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# Boosting consumers' self-efficacy by repositioning the self

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## Abstract

**Purpose** – This article aims to lend insight into the consumption situation wherein consumers are unmotivated to try new products or behaviors that they perceive as too difficult to adopt as a result of low self-efficacy.

**Design/methodology/approach** – Two experiments were introduced to test hypotheses. In Studies 1 and 2, we demonstrated that enhancing specific self-efficacy (SSE) by repositioning the self, through marketing messages, increased participants' behavioral intentions toward difficult to adopt (DTA) products.

**Findings** – In this research, an important issue is elucidated in consumer behavior: a phenomenon wherein consumers lack the motivation, as a result of low self-efficacy (i.e. assessing the disparity between their current situation and some desired goals as too wide to bridge over), to try a product that would benefit them. Thus, the marketer's role in this case is to convince the consumers that they are able to achieve these goals.

**Research limitations/implications** – This study focuses on health and fitness products and on the effectiveness of messages targeted at raising SSE among undergraduate students through verbal persuasion. For better generalizability, it is recommended that future research focus on other product categories (e.g. do-it-yourself products, technological products) aimed at other segments (e.g. elderly consumers) and use other means of boosting consumers' self-efficacy.

**Practical implications** – The practical importance of the findings is especially relevant in DTA situations in which marketers aim to motivate consumers to engage in effortful consumption tasks.

**Originality/value** – The uniqueness of our approach is, in addition to introducing the theoretical concepts, to demonstrate that marketers can boost individuals' self-efficacy by means of marketing messages that emphasize their ability to face challenges and, consequently, increase their preferences, behavioral intentions and financial commitments toward a DTA product.

**Keywords** Specific self-efficacy, General self-efficacy, External efficacy, Positive framing, Negative framing, Threat arousal, Fear appeals

**Paper type** Research paper



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## Introduction

Recently, an Internet provider launched a campaign targeted at the elderly population. The firm's Vice President of marketing explained:

We conducted research among elderly consumers and found out that they have a real need to use the Internet as a way to strengthen social interactions with their children and grandchildren. However, we also found out that there are barriers to [their] using it [...] mostly because of a technological fear of causing damage as a result of [computer] malfunctioning.

This consumption situation is an example of consumers' feeling overwhelmed as a barrier to adopting new products that they perceive as too difficult to use. This is common to many consumption categories, such as do-it-yourself (DIY) products, health programs, fitness clubs or e-learning programs for those who have little faith in their self-discipline and ability. The commonality in these examples is that consumers are not sufficiently motivated initially to try the product because they do not expect to be able to use it successfully.

Self-efficacy is an individual's belief in his or her capacity to mobilize the internal resources needed to execute the performances that are required to accomplish a task successfully (Bandura, 1977, 1997). The construct refers to individuals' beliefs about the extent to which they have the internal resources, such as ability, talent, knowledge, skill, resourcefulness, endurance and willpower, needed to perform a task successfully.

Marketing research on self-efficacy has been based on the general hypothesis that by increasing consumers' self-efficacy, marketers may be able to motivate them to overcome their resistance and engage in effortful consumption tasks. Research has shown that one's self-efficacy beliefs can play a major role in how one approaches health and other consumer issues (Luszczynska and Schwarzer, 2005; Mukhopadhyay and Johar, 2005). However, marketing researchers have not embraced the articulations of the efficacy-beliefs construct that distinguish internal and external efficacy beliefs. Beyond self-efficacy, consumers' *external efficacy* could be influenced by the properties of a product or service that the consumer is mulling (Eden, 2001).

