



# Self-Regulation Strategies and Regulatory Fit

# 4

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## Introduction

When working on a task such as an assignment for a class, there are at least two internal rewards that might motivate students. First, the topic or theme might fit their *personal preferences*. They may, for example, be fascinated by the subject, value high achievement in the academic domain, or feel obliged to make their utmost effort. In this case, motivation results from individuals' preferences regarding content – their interests, needs, or motives. Psychological research has long focused on this level of analysis of motivation, and there is substantial evidence that needs and motives are powerful predictors of human behavior (Heckhausen & Heckhausen, 2008; Roth, Chap. 3).

A second type of reward, suggested more recently in the scientific literature on motivation, concerns the *type of task* involved in achieving a goal. According to this view, certain types of tasks are themselves more motivating for some than others. An assignment regarding the same content can, for instance, require to read a text and to write an essay either summarizing the key information from the text or outlining the applied implication of the text content. The former focusses on thorough reading and error free rewording of the content, whereas the latter likewise requires thorough reading but also some creativity to connect the readings to an applied context. Likewise, to pass a pending

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exam, some students might opt for a “cramming” method and learn all the material in a couple of days before the exam, whereas others are more comfortable gradually learning the material in a step-by-step manner.

As these examples illustrate, the means or behaviors applied to complete a task or achieve a goal can differ. Research on **self-regulation** suggests that some of these so-called **self-regulation strategies** will be more motivating than others under specific circumstances. We define self-regulation as the volitional (will-based) and cognitive processes individuals apply to reach desired states including goal striving and need fulfillment (Sassenberg & Wolpin, 2008).

This chapter will summarize and provide an introduction to self-regulation. First, we will describe how self-regulation and self-regulation strategies are related to motives and other motivational concepts. Second, self-regulation strategies, their antecedents, and their consequences will be presented – with a particular focus on the motivational effects derived from the *fit* between individuals’ self-regulation strategies and environmental demands. Finally, we will summarize research demonstrating how this regulatory fit can help to solve people’s motivational problems in applied settings, ending the chapter with a discussion of a field study in the context of health behavior (i.e., physical exercise).

#### Definition Box

**Self-regulation:** Volitional (i.e., will-based) and cognitive processes individuals apply to reach their goals and fulfill their needs.

**Self-regulation strategies:** The specific types of behaviors and mental operations applied to achieve a goal or fulfill a need (such as thorough vs. superficial).

### The Motivational Hierarchy: Motives, Goals, and Strategies

One important differentiation in research on the psychology of motivation concerns the difference between needs and motives on the one hand and

goals on the other hand. **Needs and motives** are individual preferences for types of incentives (e.g., social contact in case of the affiliation motive). *Motives* refer more to the (rather cognitive) preferences, while the term needs stresses the biological or otherwise essential basis (Heckhausen & Heckhausen, 2008). **Goals** are defined as desired end states (Austin & Vancouver, 1996). They, thus, specify the preference for one specific event or incentive. Along these lines, going out for drinks or parties to meet people can be a goal, but the reason “behind” this behavior would stem from a motive to affiliate with others. In other words, goals refer to certain, tangible, events, whereas motives describe a person’s general preference.

#### Definition Box

**Goals:** Desired state specifying a concrete event an individual is striving for.

**Motives/Needs:** Preference for types of incentives (e.g., social contact). Motives are used to describe mental states, whereas the term need is rather used to stress the biological or essential nature.

Psychological research distinguishes between several different motives, such as the achievement, the affiliation, and the power motive. All these motives are generally classes of incentives, with the general aim to maximize satisfaction of some kind. Different motives may predominate as a result of individual or situational characteristics, leading to different goals and behaviors. For example, someone with an achievement motive will likely have goals such as obtaining a high grade, winning a game of sports, or excelling in their profession. Someone with an affiliation motive will likely have goals such as working together on assignments, playing team sports, or getting along well with their colleagues. The distinction between goals and motives illustrates that motives are more abstract than goals, with goals being subordinate to motives (see Fig. 4.1).

