It's like long process. And it's impossible to, I mean to grow the pumpkin within two days, you just need you know long period of time. And that problem is that there is no end. Changing the habits step by step and finding joy in the new habits. That's a challenge you have to face. Otherwise if it's like prison work, hopefully which ends in one year period and then you will be free and you can go and in MacDonald's and spend there rest of your life. Won't work.

Alex also emphasized that at least in the beginning it is important to get help and not in a way that someone tells you what not to do but instead guides you and gives you advice:

At least in the beginning also you need help. I mean help from consultant, from family, from someone else. Not in a way saying that "no no no, you can't do this" but just you know, supporting that "well of course you may eat this but I would suggest you, for example you get almost the same taste or same smell, but if you take this, then you don't have to later on lose anything, you just lose with this one". So it's like selling this idea all the time and later on when you have this path walked in quite often then it's much easier.

Another thing that Alex mentioned is that it is important to know your calories and to consider the daily recommendations of how many calories an individual is supposed to eat during the day:

And also what is important I think for people to understand is calorie issues as well, because you think "oh well, what the heck, I mean one tiramisu or let's say I have two". Okay you have two tiramisus. Maybe one tiramisu in the morning then for lunch time, for evening also some and if you're considering the whole daily scale then you can see that based only the three or four tiramisus you have completely done, I mean all your calories and nothing else and this is only dessert. It's not even main food, main course or the pancakes or something which in some countries are considered not the dessert but like appetizer.

Emma

Emma who is 47 years and married had a period during her life that she tried to lose weight. She mentioned that the most important events that influenced her weight were pregnancy and a change in jobs combined with studying. Emma described how a change in jobs combined with studying caused her not to 'move herself', incorrect eating (times), not getting enough sleep and having stress, which contributed to the weight gain:

I changed my job and also my studies at the same time. So I had a lot to do as a new teacher and then also I studied and then I gained weight not because of the psychological pressure but due to, I had really no time to move myself so after my work I went home and sat with my computer to prepare new lessons. I think this was the reason. Of course it could be, how to say... not correctly eating, not correct eating times. There were nights were I slept for like three of four hours and I don't know, maybe I ate, it was like stressful and then I was tired and then sleepy. And maybe I ate more because of that, I don't know. Or drank coffee more to stay awake.

Emma did have the intention to change something but she was not able to carry out this intention: "There are like two steps. One step is that you decide something and the second should be you also act like you decide. And I had lack of that".

Also, being a teacher made it more difficult for her to find extra time to eat. In addition, the food that the school offered was something that she did not like:

When you're a teacher, probably you know, you don't have extra time for eating. Like either lessons, lessons, lessons and then at the end of the day there is lunch break where is awful food. School canteen, you can imagine. Although this year, there was also vegetarian food that they had. It was first year and it was very tasteless. Just boiled rice with some boiled peas in it and nothing.

Other aspects, such as pressure, stress, sleep and physical activity levels affected her eating behavior and weight:

And when you are under the pressure, when I was under the pressure then I wanted to have, it's like a celebration, I wanted to have raisins or almond or candy or something in my drawer. And I think it seem to me that I didn't eat more. But I still think due to the stress and then not sleeping it affected how gaining weight. And also I didn't move, really to the car back home and from the car.

Emma described that the weight was not the problem, because she knew that "it will have a certain ending" and that she would change something. However, her health got worse and that was much more important to her:

The weight wasn't the problem, because I kind of knew by myself that it will have a certain ending at the end of May and I will change something. But the more important thing was that my health went worse. I noticed that I needed glasses, my eyesight went worse. And also some kind of, if you are not exercising at all if you are sitting on the couch or doing nothing during the day. Then all those muscles and stuff and then back and I had some health problems. And this was much more important. The weight was, it was a bad thing but not that bad.

Still, Emma waited until the end of the school year but after that everything went back to normal. She said the following:

The school year ended and everything went back to normal way. I have lost these three extra kilos. I would like to lose more maybe three, four extra. I would like to lose more but I don't do anything. But I just went away because I started to walk and do my normal things. I didn't sit with my laptop on the couch and so. I think eating habits, yes maybe they normalize at least and sleep normally, which is important.