According to the *Internal-External Efficacy Model* (Eden, 2001), external efficacy complements self-efficacy's internal focus. Self-efficacy concerns beliefs about performance-relevant resources that reside *within* the individual. In contrast, the *locus* of the resources that influence external efficacy beliefs is in the environment. For consumers, external efficacy concerns their beliefs about the properties of a product or service that they are mulling. Marketing researchers intending to enhance self-efficacy often inadvertently actually have manipulated external efficacy instead. For example, Keller (2006) attempted to manipulate self-efficacy using three external efficacy items describing a diet program as simple and easy to follow. Similarly, Tanner *et al.* (1989) intended to raise self-efficacy by using brochures to affect intentions to use condoms by describing the recommended behavior as more accessible and convenient. These researchers changed participants' beliefs about the products, not their beliefs about their own abilities. Thus, marketing research has not focused on raising the participants' self-efficacy but rather on portraying the recommended product as easier to use and more accessible and convenient while intending to raise self-efficacy they actually raised external efficacy (Fruin *et al.*, 1991; Rippetoe and Rogers, 1987; Stanley and Maddux, 1986; Wurtele, 1988). According to the internal/external distinction

(Eden, 2001), such treatments actually enhance external efficacy instead of self-efficacy because nothing is said in them to alter individuals' beliefs about their ability to perform.

Therefore, the first purpose of the present research was to provide experimental evidence that raising consumers' self-efficacy – as distinct from their external efficacy – increases their likelihood of responding positively to marketing stimuli. The novelty of our approach is to demonstrate that marketers can boost individuals' self-efficacy by means of marketing messages that emphasize consumers' ability to face challenges and overcome their fears and, consequently, increase their behavioral intentions toward a *difficult to adopt* (DTA) product. Moreover, marketers can achieve this without influencing individuals' external efficacy.

An additional aim of the present research was to demonstrate that raising consumers' self-efficacy enables them to cope better with negatively framed persuasive messages based on threat and fear arousal, and prevent a process of denial that may occur if the threat is perceived as too high to overcome.

Persuasive messages can be operationalized either by positive framing: focusing on desirable consequences that occur by using the product or adopting the recommended behavior (Levin and Gaeth, 1988) or by negative framing: focusing on undesirable consequences that occur by not using the product or not adopting the recommended behavior. Therefore, the negatively framed message is based on threat and fear arousal. Indeed, Witte *et al.* (2001) defined fear appeals as a persuasive message that arouses fear by listing the negative consequences that will occur if a consumer does not take a certain action. This definition corresponds to the definition of a negatively framed message. A major interest in persuasive messages concerns the use of threat and fear arousal (negative framing) versus the nonuse of threat (positive framing) (Maheswaran and Meyers-Levy, 1990). Studies examining the effectiveness of negative framing and threat arousal have shown contradictory results (Maheswaran and Meyers-Levy, 1990; Orth *et al.*, 2007). *General self-efficacy* (GSE) may explain the contradictory results negative framing has on persuasion:

The literature distinguishes between specific self-efficacy (SSE) and GSE. Although SSE is a state-like variable that changes from situation to situation, GSE refers to a relatively stable trait-like competence belief (Judge *et al.*, 1998; Luszczynska *et al.*, 2005; Sherer and Adams, 1983; Sherer *et al.*, 1982). Consumers with low GSE perceive tasks, in general, as more difficult. Therefore, a threatening message may overwhelm them. However, high GSE individuals tend to perceive tasks as relatively easy, or at least doable. Therefore, a threatening message could be an effective tool to rouse high GSE individuals from their indifference. Therefore, the second purpose of the present research was to provide experimental evidence that GSE moderates the effectiveness of message framing. However, in various marketing situations, persuasive messages are presented to target audiences via mass media. Therefore, all segments of the population receive the same message. Hence, our third goal was to test adding an SSE-boosting treatment to the threatening message to moderate the detrimental effect this message has on low GSE individuals. If successful, this would enable the threatening message to be effective among both high GSE individuals and low GSE individuals.

