

A self-determination theory perspective on weight loss maintenance

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Weight loss maintenance is a major challenge for obesity care. The success rate of previously overweight/obese

individuals when trying to maintain weight loss is

low and regaining weight is the most common result (Wing & Phelan, 2005). At the heart of this problem lies an interaction between human biology and the current environment, which, for many individuals, translates into physical activity and eating patterns that favor weight gain and regain (MacLean et al., 2015). This said, individual reasons for weight management attempts vary considerably and there is both theoretical and empirical support for investigating whether motivational processes underlying behavioural regulation help explain part of the success and failure in obesity management (Teixeira, Silva, Mata, Palmeira, & Markland, 2012).

A recent systematic review on theoretical explanations for behaviour change maintenance identified five interconnected themes reflecting theoretical explanations about how individuals maintain initial behaviour changes over time (Kwasnicka, Dombrowski, White, & Sniehotta, 2016). One of these themes focused on maintenance motives, which are hypothesized to facilitate behaviour change maintenance by enabling specific satisfaction-related outcomes derived from engaging in the new behaviour. Among other features, one difference between initiation and maintenance motives could lie on the level of self-determination experienced by individuals, something that often develops after

initiating the new behaviour. From the perspective of self-determination theory (SDT; Deci & Ryan, 2008), this article explores motivation-related processes viewed as necessary for the persistence of weight management-related behaviours over time.

Self-determination, commonly referred to as autonomy, is related to the perceived origin of one's behaviour or its (internal) locus of causality – that is, the extent to which a behaviour is adopted with a sense of choice and self-endorsement. According to SDT (Deci & Ryan, 2008; Ryan & Deci, 2000), having the psychological need for autonomy satisfied, together with the need for competence (i.e., an individuals' need to feel a sense of mastery and capacity to accomplish the behaviour) and relatedness with others (i.e., an individuals' need to feel meaningfully connected to others, valued and understood) energizes autonomous motivation, promoting behavioural persistence and well-being (Deci & Ryan, 2000). In turn, when these three needs are thwarted, people will tend to develop controlled motivations, regulating their behaviour based on external contingencies and internalized self-judgments (Vansteenkiste & Ryan, 2013). Evidence from several domains supports the theoretical premise that different motivational regulatory processes underlying goal pursuit are differentially associated with behavioural outcomes and wellbeing. Importantly, it suggests that maintaining certain behaviours over time (which is crucial for weight management) requires that the individual internalizes and integrates values and skills for change, and experience self-determination (Ng et al., 2012; Teixeira, Carraca, Markland, Silva, & Ryan, 2012).

Recent developments in the theory show that

not only regulatory processes can be different (as a result of need satisfaction vs. frustration), but also that “not all goals are created equal” (Vansteenkiste, Niemiec, & Soenens, 2010). In brief, the outcomes that individuals are pursuing through the new behaviour – i.e., the content of individuals’ goals or aspirations – can have intrinsic or extrinsic qualities, which can also influence behaviour maintenance. Relative to “extrinsic goals” (e.g., wealth, social recognition, physical attractiveness), “intrinsic” goals (e.g., health, personal growth, social connectedness) tend to be regulated by more self-determined forms of behavioural regulation and are thought to result in improved self-regulation and longer-term outcomes (Ingledeu & Markland, 2009; Kasser & Ryan, 1996).

In respect to weight loss maintenance, individuals can start a weight loss attempt, or join a weight loss program, with different prevailing goals in mind. For instance, wanting to improve some aspect of their health (a more intrinsic goal) or improving appearance (a more extrinsic goal). Subsequently, the motivation associated with the course of action, such as the adoption of a specific behaviour that contributes to weight loss (e.g., physical activity), can shift during the process and vary in the level of choicefulness and personal endorsement. For example, from an externally-driven (controlled) form of regulation (e.g. “because my doctor scared me by noting the severe health consequences if I don’t do it”); to a partially internalized regulation (e.g., “I feel that I should do it because I am afraid that others think of me as a lazy person”); to more autonomous forms of regulation (e.g., “I want to be able to experience myself with energy”); all the way to intrinsic motivation (e.g., “I challenge myself and I really enjoy the process”). The notion of ‘prevailing goal’ is important to note here, since people commonly have multiple goals associated with a single behaviour.