Achieving certain goals will also serve the motive the goal is derived from. Self-regulation summarizes the means and mental processes



**Fig. 4.1** Motivational hierarchy: from abstract motives to concrete strategies

applied during goal achievement – for instance, the strategies to improve gradually or to put all energy for a short period into a subject (i.e., cramming) are different strategies that could serve the goal to perform well in an exam. Self-regulation strategies are, thus, again more specific than and subordinate to goals. As alluded to earlier, research on motivation has traditionally focused on the two more abstract levels of this hierarchy – needs/motives and goals. In contrast, the strategies people use during goal striving received limited attention (Heckhausen & Heckhausen, 2008), because researchers were lacking an approach to treat the fast amount of different means and behaviors that can be applied to reach a goal in a way that made them accessible to scientific analysis (Brendl & Higgins, 1996).

The breakthrough in this respect was achieved when Tory Higgins (1997, 1998) formulated his idea of *self-regulation strategies*. The theories developed around self-regulation strategies do not only summarize means and behaviors, but they specify the antecedents and consequences of these categories of means and behaviors. These causal chains from preconditions via strategies (or categories of means and behaviors) allow for scientific analysis and for predictions in research on self-regulation.

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## Self-Regulation Strategies

### Regulatory Focus

Regulatory focus theory (Higgins, 1998) distinguishes between two independent motivational systems: the promotion and the prevention system. When the promotion system is predominantly

active – in a so-called promotion focus – individuals are concerned with “ideal” states, reflected in a sense of hope and aspiration. Promotion-focused individuals strive eagerly to achieve their goals. In other words, individuals in a promotion focus are in a “go for it” mode. Their predisposition is to act (ensuring against errors of omission). They try not to miss any opportunity and apply risky strategies, which makes them more likely to show behaviors that do not necessarily contribute to goal achievement (e.g., using the first but not necessarily best opportunity to make steps toward goal achievement). In general, individuals in a promotion focus are concerned with the presence or absence of positive outcomes: they strive for promotion success (gains) and try to avoid promotion failure (non-gains).

In contrast, prevention-focused individuals are more concerned with “ought” states, reflected in a sense of existing duties and obligations. They are highly vigilant during goal striving, try to avoid errors, and apply defensive strategies (e.g., show behaviors that almost definitely contribute to goal achievement). They rather refrain from taking action than risk making a mistake (ensuring against errors of commission) and are “better safe than sorry,” careful in their approach even if this seems difficult or unnecessary. In a prevention focus, individuals are concerned with the presence or absence of negative outcomes: they strive for prevention success (non-loss) and try to avoid prevention failure (loss) (Table 4.1).

A promotion focus is activated, when individuals situationally pursue their ideals and when they see opportunities to gain something, whereas a prevention focus is activated when individuals are guided by obligations and when they are aware of potential losses (Fig. 4.2). Students can, for instance, strive to write an A in an exam. This goal can be pursued in a promotion or in a prevention focus. A promotion focus would be likely when the student sees the opportunity to write an A because she feels particularly competent regarding the content; she might see the exam as a situation in which she can *gain* a good grade. This student would start out optimistically and write down everything that comes to mind. In contrast, a student might be in a prevention focus, because she definitely needs the A to, for example, be eli-

**Table 4.1** Overview of regulatory focus theory

Antecedents	Self-regulation strategy	Consequences
<i>Promotion focus</i>		
Pursuit of ideals Environment stressing gains Bolstering parenting style Independent culture	Strategy: risky Striving: eager (use opportunities) Events: gains vs. non-gains	Cheerfulness in case of success vs. dejection in case of failure Optimism Creative performance Perspective taking and negotiation performance
<i>Prevention focus</i>		
Pursuit of obligations Environment stressing losses Critical and punitive parenting style Interdependent culture	Strategy: defensive Striving: vigilant (avoid errors) Events: non-losses vs. losses	Quiescence in case of success vs. agitation in case of failure Resistance to change Analytic performance Conservative biases

**Fig. 4.2** In which regulatory focus is the glass half empty and which half full?  
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gible to partake in another important course. She would feel that she could *lose* something and will therefore approach the exam in a more thorough processing mode to avoid errors.