Emma gained weight during all three pregnancies (as expected). However during the first two pregnancies it was easy for her to get rid of the extra kilos, compared to the third pregnancy. She mentioned that she did not remember anything concerning that she had or problems with the weight after the first and second pregnancy. The gained weight regarding the third pregnancy was different because she did not lose the same weight immediately as she did with the first and second pregnancy:

I think because I was younger and I even didn't think about it. I mean, I lost immediately same weight that I was before with my pregnancies. As I was busy with the baby and I even didn't think about it and also didn't have to think about it as it just, one day it was gone. Of course not on the same day, but it didn't have any impact to me. But that wasn't the case in my third pregnancy. With my third child I also didn't think about weight until I saw the mirror, it doesn't look the same. I have heard a lot of course about after pregnancy it is hard to get rid of those kilos, but I didn't have this experience with my first two pregnancies.

This had a negative effect on Emma's self image and it was difficult to get rid of the extra kilos after her third pregnancy:

I mean all my clothes didn't fit and it was hard to move. And the self-concept... I used to be a thin girl and then I was like with extra weight. My self-image during pregnancy was the same with all three pregnancies but as I was much older, there are like 15 years apart between first pregnancy and third pregnancy. It was really hard to get rid of those extra kilos after the third pregnancy, after the third child.

However, after giving birth her weight was not a priority since it was a priority to take care of the baby. She said the following:

Because priority was to have the baby happy. Because I was also breastfeeding for two years I think, the last time. And it also makes so that you have to eat, you can't focus on the dieting or not to eat or not to drink. You have to drink at least quite much. But if you are aware what you are doing then it's possible to lose weight and to eat properly.

In addition, it was not the most important thing to lose weight because of the after birth depression that Emma experienced and the change in the hierarchy of the family:

The family life functioning and the baby comes and it's very, I would say it's very stressful. There are like two things. One thing is the hormone system of mother of me. I have been really... it's called after birth depression in Estonia. And I feel it very very strong that and I try to make myself normal, to stay normal. And the second thing is that when a new person comes then all the hierarchy of the family, the functioning changes a bit.

When some tiny person becomes the most important in one day and for the rest of the family kids and husband, it takes time to get used to it. Those were the most important things at that time.

Eventually Emma decided to join the Weight Watchers program and this has helped her to control her eating habits and to be more aware of her choices:

And it was, I think it was really good. It was the first time when I heard about such a thing, that there are some rules and you have to exercise. I didn't exercise much because it's hard to find time with a baby. But I have started to control my eating habits, more exact times for eating, not to eat all the time when you feel hungry or stress eating and what is a healthier choice, like vegetables or not sugar so much and it worked.

Emma's advice is that when you are in a stressful situation and there is no end, then you have to change something and take care of yourself:

But if there is like stressful situation in working place or in a marriage for example and you don't know, you don't have certain date for it to end then I don't know then you have to skip something and to take care of yourself, that's what I think. It was like normal stress for me and I understood it logically that 'yes, this has been my choices and it will end once', but if it's without any time frame then it's impossible to... you can't like hope for the future that maybe one day there will be time.

Emma also explained that there are more important problems than only your weight, for example your health. She mentioned that the media manipulates us in such a way that we are supposed to look in a certain manner and this can cause more stress:

An issue that is that the weight is not only like the visual problem. It's really really serious with the health. And as we are in a... media manipulates with us. You have to be always very thin and young and then acceptable for society. Then I still think that it makes more stress for people, because there are really more important problems and the weight problem is problem with your health, not the problem with how do you look like, what size clothes you can buy.

Carla

Carla is 45 years old and has been to college. She experienced weight gain during her life and has been successful with losing the gained weight. The most critical event in Carla's life that has been affecting her weight is relationships. Carla described that if she breaks up with someone that she tends to let herself go more and that when she is in a relationship she still wants to look good for the other person

Like if I break up with someone then I, maybe I tend to let myself more go, that I eat more because if you are in a relationship then still you want to look better for another person, though it is not the right reason to be in shape and you should really do it for yourself, but if I'm honest then that's the way it has been. Or there is like no pressure to you know, look good.

She also explained that the duration of the relationship influences whether she wants to look better for the other person:

I guess it also depends on how long you have been in a relationship, because relationships also go through different phases. So if it is a young relationship then perhaps you try harder but then if the relationship ends after two or three years then... And the last relationship it was three or four years approximately. But perhaps yes if people are married for ten years and 20 years then at one

point, you know you get really used to the person, it becomes a routine and then you don't care as much.