According to SDT, the satisfying experience of autonomy, competence, and relatedness while

engaging in that specific behaviour will foster the internalization process by reducing the psychological effort required for long-term behavioural regulation, resulting in psychological wellbeing and long-term weight loss maintenance. In the Figure, we describe critical processes thought to be associated with successful internalization. These include an individual’s exploration of personal and meaningful values; the incorporation of the change in behaviour as part of identity change (“I am a vital and healthy person, and my physical activity and eating patterns reflect that”); the experience of behaviour-related enjoyment, confidence, and ability (“while exercising I feel tension-free, happy, energetic and capable. I feel powerful!”); the adoption of positive and flexible behavioural patterns (“I know that sometimes I cannot go to the gym so during these periods I try to walk more”); and the experience of connection and trust with important others, among others.

In contrast, when the individual experience of autonomy, competence, and relatedness (in relation to weight control behaviours) is actively frustrated by controlling (i.e., pressuring and manipulative) environments, and change remains a function of external or internal pressure, the psychological energy required to self-regulate the behaviours is thought to be higher. Consequently, resource depletion and fatigue, behavioural non-adherence (e.g., quitting the weight loss attempt), and negative psychological consequences are more likely to ensue. In this case, other conditions may apply such as the experience of pressure and obligation; a sense of incongruity (because behaviour change does not reflect the individual’s values); feelings of guilt, inferiority, and self-criticism; the adoption of negative and rigid behavioural patterns; and the experience of social isolation and not being accepted, among others.

A growing body of studies has investigated the relation between SDT-related motivation variables and weight loss maintenance or energy balance-