**Box 4.1 Zooming In: Regulatory Focus vs. Approach and Avoidance**

For a more thorough understanding, it is important to distinguish between promotion vs. prevention focus and approach vs. avoidance, respectively. Approach and avoidance distinguish whether an individual primarily focuses on approaching something subjectively good or avoiding something bad. A student could, for instance, study with a focus on passing an exam or with a focus on not failing an exam. Approach and avoidance are closely related to the promotion and prevention focus, respectively, but there are important differences. On the one hand, the

eager striving and the focus on gains in a promotion focus imply approaching something good, whereas the vigilance and the focus on losses suggest that avoidance will be dominant (Shah, Brazy, & Higgins, 2004). However, promotion is not only about approaching gains but also about avoiding non-gains (not getting an A), and prevention is about avoiding losses *and* approaching non-losses (getting an A). A sports team can, for instance, eagerly strive (a promotion strategy) not to lose a game (avoiding a negative outcome), for example, because this will warrant them the points they need to qualify for the play-offs. As this example illustrates, regulatory focus and approach/avoidance behaviors are not necessarily compatible such that a promotion focus is always related to approach behavior and prevention is always related to avoidance behavior.

As this example illustrates, the two foci may vary situationally and may be temporarily activated using gain or loss framing. Because many tasks and goals can be framed in either positive (gain) or negative (loss) frames, researchers and practitioners can differentially induce the foci with relative ease. For example, a health message framing regular exercise as a good way to promote your health is likely to activate a promotion focus. In contrast, a health message framing regular exercise as a good way to prevent disease is likely to activate a prevention focus. Similarly, shops can charge a fee (loss) or give a discount (gain) when paying with credit card or cash, respectively (Idson, Liberman, & Higgins, 2000). Aside from reading messages framed in gain/non-gain or loss/non-loss terms, experimental studies have also successfully used tasks such as reflecting on past experiences, describing one’s own aspirations (promotion) or obligations (prevention) and essay writing to induce the different foci.

The two foci may vary situationally, but also chronically. On a chronic level, a bolstering parenting style reassuring children that they can achieve a lot is, for example, correlated with children’s promotion focus. In contrast, a critical and punitive parenting style focusing on obligations, safety, and rules predicts children’s prevention focus (Keller, 2007). Culture has also been found to be an important factor in shaping people’s regulatory focus (e.g., Lee, Aaker, & Gardner, 2000; Uskul, Sherman, & Fitzgibbon, 2009). For example, a promotion focus is more prevalent in Western societies, which tend to emphasize individual uniqueness and aspirations to “be the best” and stand out from the crowd. In contrast, a prevention focus is more prevalent among East Asian societies (e.g., Chinese, Japanese), which tend to emphasize interdependence, group harmony, and a sense of obligation (Markus & Kitayama, 1991).

Although both foci may vary as a function of situational or chronic pressures, they are not opposites on one dimension. Theoretically, both foci constitute independent dimensions implying that how frequently an individual pursues goals in a promotion focus does not predict how

**Table 4.2** How to measure self-regulatory focus

Measuring (chronic) self-regulatory focus		
Example items	# items	Reference
<i>Promotion</i> How often have you accomplished things that got you “psyched” to work even harder? Do you often do well at different things that you try?	6	Higgins et al. (2001)
<i>Prevention</i> How often did you obey rules and regulations that were established by your parents? Not being careful enough has gotten me into trouble at times.	5	
<i>Promotion</i> Nothing ventured, nothing gained. No pain, no gain.	8	Faur, Martin, and Clavel (2017)
<i>Prevention</i> Better an egg today than a hen tomorrow. Better safe than sorry.	10	
<i>Promotion</i> I am striving for success in life. I am guided by my ideals.	12	Sassenberg, Ellemers, and Scheepers (2012)
<i>Prevention</i> Success sets me at ease. I take care to carry out my duties.	8	

frequently the same person pursues goals in a prevention focus (Higgins, 1997). In most measures of promotion and prevention focus (see Table 4.2 for an overview), the two scales are if anything slightly positively correlated (Higgins et al., 2001; Sassenberg et al., 2012).

**The Effect of Promotion Versus Prevention Focus**

Research has shown a broad range of consequences of both foci in terms of people’s motivation to complete a task and the emotions they experience as a result of failing or succeeding in achieving their goals. The effects described in what follows stem from research that either

compared an experimentally induced promotion to an experimentally induced prevention focus or correlated assessed chronic promotion and prevention focus with the respective outcome measures or both.