Furthermore, she mentioned that the type of person she is in a relationship with can influence her health behavior:

I guess it also depends with whom you're in a relationship. If the person you are in a relationship is athletic then you also tend to you know go and workout together and do things together and then that way you perhaps it's easier to stay in shape.

When asking her how the weight change actually happened related to the break up, she mentioned that she exercises less or she experiences sadness, which she then compensates with food. At that moment she eats something that she could substitute with something else but she does not substitute it because it is like a reflex, which she acts upon:

I don't exercise that much or you feel perhaps you feel sad about the break up and then you compensate with food. And you think that you want something that makes you feel better. And you eat but you don't... you could also substitute it with something else, like going to the theater or going for a walk. But it's just like a habit. At the moment it's like a certain feeling and then your respond, it's like a Pavlov reflex, something that's already in your mind that you know 'I don't feel bad right now but if I have a chocolate then I feel good'. But then you don't think that perhaps next day or day after you're not gonna feel that good, because it will show up on your hips.

However Carla did have a moment where she was thinking that it was going to far and she did manage to deal effectively with the weight gain. She specifically mentioned that when she loses weight she feels better and this motivates her to lose more weight. She said the following:

I have noticed that like when you see yourself in the mirror everyday on a daily basis then you don't notice it but then sometimes suddenly you look at a picture

or you are like ‘oh my God, I’m like so much bigger than I was a few years ago’. And then you are like again continue, I have to like watch it, eat healthier and move more.

I think now during the summer also I little bit lost weight, because it’s easier to move, I do a lot of gardening, walking and I feel better. And then when I see that I lose weight and I feel better then it motivates me more and then I do it more.

However Carla also said that losing weight is not a priority. She mentioned that it is not a priority because she is not like a ‘complete whale’. In addition, she said that if she really wants to lose weight she could lose it in a few weeks. Carla said that losing weight could be a priority when it comes down to her health. Besides relationships, other events also affected Carla’s weight. She said the following:

When we talk about events that affect the weight change, I think often times the weight gain has been related to stress. Like I remember about five years ago or something, then I gained a lot of weight. And I was graduating from University and there was a lot of stress with that and I also had a lot of stress with my job. And then I had some health problem with my thyroid and then I thought that I need to lose weight because it affects your health. It’s a problem.

When asking Carla what the reason was for the weight gain five years ago she said that it was because of stress and social pressure at work. In addition, the issues that Carla had with her thyroid became a motivation for her to lose weight:

Stress because of work and also where I was working it was an open office and I had a lot of colleagues and everyday there was a celebration of somebody had a baby or somebody graduated or whatever. And then they would bring like cakes and it’s like a social thing, social pressure also. You know they say that you are the average of the five people that you see the most during the day. So I think eating is also like a social thing. You know why every time we get together there is always, we have food and let’s do this, like birthdays. All the traditions like Christmas. Everything revolves around food. So it’s a very like touchy social thing too.

When I had this thyroid thing, I realized that I have some issues and then the doctor prescribed me some hormone tablets for the thyroid but I thought that I will try to lose some weight and exercise and I did some yoga, didn't eat candy and so.

Carla said that because of the weight gain she was not able to wear certain clothes and that it affected her quality of life. Losing the gained weight made Carla feel better about herself. As Carla said: "It was very motivating. It made me feel great. Definitely felt so much better." This raised the question why she did not kept the weight off: "How was it then that it didn't become a lifestyle still, because it gives you this good feeling of achievement that you have lost the weight but then slowly it comes back?". Carla said the following:

That's a really good question. Yes, I think again it has to do with your inside feeling, then something bad would happen or you would like be stressed out and again like it kinda goes out from of your mind. You think 'ok I reached this goal and then now I don't feel that good and I'm gonna have that ice cream again.' And then with me it is that I can stay away from bad food if I don't touch it. But I really like chocolate and I know myself that if I take the first one then it just goes down and I just keep taking them. But if I don't take any then I'm fine. But it's just a matter of avoiding the first one.