### **Theoretical overview**

In his social cognitive theory, Bandura (1986, p. 391) defined self-efficacy as “people’s judgments of their capabilities to organize and execute courses of action required to

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attain designated types of performances” (see also Bandura, 1977, 1997). Meta-analytic research syntheses have established relationships between self-efficacy and variables that are important for work organizations (Moritz *et al.*, 1988; Sadri and Robertson, 1993; Stajkovic and Luthans, 1998), for academic settings (Multon *et al.*, 1991) and for health-related outcomes (Holden, 1991). The cumulative results suggest that raising self-efficacy can produce outcomes that have value for participants. Self-efficacy is widely acknowledged as crucial to understanding work motivation (Latham, 2012). Self-efficacy has attracted the attention of marketing researchers recently with the aim of testing whether enhancing consumers’ self-efficacy increases their tendency to purchase products (Luszczynska and Schwarzer, 2005; Mukhopadhyay and Johar, 2005). However, this research has neither distinguished between internal or self-efficacy, on the one hand, and external efficacy, on the other hand, nor has it distinguished between GSE and SSE, on the other hand. This has resulted in confusion manifest in experimental marketing treatments that purported to augment one type of consumer efficacy but actually targeted a different type of efficacy. After clarifying the conceptual distinctions among these different types of efficacy beliefs, we show experimentally how the different efficacy constructs affect consumer behavior differently and how they interact with threatening messages in affecting consumer behavior.

#### *Internal versus external efficacy*

Self-efficacy, defined as individuals’ beliefs about the extent to which they have the *internal* resources, such as ability, talent, skill, resourcefulness, endurance and willpower needed to perform successfully, is a deeply entrenched construct. Bandura’s self-efficacy construct has a decidedly internal focus. For him, “Perceived self-efficacy refers to *belief in one’s capabilities* to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3, italics added). Furthermore, “The item content of self-efficacy scales *must represent beliefs about personal abilities* to produce specific levels of performance and *must not include other characteristics*” (Bandura, 1997, p. 45, italics added). Because of Bandura’s internal focus, we refer to self-efficacy as *internal efficacy* to distinguish it from *external efficacy*.

External efficacy (Eden, 2001) refers to individuals’ beliefs about the utility of the available outside resources that are important for achieving success. They may believe these resources will aid or impair performance. External efficacy is different from internal efficacy, in that it does not refer to beliefs about self; the objects of external efficacy are outside of the individual. The outside resources may include externalities such as tools, equipment and other means; guidance, support or supervisory leadership; an effective organizational structure and administration; or coworkers or teammates. An individual may believe any and all of these are positive and facilitative of success or negative and detrimental to success. Beliefs about the efficacy of external sources complement beliefs about internal resources, including assessment of aspects of the task itself that may facilitate and ease performance.

The variant of external efficacy that has been studied most is *means efficacy*. It refers to the individual’s belief in the quality of the tools – or means – that are available for use in achieving successful performance (Eden, 2001; Eden *et al.*, 2010). It is hypothesized that when it is high, means efficacy – like self-efficacy – raises performance expectations and motivates intensification of effort, culminating in enhanced performance. When means efficacy is low, motivation, effort and performance are also low. Available

evidence suggests that self-efficacy and means efficacy are distinct constructs that have distinct effects (Agars, 2010; Jones *et al.*, 2010) and that changing one does not change the other (Chen *et al.*, 2009; Eden *et al.*, 2010).