First of all, individuals show different emotions in response to success and failure depending on their regulatory focus. The scientific analysis of emotions typically identifies two dimensions of core affect (activation and pleasantness; Russell & Barrett, 1999) along which specific emotions may vary. Pleasantness refers to the subjective experience of “doing well.” It summarizes the experience of something being good or bad, positive or negative, or pleasant and unpleasant. Activation refers to the subjective sense of mobilization or energy. It summarizes the experience of one’s physiological state and may range from anywhere between sleepiness, lethargy, relaxation, attentiveness, activation, hyperactivation, and frenetic excitement.

In a promotion focus, self-regulation success (gains) leads to positive activating emotions (i.e., cheerful emotions such as happiness or pride), whereas self-regulation failure (non-gains) leads to negative emotions with low activation (i.e., dejected emotions such as sadness or shame). In a prevention focus, self-regulation success (non-losses) leads to positive emotions with low activation (i.e., quiescence as in a state of relief or relaxation), whereas self-regulation failure (losses) leads to negative activating emotions (i.e., agitation as in case of feeling upset or worried; Higgins, Shah, & Friedman, 1997).

This implies that individuals in a promotion focus are more activated by success (or gains) and other positive stimuli such as positive role models. Hence, they will celebrate their successes more and be more motivated to follow the example of others who succeeded. However, individuals in a prevention focus are easier activated by failure (or losses) and other negative stimuli such as negative role models. In other words, these people will be motivated when they anticipate or face problems or when they see others who failed or were harmed (Idson et al., 2000;

Lockwood, Jordan, & Kunda, 2002; Sassenberg & Hansen, 2007).

Another affective consequence of regulatory focus concerns the sense of optimism that people have during goal striving. Because people in a promotion focus have an easier time to see options to act, they are often more optimistic about their chances of success than people in a prevention focus. For the same reason, promotion-focused individuals tend to be more open to change, whereas prevention-focused individuals have a preference for stability (Grant & Higgins, 2003; Liberman, Idson, Camacho, & Higgins, 1999).

Beside these affective consequences, there are also a number of cognitive consequences of the two foci. A promotion focus leads to better creative performance and more global or abstract thinking, whereas a prevention focus leads to better analytic performance and a more detailed or local processing style of information (Friedman & Förster, 2005; Seibt & Förster, 2004). Therefore, in the student assignment example at the start of this chapter, a student in a promotion focus is likely to perform better in case the assignment requires creativity, whereas a student in the prevention focus is more likely to perform better when the assignment requires a thorough analytic, step-by-step approach.

Implications of regulatory focus have been found in many other domains. Promotion (compared to prevention)-focused individuals are better able to imagine others’ perspective and recognizing others’ emotions (Sassenrath, Sassenberg, Ray, Scheiter, & Jarodzka, 2014). They are also more successful in negotiations (Galinsky, Leonardelli, Okhuysen, & Mussweiler, 2005). The defensive strategy of prevention-focused individuals on the one hand facilitates their analytic performance but on the other hand makes them more prone to all sorts of conservative biases; they stick more to their own decisions and show a stronger confirmation bias (i.e., see information supporting their own opinion as more relevant than information contradicting it; Molden & Hui, 2011; Sassenberg, Landkammer, & Jacoby, 2014).

**Box 4.2 Questions for Elaboration**

Individuals differ chronically in their regulatory focus. Think about jobs for which a promotion focus and a prevention focus would be particularly profitable. Why?

Imagine you would like to move to a new flat with the help of some friends. Which tasks would you allocate to promotion-focused individuals and which to prevention-focused individuals and why?

Regulatory focus is a well-studied self-regulation strategy which asserts an influence on emotion, cognition, and behavior in multiple ways. There are a number of other self-regulation strategies that are not yet that well understood, because research has dedicated much less attention to them. Box 4.3 presents one of these examples.