Coping strategies Carla used included joining the Weight Watchers program, doing yoga and participating in an Internet program. The Weight Watchers program worked as a good motivator. In addition, there was a strong social factor, since there were weekly group sessions where everyone could share his or her story. She said the following:

And I think there is a strong social factor too that you know that you have to go every week and tell about your, you know share your success or failure and there are others that feel the same way. It's a very good motivator.

The Internet program worked very well for Carla. One of the reasons was that she had a visual representation regarding the caloric information and how much she moved:

I forgot what the name was. But it worked very well. Like you would mark down, there were like caloric information and then you would mark down everything that you ate during the day and you would set your calorie limit per day and then you would also insert how much you moved and then you would see the calories and that kinda motivated. And you see the result that ‘oh today I have already, I lost that much and then I lose that much.

Carla’s advice was, that you first need to inspect how you feel from the inside and deal with those inner issues first. She said the following:

But I don’t think that it is like people sometimes think ‘oh I’m gonna lose the weight and then my problems will disappear’. I think it’s the other way around. That you have to first kinda solve something in your head and then the weight will fall in place. Rather that. I would say that first inspect the way you feel about, you know if you are happy, like really happy inside. If you are doing the things you love and you feel good and deal with those inner issues first and understand that the weight is just a side effect often times.

Also, Carla explained that eating healthy and exercising should be a lifestyle: “Try to think of this not as a diet but as a healthy lifestyle, because your body is the temple.” If this is not the case, you are setting yourself up for a psychological failure:

I think if a person is able to kinda ingrain it into their head that ‘this is my lifestyle, this is the way it is’ and it’s not like a temporary thing that ‘I’m not gonna eat bad things’ or they are able to kinda workout... a system that works for them but for instance I only eat candy like once a month or once a week or... then it would work.

But if you think ‘oh it’s a temporary diet for two weeks and then I will lose this amount... you know’ and then you kinda like already psychologically you are setting yourself up for a failure maybe. Because you think ‘oh now after two weeks it will end and then I can go back...

6. DISCUSSION

The purpose of this study was to examine how certain events are associated with weight change, how weight change influences with Health Related Quality of Life (HRQL) and how individuals cope with the weight change. More specifically, five individuals from Estonia told their stories, explaining how certain events influenced their weight, how this affected them emotionally, physically and mentally and how they coped with the change in weight. There were a lot of different events and sometimes a combination of events that were associated with the weight change. It appeared during the interviews that unintended gained weight was associated with a decreased HRQL and intended weight loss was related to an increased HRQL, however this was not always the case and it highly depended on the event that influenced the weight change. The change in HRQL was associated with different coping mechanisms, such as problem focused and/or emotional focused coping. After analyzing the results it appeared that attitudes and appraisal also play a role in how an individual decides to cope with the weight change. All the participants who gained weight at a particular point during their life managed to lose the gained weight. However, it seemed that for some participants it was difficult to maintain their new weight.

In the sections below, the findings from the results will be discussed, regarding which events were associated with the weight change, how the weight change influenced HRQL and attitudes, how this was associated with appraisal and eventually led to a certain coping strategy. Lastly, the practical implications, recommendations, strengths and limitations will be discussed. It is important to keep in mind, especially when looking at HRQL and attitudes, that there is overlap and that one description can also fit elsewhere. Furthermore, it is not the case that only one specific event leads to weight change but that there are multiple factors that can play a role. However, the sections have been categorized to present a coherent picture of the findings.

There were many different reasons among the participants for gaining weight. Some had similar reason while others had different reasons. One thing that stood out was that often weight gain went unnoticed until the participant became aware of it because of a comment of a neighbour or looking back at an old picture and starting to compare with how one looks like in the present. The literature pointed out that events like work, school, relationships, neighborhood and parenthood are associated with weight change.

However, some participants also mentioned events that were not discussed in the literature review. The main events that were mentioned were relationships with significant others, age, parenthood, seasonal changes, work and studying. Events that were mentioned less but still played a role were the army and social pressure