#### *General self-efficacy versus specific self-efficacy*

Bandura's self-efficacy refers to individuals' beliefs about their prospects for success at *specific* tasks in *specific* situations, that is, SSE, whereas GSE refers to a relatively stable, trait-like, generalized competence belief. Every individual has a myriad of levels of SSE, each for the performance a different specific task and also some level of GSE. Many psychologists have defined and operationalized self-efficacy as a generalized trait. For example, Sherer *et al.* (1982) reasoned that expectations formed in one situation generalize and influence mastery expectations in new situations. They developed and validated the GSE Scale (Sherer and Adams, 1983, p. 664) and cited evidence that "the experiences of personal mastery that contribute to efficacy expectancies generalize to actions other than the target behavior". GSE taps a broad and stable overall sense of personal competence to deal effectively with a variety of challenging situations, human behaviors and coping outcomes, whereas SSE concerns a varied profile of beliefs about a broad spectrum of individual skills and abilities (Luszczynska *et al.*, 2005). Similarly, Judge *et al.* (1998, p. 170) defined GSE as "individuals' perception of their ability to perform across a variety of different situations". Thus, GSE is relatively stable across varied tasks and situations, whereas SSE varies across tasks and situations. More recently, Chen *et al.* (2001) developed and validated the New General Self-Efficacy (NGSE) Scale for use in organizational research. GSE differs from – but is correlated with – self-esteem, which is "a trait referring to individuals' degree of liking or disliking for themselves" (Brockner, 1988, p. 11; see also Chen *et al.*, 2004).

Furthermore, SSE has been shown to be a manipulable, state-like independent variable that can be targeted by experimental treatments to produce performance improvements, whereas trait-like GSE has been shown to moderate these effects; the treatments influence individuals with low GSE more than those with high GSE (Eden and Aviram, 1993; Eden and Kinnar, 1991; Eden and Zuk, 1995). Brockner called this "behavioral plasticity". Thus, GSE and SSE are different constructs. Both are valid, but for different purposes. SSE is a malleable independent variable, whereas GSE is a stable, trait-like variable. In the experiments reported below, we examined both types of efficacy beliefs, each in its theoretically proper role.

#### *Efficacy beliefs in marketing research*

Based on the theory of reasoned action, the technology acceptance model (TAM) suggests that users' acceptance of technology is driven by their beliefs about the consequences of that usage (Davis, 1989; Davis and Bostrom, 1993; Lee and Mendlinger, 2011). In particular, TAM predicts that users embrace new technology when their perceptions of the ease of use and the usefulness of the technology are positive. Therefore, many marketing strategies try to motivate consumers toward specific products by positioning products as the means to fulfill their basic needs. This is akin to enhancing their external efficacy regarding the product. Alternatively, marketers can motivate consumers by using appeals that focus on the avoidance of a negative outcome. In this approach, marketers evoke fear by listing the negative consequences to consumers not taking a certain action (i.e. adopting the recommended product; Geuens

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and De Pelsmacker, 1999; Glascoff, 2000; Witte *et al.*, 2001). By arousing the consumer's fear regarding his or her current state (Rogers, 1983), the marketer offers the product as a way to eliminate the threat. Therefore, marketers motivate consumers and influence their preferences and behavioral intentions by means of persuasive communication aimed at creating a positive attitude toward the product (Colley, 1961, 1962) by increasing consumers' perception of the product's efficacy or the product's ability to satisfy their needs and goals. This is actually an attempt to manipulate external efficacy.

However, there are situations in which the consumer perceives the desired goals as difficult to achieve (Bagozzi, 1992; Bagozzi and Dholakia, 1999). Bagozzi (1992) posited that for difficult goals and effortful consumption tasks, consumers weigh alternative means to achieve such goals by evaluating their SSE as distinct from the effectiveness and affective significance of each available means (external efficacy). In the present experiments, we applied Bagozzi's (1992) concept of difficult-to-achieve goals to marketing and consumer behavior. The relevant goals are those related to product use or adoption. We define DTA with regard to DTA products and consumption tasks perceived by consumers as intimidating, too challenging or too difficult for them. Difficult-to-consume goods and services exist in product categories from health programs through new products, particularly those with elaborate technical specifications. A recent example is the study by Lee and Mendlinger (2011), who showed that many students are reluctant to take online courses because they perceive them to be too difficult and to require too much effort. Similarly, there is evidence that individuals are reluctant to undergo medical procedures – e.g. breast self-examination (BSE) – that they deem to be too difficult. Meyerowitz and Chaiken (1987) argued that BSE is performed so infrequently because it requires women to learn how to perform, to remember how to perform and to maintain the self-examination over a long period. To conclude, in various consumption tasks, consumers actually perceive the product as useful (i.e. high external efficacy). Still, they remain unmotivated to adopt it due to fact that they perceive it to be too difficult for them to use (low SSE). Based on efficacy theory, we predict that raising consumers SSE will motivate them to overcome their resistance and engage in effortful consumption tasks. Indeed, Locke and Latham (2002) argued that high SSE increases consumers' persistence and search for ways to achieve their desired goals. Self-efficacy beliefs influence motivation to adopt coping behavior, effort and perseverance (Bandura, 1977). High SSE also increases the relationship between satisfaction and repurchase intention, as well as the relationship between satisfaction and word of mouth (Yi and Gong, 2008).