**Box 4.3 Zooming In: Regulatory Mode**

To reach a goal, two types of actions are essential: making steps toward the goal and evaluating the current state and potential further steps. Regulatory mode theory (Kruglanski et al., 2000) distinguishes the motivational states in which these actions are dominant in locomotion and assessment mode. In a locomotion mode, individuals feel the urgent need to act and get on. They are impatient with barriers, delays, etc. and embrace each opportunity for change and breaking the status quo. Locomotors are, for instance, open for organizational chance (Kruglanski, Pierro, Higgins, & Capozza, 2007). Locomotors are doers.

In an assessment mode, in contrast, individuals are more reflective. They have a desire for perfectionism, fear errors, and are worried about missing out opportunities. To this end, individuals make comparisons and mentally simulate the outcomes of potential actions. As an outcome, assessors experience more regret in case of

negative outcomes (e.g., a bad grade). Assessors are thinkers. More generally, assessment mode is positively associated with negative affect and depressive mood and negatively associated with subjective well-being, whereas locomotion is negatively correlated with depressive mood and positively associated with positive mood and subjective well-being (Higgins, Kruglanski, & Pierro, 2003).

**Increasing Motivation Through Regulatory Fit**

**Regulatory fit** is the match between a person's self-regulation strategy – being it regulatory focus, regulatory mode, approach/avoidance orientation, or something else – and the strategy they choose or have to apply to achieve a certain goal. Regulatory fit is high, if the preference and the affordances regarding self-regulation are matched and low if they are not. If, for example, a person in a prevention focus can thoroughly weigh the alternatives, this will be experienced as regulatory fit. A pressing deadline may prevent prevention-focused individuals from using such an analytic, step-by-step approach but may suit promotion-focused individuals better. If they can intuitively chose an alternative, this should be experienced as regulatory fit.

**Definition Box**

**Regulatory fit:** The match between an individual's momentary preferred self-regulatory preferences and the self-regulation strategy applied in a certain situation

According to the theory of regulatory fit (Higgins, 2000), stronger regulatory fit leads to a positive experience (i.e., it enhances the perception of the *value* of what people are doing). As a result, their behavior is experienced as more

pleasurable, and individuals will thus engage more in it (i.e., stronger persistence and more effort). Individuals with a strong promotion focus will, for instance, feel more attracted to choices they made after considering positive outcomes of several alternatives, whereas individuals in a prevention focus feel more attracted by choices they made after considering potential negative outcomes (Idson, Liberman, & Higgins, 2004). This is because individuals in a promotion focus care more about gains (and non-gains), whereas individuals in a prevention focus care more about losses (and non-losses).

Moreover, individuals, objects, and social targets related to behavior high in regulatory fit will be evaluated more positively. For example, individuals with a prevention focus are attracted more by low power (e.g., jobs not involving control over other people's situations) than individual in a promotion focus, because stereotypically low-power groups demand their members to defend their safety and security (against those high in power). However, individuals in a promotion focus have a stronger preference for high power (e.g., jobs involving a lot of control over other people's situation) compared to those in a prevention focus, because groups high in power according to common stereotypes provide the room to apply promotion strategies (e.g., be creative and try out new things, think globally, etc.; Sassenberg, Jonas, Shah, & Brazy, 2007).

The regulatory fit hypothesis, thus, describes a source of valence (i.e., positive evaluation) and motivation, which does not result from the fact that the behavior fits one's needs or motives. In contrast, it suggests that motivation can also result from a fit between strategy preferences and behavioral opportunities. A recent meta-analysis (Motyka et al., 2014) has shown that regulatory fit effects regarding evaluation, behavioral intention, and behavior are medium in size ( $r$  about 0.3). They thus seem to contribute substantially to individuals' motivation and choice of action. In the following paragraph, we will illustrate the applied relevance and external validity of regulatory fit effects.

## Regulatory Fit in the Wild

Evidence for regulatory fit effects has been found in a number of applied fields, most notably in organizational settings, consumer behavior, health behavior, and sports performance. In this section, we will briefly summarize this work, before elaborating on a specific study in the context of health behavior.