The first event is relationships with significant others. Being in a relationship can be a reason to be in good shape for the other person one is with and can also depend on the duration of the relationship. The need to look good for the other person might be an attitude one has at the beginning of a relationship while this might slowly fade away as a couple is together for multiple years. Furthermore, weight change is also associated with the type person an individual is with. Being with someone who is athletic can make it easier to stay in shape because of the health behavior of the athletic person. For example, one can think about working out together. When a relationship ends or being in a fight with someone who has a significant value is something that could lead to an individual not eating. This in turn is associated with weight loss. However a break up can also lead to eating more than usual. Feelings of sadness are then compensated with food even though it could be compensated with something else, like going for a walk or visiting a theater. This compensation is like a habit and can make it more difficult to choose for something that is beneficial in the long-term. Berge et al. (2014) explained that married men have a higher chance of being overweight/obese compared to younger males who are single, casually dating, committed dating or engaged, while there was no difference for women. This can be one possible explanation for why married men are more likely to be overweight/obese. Perhaps it is because in the beginning they have the need to look good but this slowly fades away during the marriage. Regarding a partner who is athletic and can make it easier to stay in shape, Jackson et al. (2015) mentioned that a partner who is constantly healthy is related to a higher chance of the other partner making a positive health behavior change.

The second event is age. Age and a slower metabolism were mentioned as reasons for gaining weight. Age was also seen as a reason for having more difficulty losing weight and that it is therefore necessary to be more careful with what one eats. Also, it seems like there is less awareness regarding to what one eats at a younger age compared to an older age. The realization that the things that did not affect you earlier - the kinds of food you ate - do affect you as you grow older, led to being more careful with food choices. Also, there was the attitude that it does not matter how active you are since gaining weight is inevitable as you grow older.

Also aging makes one more aware about the limits regarding exercising. Furthermore, one is more active during the younger years as compared to the older years. For example, participating less in sports in the older age. Lastly, there was the attitude that during the younger years you eat what you get, but in the older age you eat what you want, simply because you can afford it and that this is associated with weight gain.

The third event is parenthood. Having children or getting a first child is associated with weight gain. It can lead to having different routines (e.g., what the parents eat depends on what the children eat). Also, children do not always eat the food that they get and since throwing the food away could be seen as a waste, the parent decides to eat the food him or herself. Furthermore, when the child is born it can be seen as priority to make the baby happy and therefore weight is not as much of a concern. The birth of a newborn child causes the functioning of the family to change and it takes time to get used to this. In addition, as being pregnant leads to weight gain, losing weight after pregnancy can be difficult and it is easy to lose weight after the first and second pregnancy, does not mean that it is easier after the third time. Also this can be associated with age, making it more difficult for someone who is older to lose weight after giving birth. Even though one is aware that it is common to gain weight during pregnancy and therefore is not worried, it does seem that losing weight after pregnancy can be difficult and in turn can negatively affect the individual.

Being a parent and gaining weight is also confirmed by Umberson et al. (2011) who concluded that parents gain weight faster than those who are non-parents, especially the first-born causing rapid weight gain. Being aware of it that it is common to gain weight during pregnancy and not worrying about this is in line with the findings of Heery et al. (2013) who indicated that women are not concerned about gaining weight during pregnancy, since they know that this cannot be avoided. Regarding age, Kirkegaard et al. (2015) explained that behavior-performed during pregnancy is associated with longer-term weight gain among women with a history of macrosomia but did not mention anything about the indirect influence of age. So, the influence of age (e.g., slow metabolism) can also contribute to the weight status after pregnancy and affect weight loss.

The fourth event is seasonal changes. The results indicate that it can be easier for individuals to maintain or lose weight during spring and summer but that there is an increase in weight during autumn and winter. This was contributed to being more active and eating less during summer compared to the winter.

The fifth event is work and studying. Work can indirectly cause weight gain. First of all environmental factors can play a role, such as being among people who are overweight or when the workplace is supplied with candy. Secondly stress, which can lead to consuming more food. Social pressure can also play a role on the workplace. Whenever there is a celebration, people tend to bring something to the workplace like cake for example. Instead of saying no, one says yes, because other people are also eating. Another factor is not getting enough sleep. Lastly, travelling can lead to not having enough time to eat, which can lead to overeating when one does get the opportunity to eat. A combination of working and studying can lead to not having enough time to exercise, an irregular eating pattern, not getting enough sleep and stress. This is associated with weight gain. Also, graduating was mentioned as a reason for stress and gaining weight. Pope et al. (2017) and Fedewa et al. (2014) found that students gain weight during college, especially after the first 12 months compared to the first 12 months. Unfortunately the findings of Pope et al. (2017) and Fedewa et al. (2014) do not contribute to the findings in this study. Looking at college, the participants who gained weight in the present study either gained weight during their graduation period or because of a combination of work and studying.