Therefore, we hypothesized and tested in Experiment 1:

*H1.* Boosting SSE increases consumers' behavioral intentions toward DTA products.

Experiment 2 went two steps further by framing the message negatively thereby adding a threat–arousal treatment and adding GSE as a moderator. The logic is that SSE and threat–arousal interact in a predictable way that is conditional upon the individual's level of GSE.

#### *Negatively framed message*

Persuasive messages can be framed to focus either on the benefits of adopting a specific behavior or product (a gain-frame) or on the losses of failing to adopt such behavior

(Gallagher and Updegraff, 2012). Negative and positive framing of messages are two ways of representing the same information (Maheswaran and Meyers-Levy, 1990). An example of a negatively framed message regarding use of dental floss on a regular basis might read as follows: "If you do not floss regularly, you will increase your chances of gum disease and tooth decay". A positively framed message would be: "If you floss regularly, you will increase your chances of having healthy gums and teeth" (Finney and Lannotti, 2002 p. 6). Another example is Meyerowitz and Chaiken's (1987) research. These authors compared positively and negatively framed messages regarding the consequences of [not] performing BSE: "You can (gain) [lose] several potential health benefits by (spending) [failing to spend] only five minutes each month doing BSE" (Meyerowitz and Chaiken, 1987 p. 504).

A key interest in message framing regards individuals' reactions to gains versus losses (Idson *et al.*, 2000). Studies examining the effectiveness of message framing on persuasion have produced inconsistent results (Maheswaran and Meyers-Levy, 1990). For example, Levin and Gaeth (1988) showed that a gain-framed message was more effective than a loss-framed message (Levin, 1987), whereas Meyerowitz and Chaiken (1987) found the opposite. Orth *et al.* (2007) argued that the effect of message framing on persuasion may vary under different conditions such as culture, involvement (Maheswaran and Meyers-Levy, 1990) and personal experience (Gaeth *et al.*, 1990) or age (Jayanti, 2001). According to Kahneman and Tversky's (1979) prospect theory, the value function is S-shaped; it is steeper for losses than for gains. That is, subjective value is concave in the gain domain, yet steeper and convex in the loss domain. Therefore, losses are experienced in greater magnitude than are gains of the same objective intensity (Idson *et al.*, 2000). Similarly, O'Keefe and Jensen (2008) argued that loss-framed appeals are more engaging than gain-framed appeals due to the fact that gains and losses are psychologically asymmetrical such that individuals are generally more sensitive to losses than to equivalent-size gains. Indeed, Yates (1982), who studied the effect of a negatively (vs positively) framed message for purchasing energy-saving devices in light of prospect theory's framing assumption, found that the negatively framed message was more effective but only when it presented a low-cost energy device.