In consumer research, a large body of studies have tested regulatory fit effects. One main finding of this literature is that regulatory fit between consumers' regulatory focus and brand characteristics leads to more positive evaluation of brands (for an overview, see Motyka et al., 2014). Florack and Scarabis (2006; Study 1), for example, studied preferences for a promotion or prevention advertisement message for sun lotions. Because sun lotion is generally bought for the purpose of preventing skin damage or disease, prevention-focused messages (e.g., use for protection) were more persuasive than promotion-focused messages (e.g., use for a healthy tan), and this was especially the case for individuals in a prevention focus. Similarly, participants in a study by Murali and Pons (2009) were willing to pay more for consumer products (e.g., computers, printers) when a fit existed between regulatory focus (promotion vs. prevention) and the decision strategy.

### Box 4.4 Question for Elaboration

Try to create messages to advertise a dating website that are tailored to create regulatory fit in individuals with a strong promotion and a strong prevention focus, respectively.

Another field that has repeatedly demonstrated regulatory fit effects is leadership research (for an overview, see Sassenberg & Hamstra, 2017). Regulatory fit from regulatory focus and regulatory mode lead to lower turnover intentions, more positive leader evaluations regarding effectiveness and satisfaction, and more organizational citizenship behavior (Benjamin & Flynn,

2006; Sassenberg & Hamstra, 2017). In a study by Hamstra, Sassenberg, Van Yperen, and Wisse (2014), for example, a regulatory fit between the regulatory focus of leaders and their group members in a real-estate business simulation task made group members feel more valued by their leader than when no regulatory fit existed.

Regulatory fit also asserts a positive impact in other domains of organizational psychology. Applicants consider, for example, jobs fitting their regulatory focus more attractive (Sassenberg & Scholl, 2013). Promotion-focused individuals value jobs more when they can take the lead and work autonomously, for example. In contrast, prevention-focused individuals valued job security more, feeling more attracted to jobs where they were able to continue developing, for example, through continued job training or gaining useful work experience. In addition, recruiters are more likely to select applications with a motivation letter fitting their own self-regulation strategy (Hamstra, Van Yperen, Wisse, & Sassenberg, 2013).

Finally, there is evidence that regulatory fit effects can facilitate sports performance. If a particular activity (e.g., defense) is perceived in line with an athlete's regulatory focus (prevention focus), this leads to higher performance. This has been demonstrated for penalty kicking in soccer (Plessner, Unkelbach, Memmert, Baltes, & Kolb, 2009) and putting in golf (Kutzner, Förderer, & Plessner, 2013). These findings should, however, be considered as preliminary, because they rely on studies with small sample sizes.

All in all, this brief overview indicates that regulatory fit effects have a broad range of applications. In most empirical studies, fit from promotion *and* fit from prevention (or fit from *both* regulatory modes) occur. However, there are also applications in the organizational context (Petrou, Demerouti, & Häfner, 2015) as well as in close relationships (Righetti, Finkenauer, & Rusbult, 2011) that only found effects of regulatory fit from either promotion *or* prevention focus. At this point, it is not clear what caused these asymmetries in the findings. For applications of regulatory fit in field interventions, this implies that it needs to be thoroughly checked whether an intervention

works equally well for participants in a prevention focus *and* those in a promotion focus.

The above summary has left out the domain in which the regulatory fit hypothesis has been applied most frequently and very successfully, namely, health communication.

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## Self-Regulation and Regulatory Fit in Health Communication

Many threats to public health arise from people's behaviors and lifestyles. For example, of a total of 56.9 million deaths in 2016, 15.2 million deaths (27%) were caused by ischemic heart disease (blockage of arteries to the heart) and strokes – caused by factors such as smoking, drinking alcohol, fatty foods, and stress, in combination with a sedentary lifestyle (WHO, 2018). Therefore, public health professionals try to find effective communication strategies to motivate individuals to change their health relevant behavior (Ludolph & Schulz, 2015). Over the last decade or so, researchers have frequently made use of the idea of regulatory fit. To be more precise, messages promoting a certain health behavior are framed in terms of gains (such as health promotion) or non-losses (such as preventing illnesses) and delivered to recipients with a chronic or situationally induced promotion or prevention focus (see Table 4.3 examples of tailored messages). As an outcome of a substantial narrative review, Ludolph and Schulz (2015, p. 149) conclude “regulatory fit is a promising approach to enhance the effectiveness of health messages.” Therefore, the remainder of this chapter summarizes a field study demonstrating the successful application of regulatory fit in health communication regarding a health behavior – here physical activity.