The sixth event is being in the army. This event was mentioned only once but should not be left out. Going to the army is associated with weight gain since one has nothing to do and one eats very regularly. At the same time, the meaning of food can also change. For example, knowing that it is difficult to get food and not being free to consume food at any particular moment can lead to eat as much as possible when the moment presents itself.

The seventh event is social pressure. Media can indirectly influence weight. Portraying models in a certain way can influence the audience and make them believe that they should look the same way. This can cause stress because if one does not look like the models on the picture (e.g. thin and young) then one is not accepted by society. This change in attitude by the media affects health behavior and can be associated with weight loss, only focusing on weight and not health. Also one's culture can cause social pressure on an individual and affect weight change. For example, in some cultures it is important to be slim in order to be accepted.

Weight gain can influence one's self-image. It can cause individuals to buy the type of clothes that will hide their body. It can also make them more aware about the weight gain, since certain clothes do not fit anymore. In addition, weight gain can negatively impact health (e.g., problems with eyesight) and can have an impact on one's work. For example, with certain jobs it is not desirable to be big since it can influence one's job in a negative way. Weight loss can lead to an increase in energy levels. Also, losing weight can work as a motivation to lose more weight. However, weight gain does not necessarily need to have an effect on HRQL. The present study showed that being aware of weight gain does not have to affect mental, physical or emotional well-being. All in all, most findings of the present study are in line with the studies of Pan et al. (2014), Yiengprugsawan et al. (2017) Zheng et al. (2017) who found that weight gain is associated with poor emotional well-being and problems with eyesight.

Different coping styles have been used to deal with the weight change, Weight Watchers, yoga, monitoring weight, going to the gym and visiting a consultant are some of the coping strategies that have been used. The participants in the present study joined the Weight Watchers program to lose weight. Instead of focusing on short-term solutions, Weight Watchers focuses on long-term solutions, provides support, helps to change one's lifestyle, teaches to control eating habits and makes one more aware about choices. Every week there are gatherings for people who try to lose weight and everyone can share their experiences. This can work as a good motivator since everyone shares their successes and failures and can relate to each other. Yoga can help an individual to listen to one's body, make one aware about what is going on in the mind and body and can help to deal with certain emotions, such as sadness. Another way of dealing with gained weight is by monitoring the weight. Zheng et al. (2016) confirmed in their study that monitoring weight is associated with weight loss. Furthermore going to the gym and visiting a consultant are two other coping mechanisms. However, one must be aware that the gym alone won't necessarily lead to weight change and that it is important to look at other factors as well, such as nutrition. From this perspective a consultant can provide the necessary information and help. This external help can make an individual more aware. These coping strategies can be categorized as problem focused coping since, they involve behavioral problem-solving strategies, such as looking for information about the problem and undertaking action by trying to look for a solution and following it (Graham, 2015; Lazarus & Folkman, 1984).

At the other hand emotion focused coping seems to go hand in hand at times with problem focused coping. Emotion focused coping involves a change in thinking or feeling about the existing problem, searching for support, isolating, avoiding or blaming one-self (Graham, 2015; Lazarus & Folkman, 1984). For example the Weight Watchers program helped the to lose weight by changing the lifestyle. At the same time the gatherings that took place every week where people could share their experience, gave them a chance to change their way of thinking and approach the problem differently. An individual might notice that she is not the only one who is trying to lose weight or that there are other people just like her who are also struggling. Furthermore yoga can be seen as a combination of problem focused and emotional focused coping, since it can help to listen to the body, increases awareness and can help to deal with certain emotions, which in turn can lead to the desired health behaviors. At the other hand, emotion-focused coping techniques such as avoidance have also been used. It seems like that the situation that an individual is in plays a role whether or not he or she decides to lose weight. For example, gaining weight during the winter does not cause an individual to do something about the gained weight during that time since the weight will be lost during the summer. Also, gaining weight after having a first child does not automatically have any physical, emotional or mental impact, because it is something that is not important (e.g., the happiness of the baby comes first) at that time and that it is just the basic things that matter at that point, like having a good night sleep. In addition, it can be stressful when a new baby is born since it changes the functioning of the family. Another interesting finding is that there is a possibility that someone does not try to change his or her weight because there are other things going on that are more important at the moment even though the individual is aware of it that his or her health is negatively affected. Not having the time in the present moment to do something and knowing that there will come a time in the future that one will be able to deal with the health issues is related to making this decision. Lastly, the attempt to lose weight can be avoided because the individual pays attention only to his or her physical state and therefore might think that it is not necessary to lose weight.