A negatively framed message (i.e. loss-framed) is a message that emphasizes the undesirable consequences associated with noncompliance (O'Keefe and Jensen, 2008). This definition of a negatively framed message corresponds to the definition of *fear appeals*. A fear appeal (i.e. a threatening message) is a persuasive message that arouses fear by listing the negative consequences that will occur if a consumer does not take a certain action (Witte *et al.*, 2001). Advertisers frequently use fear appeals to make their advertisements distinctive (Glascoff, 2000). In a content analysis of print advertisements, Geuens and De Pelsmacker (1999) found that 9.4 per cent of advertisements include a threatening message. Attempting to change consumer behavior through a negatively framed advertisement is particularly common in health campaigns (Glascoff, 2000). According to Thompson *et al.* (2009), campaigns based on arousing fear lead to behavior change in two stages: first, they arouse fear and create a sense of threat related to a certain activity (or lack of activity). Then, the negative appeal motivates the individual to change behavior. However, negatively framed messages based on threat and fear arousal may affect consumers in the opposite direction of marketers' intentions. This is because such messages, specifically those that deal with

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health risks, may arouse responses such as defensiveness, resentment, anger or annoyance (Burnett and Oliver, 1979).

#### *Threat appraisal and SSE*

The discussion regarding negative versus positive messages corresponds to the discussion regarding fear arousing and messages based on threat. The protection motivation theory (PMT) (PMT, Rogers, 1983) illuminated the role of SSE in explaining reactions to threats, in general, and, specifically, in the domain of health promotional messages. According to PMT, high SSE coupled with high perceived threat promotes protection motivation and danger control responses. In contrast, low SSE coupled with high perceived threat promotes defensive motivation and responses of denial (Witte, 1992). That is, fear arousal and SSE interact in theoretically predictable ways. According to Bandura (1997), individuals with strong SSE see themselves able to overcome stressful situations, whereas individuals with weak SSE have more self-doubts. Moreover, a low level of SSE is related to negative emotions such as helplessness, anxiety and depression (Bandura, 1997; Schwarzer, 1992).

#### *Threat appraisal and GSE*

Rogers's (1983) PMT focuses on the role of SSE. However, explaining the effectiveness of threatening messages via GSE could help marketers decide to which segments of the market to address such a message. The literature regarding the role of GSE in explaining reactions to threat does not relate specifically to its role *vis-à-vis* the use of threat in promotional messages. However, researchers have studied the role of GSE in explaining reactions to threat, stress and challenges across various circumstances. GSE is negatively related to stress perception, anxiety, depression and anger (Luszczynska *et al.*, 2005; Leganger *et al.*, 2000 and Schwarzer, 1993). High GSE is positively related to positive affect, to achievement and to life satisfaction. Individuals with high GSE appraise stressful situations as challenging, whereas low GSE individuals appraise them as threatening (Jerusalem and Schwarzer, 1992; Schwarzer, 1992; Luszczynska *et al.*, 2005). Yi and Gong (2008) argued that individuals with high GSE are expected to handle challenging situations effectively. According to Olsson and Dahl (2012), low GSE is associated with avoidant personality traits; such individuals are also more stressed, suffer more from smoking, overeating and lack of empowerment.

Summarizing, consumers with low GSE perceive every task as more difficult, whereas high GSE individuals tend to perceive difficult tasks as challenging and doable. We therefore hypothesize that individuals who are high in GSE lack motivation to adopt coping tools and to join support programs. Hence, a threatening message could be an effective tool to rouse high GSE individuals from their indifference, but not those low in GSE. Threatening messages may overwhelm low GSE individuals. Indeed, according to Hastings *et al.* (2004), threatening messages are effective among consumers who are well-equipped to adopt the recommended behavior. However, such messages lead to worse results when delivered to psychologically less-resourced consumers.

We hypothesize:

- H2. GSE moderates the effect of threatening messages on behavioral intentions. Sending high-GSE individuals a threatening message increases their behavioral intentions for DTA products, whereas sending low-GSE individuals a threatening message decreases their behavioral intentions.