Latimer, Rivers et al. (2008) aimed to test the impact of regulatory fit in health communication. They experimentally varied health messages related to physical activity in order to increase physical activity among inactive individuals (i.e., “couch potatoes”). While the content of the messages was constant, their framing varied. They either received a gain-framed message emphasizing the *benefits* of physical activity or a

**Table 4.3** Samples of tailored messages regarding fruit (F) and vegetable (V) intake

Promotion-focused messages	Prevention-focused messages
Optimize your health: Eat 5–9 FV every day	Protect your health: Eat 5–9 FV every day
Take the 5–9 challenge: It's a goal you can meet!	Eat 4–9 FV a day – it's what everyone ought to do!
FV contain fiber, which promotes optimal colon functioning	FV contain fiber, which helps prevent colon cancer
When you're in a hurry, have a quick and healthy breakfast	When you're in a hurry, don't skip a healthy breakfast
Get revved up in the morning with FV	Relax in the morning with FV
FV provide nutrients that promote health	FV provide nutrients that help guard against disease
Achieve the 5–9 goal to look and feel your best	Meet the 5–9 guideline to protect your health
Promote your health: Eat more FV today!	Prevent disease: Eat more FV today!

Source: Latimer, Williams-Piehot, et al. (2008)

loss-framed message emphasizing the potential *costs* associated with not being physically active (e.g., “Scientists say to accumulate physical activity throughout the day to stay healthy or improve your health” vs. “Scientists say failing to accumulate enough physical activity throughout the day can lead to poor health”).

Based on the theory of regulatory fit, the researchers predicted that gain-framed messages would “fit” better with a promotion focus, whereas loss-framed messages would “fit” better with a prevention focus. As a result, after reading gain-framed messages, promotion-focused individuals should experience more value from regular exercise (i.e., have more positive thoughts and feelings about physical exercise) and engage in greater physical activity than prevention-focused individuals. In contrast, after reading loss-framed messages, prevention-focused individuals should experience more value from regular exercise and engage in greater physical activity than promotion-focused individuals.

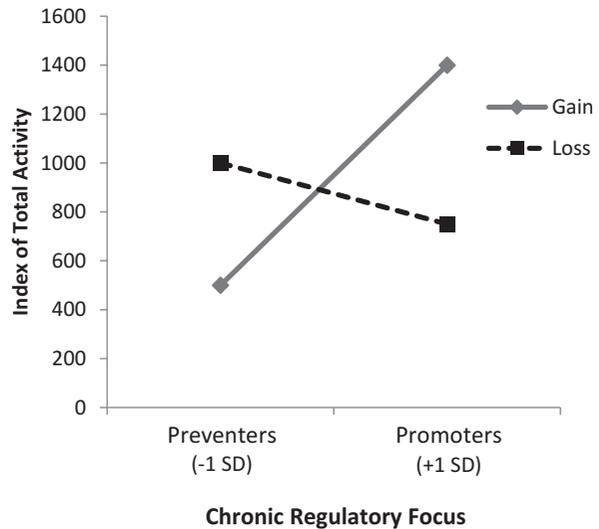
To test these hypotheses, the researchers recruited a total of 206 participants (aged 18–69 years) with a sedentary lifestyle through the National Cancer Institute's (NCI) database of the American public (i.e., cancer survivors and their family and friends). Through the NCI, people can ask questions and gain information about cancer by calling a toll-free number. Consenting callers first completed a screening interview to gauge if they were eligible to participate in the study. For example, callers with a physical impairment or doctor's recommendation advising against unsupervised physical activity were not eligible to participate. Eligible participants

then completed a baseline interview assessing their level of physical activity, after which they were randomly exposed to either a promotion- or prevention-focused message encouraging regular physical exercise.

Participants' chronic regulatory focus and all dependent measures (i.e., perceived value of physical exercise and level of physical activity) were assessed during a second interview, 2 weeks later. Ideally, the assessment of the regulatory focus should have taken place before the intervention. However, due to time restrictions during the first telephone session, this was not possible. Of the original 206 participant, only 118 completed the second interview (57%). Those who dropped out were more physically active before receiving the intervention and more likely to be of non-white ethnicity. Both – the order of the measures and biased dropout – are limitations that can often be found in field studies: organizational restrictions often prevent the application of an optimal design and control over the study, and its participants are limited.