During the analyses it appeared that weight change is associated with attitudes and appraisal. Gaining weight can lead to the belief that if nothing is done now with gained weight in the present moment that it will be harder to lose it in the future. This attitude can be appraised as a threat, which leads to a certain coping mechanism.

Also, culture can play a role. Being aware of the gained weight can make one fearful, since it is important to look in a certain way according to the rules of the culture. Gaining weight can also be attributed to aging and this could take some of the pressure away or add pressure to do something about it, since it is inevitable. Other attitudes regarding gaining or losing weight were related to that it is bad for the body to fluctuate in weight, that weight is not a priority at a certain moment, that things will get better in the future, that one does not want to go into a relationship and becoming self-aware how one is compared to how one was (e.g., looking at old pictures). One interesting finding was that losing gained weight can lead to the attitude that it is possible to go back to old eating behaviors before losing weight, which causes weight gain.

As discussed before, a certain life event is associated with weight change or no weight change. Looking at the Health Related Quality of Life (HRQL) weight change model, there was unintentional weight gain and weight loss and intentional weight gain and weight loss. According to the transactional model of stress and coping, a situation (in this case weight change) can lead to a certain appraisal and this leads to a coping mechanism. As this study indicates, before appraisal takes place it is necessary to look at how the weight change influences the attitude and the HRQL of the individual. After that, look at appraisal and then the coping strategy. In turn, the coping strategy leads to weight change or no weight change and this again has an effect on the attitudes and HRQL of the individual. However, these models are not without any limitations. Firstly, it is easy to assume that there is a causal relationship, for example that weight change leads to a certain attitude and HRQL but not that attitude and HRQL could inversely affect weight change as well. Furthermore, there is no consideration of other factors that might influence weight change such as personality traits, which have been related to body mass index (BMI) and the risk of obesity (Sutin, Kerr, & Terracciano, 2017).

6.1 Practical implications

Based on the findings, there are various practical implications and recommendations that should be considered. The study covered several variables related to weight change. Firstly, workplaces could use the information presented in this study to prevent workers from gaining weight. As Roos et al. (2014) concluded, preventing weight gain is important for employees' well-being and work ability. For example, stress and social pressure at work can contribute to weight gain.

Certain rules at the workplace, such as no candy, cakes or any unhealthy foods and instead healthy substitutes (e.g., fruit or low calorie snacks) could help to prevent weight gain at the workplace. Regarding parenthood, Umberson et al. (2011) indicated that the first-born baby causes rapid weight gain among parents. Even though smoking, psychological stress, financial stress and physical activity levels were not associated with change in body weight, the present study found that what contributes to the weight gain is the change in routines, being dependent on what the children eat, change of functioning in the family, making the happiness of the child a priority and attitudes towards weight at the moment of having a (first born) child. It is important for parents to realize that they should also take care of themselves, since changes in weight can affect Health Related Quality of Life (HRQL) (Laxy et al., 2014). Parents should be informed and educated how they can make their child a priority but also make their own health a priority instead of neglecting it. Well-being consultants could aim to target the attitudes of these individuals.

In addition, it is important to inform individuals about different coping mechanisms and its effects, explaining for example that problem-focused coping can be more effective to deal with weight change than emotion-focused coping. However, it is also necessary to keep in mind that this depends on the situation and whether they perceive that they can control the situation or not.

Three of the five participants joined the Weight Watchers program and had success. It did not only help them to change their lifestyle but they were also able to connect with others in a group setting, share their experiences and learn from each other. Future programs might adopt the same approach to make people realize that dieting alone will not work, especially in the long-term and that instead one should change his or her lifestyle.

6.2 Strengths, limitations and recommendation for future research

This study has several limitations. The small sample size of the study makes it difficult to generalize the results to the general public (Queirós, Faria, & Almeida, 2017). Perhaps future research could use a larger sample. Another issue that makes it more difficult to generalize the findings is that the snowball method was used. This makes it harder to generalize the findings (Sharma, 2017). Another limitation is the sensitivity of the topic, which might have caused participants to feel uncomfortable

during the interview and therefore not tell everything (Elmir, Schmied, Jackson, & Wilkes, 2011).