*The role of SSE.* Marketers that address consumers through threatening messages do tend to suggest that the product is a solution to a potential threat. However, as we posited, threatening messages may have a detrimental effect on low-GSE consumers' purchase intentions for DTA products or behaviors. In contrast, we propose that threatening messages are effective for low-GSE consumers if accompanied by coping tools relating not only to the product's effectiveness but also to consumers' SSE for overcoming the difficulty and adhering to the recommended response (Rogers, 1983).

Thompson *et al.* (2009) argued that fear appeals are more effective among individuals who have the means of changing their behavior (Witte and Allen, 2000) and who are well equipped to execute the recommended behavior (being self-efficacious). Therefore, one's belief in his/her own ability to follow, adopt and preserve the recommended behavior is a key element in regard to the success of threatening appeals. Thus, for low-GSE consumers, an advertisement that arouses fear (e.g. showing the consumer the severe consequences of not exercising regularly) yet boosts SSE through the activation of internal SSE sources (e.g. boosting a consumer's perception of his or her self-discipline) may be a more effective strategy than fear appeals alone. We therefore hypothesize:

*H3.* Sending low-GSE consumers a message that adds SSE-boosting appeals to a threatening message increases their behavioral intentions toward DTA products more than does sending a threatening message only.

Experiment 1 tested *H1* and Experiment 2 tested *H2* and *H3*.

### **Experiment 1**

The objective of Experiment 1 was to test *H1*, such that marketers can enhance consumers' SSE, and thereby increase their behavioral intentions toward DTA products.

#### *Method*

*Design and sample.* Experiment 1 used a two-group (SSE: boosted vs control) design. Each group received a different advertisement. Participants were 139 male college freshmen. For participating, they were entered into a drawing for a \$35 gift certificate for school supplies.

*Preliminary studies.* To find a product or service that participants perceived as a DTA product, we conducted two preliminary studies on two samples that were not used in either experiment. In the first preliminary study, we asked 120 male and female students to describe products or services that they needed but refrained from buying or trying because they were too challenging, demanding or difficult to try or maintain. Respondents mentioned four products most often: a physical fitness program, a nutrition program, a challenging yet rewarding course in learning a foreign language through e-learning and a smoking cessation program. In the second preliminary study, we described the four products to 200 different male and female students. Each was asked to rate each product on a five-point scale as follows:

- How relevant is the product to your needs?
- Does this product meet the definition of a challenging product? (as described in the preamble, i.e. requires to demonstrate high personal capacity, such as self-control, perseverance, mental ability and the like).
- How likely is it that you would adopt the product?

The results confirmed that the men viewed the physical fitness program as DTA in both an absolute sense (72 per cent rated this program as highly relevant for them yet highly challenging) and a relative sense (they rated this product higher than all the others), whereas the women viewed the nutrition program as DTA in both an absolute sense (78 per cent of the women rated this program as highly relevant for them yet highly challenging) and a relative sense. Therefore, we used the physical fitness program for men in Experiment 1 and the nutrition program for women in Experiment 2.

*Procedure.* The experiment was conducted using a computer in four stages. In Stage 1, participants completed an NGSE questionnaire. Next, as a task filler, they completed a *locus-of-control* (LOC) questionnaire (Burroughs and Mick, 2004). In Stage 2, participants read a short description of Fit 'n' Fine (a fictitious product), a fitness product described as designed especially for male students to increase their awareness of healthful activities. The basic principle of Fit 'n' Fine was to engage in any type of physical activity four times a week[1]. Next, participants were instructed to click a Continue button to receive their scores on the questionnaires they had filled out in the previous stage. Those in the SSE-boosting condition read the following statement:

Good for you. According to your score, you are classified as Type A: You are in the highest quartile of the total student-wide distribution. You possess high persistency and self-control. Therefore, your odds of succeeding in activities demanding persistency are very high.