Despite these methodological limitations, the findings of this field study provided support for the regulatory fit hypothesis. As we can see in Fig. 4.3, individuals with a strong prevention focus who received a loss-framed message reported that they had engaged more in physical activity over the last 2 weeks (i.e., a product of time spend on exercising and intensity of the exercise). The same was true for individuals with a strong promotion focus who received a gain-framed message. Importantly, these results controlled for physical activity prior to receiving the message. This study supports the general tenet of

**Fig. 4.3** The effect of loss- versus gain-framed messages on people's total activity



regulatory focus theory and illustrates that a seemingly trivial difference in the way a message is framed can have significant ramifications on a behavioral level.

Recall, however, that the researchers not only predicted an effect on participants' actual physical activity. Indeed, regulatory fit theory suggests this effect occurs because the existence of fit leads people to attach more value to those behaviors that facilitate goal attainment. The findings from the current study also supported this claim. Thus, participants who experience a fit between the message and their regulatory focus reported more positive feelings about the message, as well as more positive prospective and retrospective feelings associated with engaging in physical activity. Finally, these feelings associated with physical activity mediated the impact of regulatory focus and message type on physical activity.

In sum, the findings of this study underline the potential of regulatory fit for health communication, despite the limitations regarding the design and the attrition mentioned above. The fact that similar results have been reported in a number of studies (for a summary, see Ludolph & Schulz, 2015) further justifies this conclusion. Positive effects of messages high in regulatory fit have also been found for healthy snacking (Hong & Lee, 2007), attitudes toward organic food (Hsu & Chen, 2014), and many other

health-related attitudes and choices. Thus, the regulatory fit hypothesis has proved to be a powerful framework for health-related intervention as well as interventions in other domains.

### Summary

- People are not only motivated by their preferences regarding content – their goals, motives, and needs. They also engage in behaviors that fit their preferences regarding processes – their preferred self-regulatory strategies.
- In a promotion focus, individuals focus on gains and non-gains and pursuit goals applying eager, risky strategies.
- In a prevention focus, individuals focus on non-losses and losses and pursuit goals applying defensive, conservative strategies.
- When tasks or contexts allow individuals to behave in line with their self-regulation strategies, they experience regulatory fit and thus become more engaged in the task.
- These regulatory fit effects have the potential to increase motivation in many domains such as health, sports, consumer behavior, or work.

## Recommended Reading

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## Guiding Answers to Questions in the Chapter

- Q (with Fig. 4.2): In which regulatory focus is the glass half empty and in which half full?  
A: In a promotion focus, the glass would be perceived as half full due to the focus on the gains (here the water that is still in the glass). In contrast, in a prevention focus, the glass would be classified as half empty because of the focus on the losses (here the water that is missing in the glass).
- Q (with Box 4.2): Individuals differ chronically in their regulatory focus. Think about jobs for which a promotion focus and a prevention focus would be particularly profitable. Why?

A: Prevention focus fits jobs with a focus on security, where the identification of problems or failures is leading, or jobs focused on enforcement of rules and obligations. Promotion focus fits better with jobs focused on growth, where the identification of changes and opportunities for development is leading, or jobs focused on creative output.

- Q (with Box 4.2): Imagine you would like to move to a new flat with the help of some friends. Which tasks would you allocate to promotion-focused individuals and which to prevention-focused individuals and why?

A: Tasks that require attention to detail and the prevention of something going wrong (e.g., the handling of precious or vulnerable items) would better fit a prevention focus. Tasks that require an optimistic, positive, and creative approach (e.g., fitting furniture in the truck, decorating the house) would better fit a promotion focus.

- Q (with Box 4.4): Try to create messages to advertise a dating website that are tailored to create regulatory fit in individuals with a strong promotion and a strong prevention focus, respectively.

A: To create messages that fit the different foci, try to identify what people can gain or lose by becoming or not becoming a member of a dating site (e.g., to help people find a perfect match vs. to help people prevent being alone).

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