Furthermore, the participants recalled through their memory how the weight change affected them and how they coped with it. Therefore they might have left out unintentionally certain aspects that played a role (King et al., 2018). In addition, there is a chance of a social desirability bias (King et al., 2018). Social desirability is related to the respondent providing an answer which is more socially acceptable than his/her true attitude or behavior (Kaminska & Foulsham, 2013). Finally, the native language of the interviewer and the participants was different, which may have represented a barrier for effective interviewing (Drew, 2014).

The interviews allowed the participants to tell their story. Sharing their story might have increased their sense of purpose and contribution by increasing the awareness of their experiences (Elmir et al., 2011). Furthermore, knowing the participants beforehand could have solved trust issues that can emerge regarding conducting interviews and therefore provide deep rich data (Quinney, Dwyer, & Chapman, 2016).

When examining the influence of weight change on Health Related Quality of Life (HRQL) and how individuals cope with the weight change it seems reasonable to use the transactional model of stress and coping (Lazarus & Folkman, 1984) and the Health Related Quality of Life (HRQL) weight change model (Laxy et al., 2014; Milder et al., 2014). It gives a better understanding to why individuals choose for a certain coping strategy and how weight change affects HRQL, surrounded by different factors, such as intentional/unintentional weight change and social norms and cultural perceptions. As this study shows, one aspect does not necessarily lead to the other aspect. It is rather that multiple aspects play a role. Future research might examine how perceptions of different events contribute to the attitudes regarding weight change and how this influences HRQL and coping strategies in line with the transactional model of stress and coping and the HRQL weight change model.

6.3 Conclusion

Weight change throughout the life cycle seems like something that is inevitable. All participants experienced different events during their life that influenced them in different ways. Some of the events that were associated with weight change were relationships, work, studying and aging. This can influence one's attitude and Health

Related Quality of Life (HRQL). As this study indicates, weight gain can negatively influence one's self-image while weight loss can increase energy levels and work as motivator to lose more weight.

It seems like that not only the weight change affects attitudes and HRQL but also the importance of the event that caused the weight change. For instance, gaining weight due to raising children is given less importance than gaining weight, as an individual grows older. This also has an impact on the coping strategy one chooses, making the decision to effectively deal with the weight gain or to avoid it. This study suggests that losing weight does not only lead to a better HRQL (e.g., increased energy levels) but also a different attitude, such a thinking that it is possible to eat those things that one ate before attempting to lose weight and in turn gaining weight again. All in all, there are many different ways that weight can be influenced, there are different ways that an individual can be affected and there are different ways of coping.

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APPENDIX

Interview guide

A) What critical aspects influenced weight and how did it influence weight?

1. What have been the most critical aspects in your life, that affected your weight (in a positive and/or negative way)? With ‘critical aspects’ I mean happenings that were important to you, such as getting into a relationship, changing neighborhoods or getting a new job.
2. How did it affect your weight?
3. How did the weight change happen?
4. How did the weight change affect healthy habits (e.g. eating, physical activity and sleeping pattern)?
5. How did the weight change affect you?

B) Questions related to health related quality of life and how the participant coped with the weight change.

8. How did you cope (deal) with this/ what did you do regarding the weight change (e.g. feeling of self-efficacy related to dealing with the situation and self-control related to dealing with the weight change)?
9. Did you have any resources to support you, such as support from friends? Were there resources? Did you might have overlooked any resources, for example a therapy group?
10. What was the role of significant others? Did you feel like you had support? If so, what kind of support? What kind of support would you wished to have had? And do you think it would have helped you?
11. How did it affect you emotionally, physically and mentally? How did the weight change affect you in your daily life? What were your thoughts about the weight change?
12. Have you tried to give a different meaning to the weight change in order to deal with it?
13. If you think about it now, was the weight change actually an issue? Was the weight change something bad? If so, why?

C) Questions related to how other people can deal with it in the future.

14. How do you feel about how you dealt with the weight change?
15. What kind of advice would you give to people who go through the same situation as you went through (things that you did or did not do)?

16. Is there anything else that you would like to mention or share, that we haven't discussed?