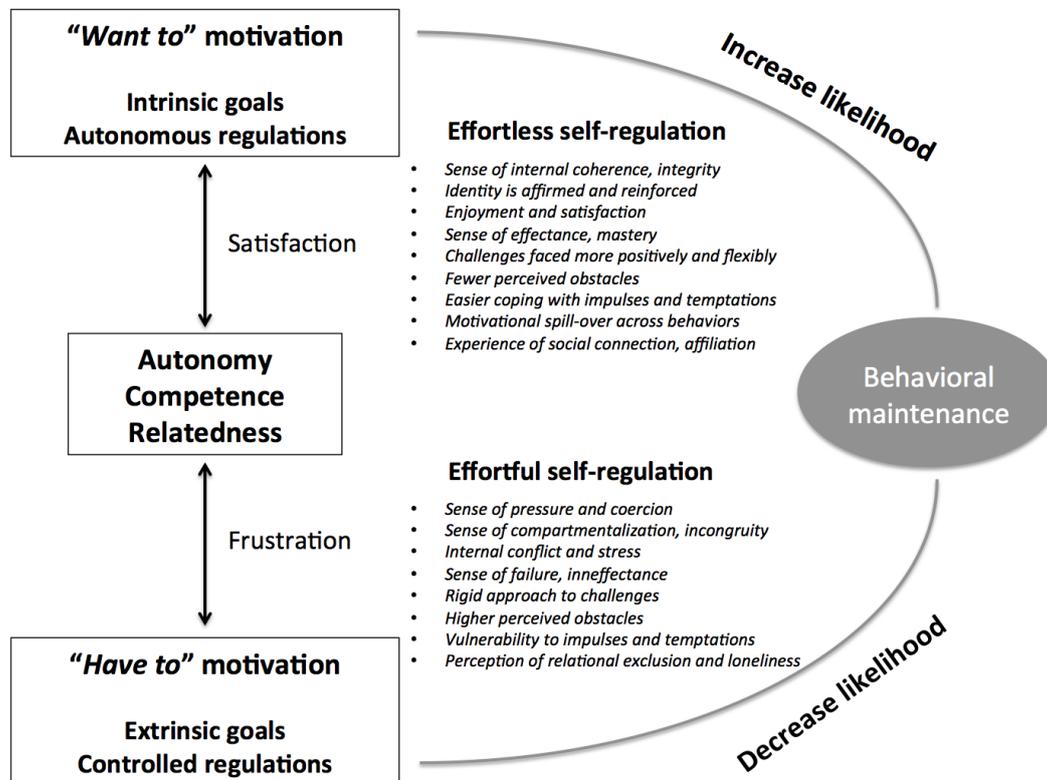


Figure 1. Critical processes and conditions involved in behavioural maintenance

related behaviours (Patrick, Gorin, & Williams, 2010; Teixeira, Silva, Mata, Palmeira, & Markland, 2012). For instance, Gorin et al. showed that autonomy support from one’s partner predicted better weight loss outcomes at 6 and 18 months among overweight and obese individuals participating in a behaviourally based lifestyle intervention, while more directive forms of support hampered progress (Gorin, Powers, Koestner, Wing, & Raynor, 2014). More recently, in the context of a 1-year SDT-based randomized controlled trial with a 2-year follow-up period, a large set of behavioural and psychological variables at the end of intervention as predictors of 3-year weight loss maintenance in overweight and obese women was examined (Santos, Mata, Silva, Sardinha, & Teixeira, 2015). Seeking for a hierarchy of predictors, this study showed that, from the 28 potential predictors included (within general and exercise motivation, psychological wellbeing and

quality of life, eating behaviours and eating habits, and physical activity), exercise autonomous motivation emerged as the best predictor of at least 10% weight loss maintenance at 3 years. Moreover, women with high exercise-related autonomous motivation also showed greater psychological wellbeing, quality of life, and a more adaptive motivational profile (e.g., higher perceived choice and self-efficacy), suggesting a synergy between these features. An earlier longitudinal study from the same trial highlighted the importance of increasing autonomous motivation during treatment (1 year) for long-term physical activity participation (2 years), which mediated long-term (3 years) weight change (Silva et al., 2011). In a different cohort, an epidemiological study recently explored the association of different aspects of physical activity motivation – including intrinsic motivation and goals, namely health, fitness, appearance, weight, relaxation, and stress relief

goals – with short and long-term behaviour among Australian women. It showed that intrinsic motivation was the most predictive variable for sustaining physical activity participation over time among women trying to control their weight (Santos, Ball, Crawford, & Teixeira, 2016).

For its role in energizing the direction and persistence of human behaviour, motivation is clearly among the best candidates for predicting weight loss maintenance. As these and other studies show (see (Ng, et al., 2012) for a meta-analysis of SDT empirical studies and (Teixeira et al., 2015) for a systematic review of intervention studies), not all types of motivation predict long-term and positive behavioural outcomes. Therefore, targeting the motivational quality underlying weight-related behaviours, rather than imposing and prescribing behavioural changes, seems to be more promising for helping individuals achieve weight loss maintenance. This can be promoted by creating more enjoyable contexts, helping individuals set their own valued and aspired goals (instead of imposing or promoting standard and socially-valued goals), exploring how goals can be accomplished in their daily living (i.e., focusing on their own behavioural targets), and identifying factors that encourage more autonomous reasons for changing the behaviours while supporting autonomous action (for example, by giving structured choice). Taking the example mentioned above – engaging in physical activity as a weight control behaviour –, health professionals can emphasize the experience of the behaviour itself, and more intrinsic and positive psychological benefits of regular practice. For example, by reducing the “instrumental” focus (i.e., as a means to achieve weight loss and maintenance) and encouraging individuals to explore a way to exercise that is fun and enjoyable, challenging yet personally valuable, and, and that fits in their lifestyle, therefore increasing the potential for long-term integration. For instance, if an individual likes to dance, the suggestion can rely on trying

various dance classes, instead of suggesting one of the activities on the top of the fitness trends (e.g., high-intensity interval training); these are promoted and valued by many people worldwide but may not be suitable for that particular person. The challenge is thus supporting a shift from “should/must/have to” motivation (i.e., simply comply with demands) to “want to” motivation (i.e., accept the regulation for change as one’s one) for adopting the weight control and other behaviours requiring self-regulation (Milyavskaya, Inzlicht, Hope, & Koestner, 2015). Meanwhile, while research is uncovering the neuro-affective mechanisms by which autonomous motivation influences self-regulation (Legault & Inzlicht, 2013), more SDT-based intervention research is needed to further support (or reject) the benefits of such an approach and, perhaps more importantly, its parameters of effectiveness.

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