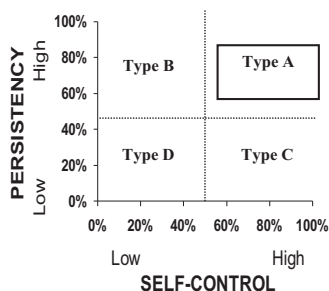
This statement was followed by a diagram (Figure 1) illustrating that Type A individuals score relatively high in self-control and persistency traits.

Control participants read the following message:

Thank you. Your answers were coded and stored on our database. The data are stored anonymously and will be used for research purposes only. Among other things, they will be used for analyzing the total student-wide distribution based on persistency and self-control traits.

This statement was followed by a diagram similar to the one presented in Figure 1, but the caption of the text "Type A" was not highlighted.

In Stage 3, participants viewed a print advertisement designed by a professional designer from an advertising agency for Fit 'n' Fine. There were two versions of the advertisement. In the both conditions, participants read the following main headline: "New research shows: Physical activity – the path to a successful life". In the SSE-boosting condition, the main headline was followed by the sub-headline: "As you have been identified as a persistent person, your future success is in your hands". Control participants read the following sub-headline, "Effective physical activity



**Figure 1.**  
Diagram presented to  
participants in the  
SSE-boosting condition

includes various types of fitness such as aerobic, motion, and muscular fitness". The advertisement in both conditions also included the following short description of Fit 'n' Fine accompanied by its logo (Appendix 1):

Fit "n" Fine is a physical activity program designed especially for persistent men that includes:  
A private session with a certified trainer followed by a weekly supervision session;  
Customizing an individual physical activity for implementation four times a week.

In Stage 4, participants completed the SSE questionnaire as a manipulation check. Next, they were asked to render their assessments of the program's difficulty and of their intentions to try and adhere to the program. Finally, they were asked to report their routine exercise behavior.

### *Measures*

*General self-efficacy.* We used [Chen et al. \(2001\)](#) eight-item NGSE scale which has high reliability ( $\alpha = 0.87$ ), as well as high content, discriminant and predictive validity ([Chen et al., 2004](#)). The results revealed no significant difference between the experimental and control groups GSE [ $M = 4.32$  and  $4.28$ , respectively;  $t(125) = 0.47$ ,  $p < 0.64$ ]. Randomization had succeeded in creating pre-experimental equivalence, as intended.

*Manipulation check.* The manipulation check included two five-point indexes:

- (1) a multi-item SSE index; and
- (2) a single-item SSE measure.

As is common in organizational behavior experiments ([Eden and Kinnar, 1991](#); [Eden and Zuk, 1995](#)), the multi-item SSE questionnaire was an original *ad hoc* scale developed especially for the particular activities relevant to the present experiment. The scale included seven items ( $\alpha = 0.86$ ), each representing a different aspect of the respondent's ability required to perform the challenging task:

- (1) "I believe I can engage in a physical activity nonstop for 30 minutes".
- (2) "I believe I can consistently engage in the chosen physical activity four times a week".
- (3) "I believe I can prevent a bad mood from disturbing or distracting me while engaging in the physical activity".
- (4) "I believe I can focus on my performance during the physical activity".
- (5) "I believe I can exercise efficiently to achieve results".
- (6) "I believe I can rely on myself to execute the physical activity program".
- (7) "I believe I can maintain the program over a period of two months."

The single-item SSE measure included one question:

How strongly do you *believe that you can succeed* in adhering to Fit "n" Fine, based on the fact that this program involves engaging in a physical activity four times a week for at least two months?

Because the SSE multi-item index and the single-item SSE measure were highly correlated ( $r = 0.73$ ) and had similar standard deviations, we treated their average as a measure of total SSE.

*Behavioral intentions.* The measure of behavioral intentions included three questions on a seven-point scale:

- (1) "How interested are you in joining Fit 'n' Fine?": You can join Fit 'n' Fine for a trial period of two months, based on your commitment to maintain the program for that two-month period.
- (2) "What is the likelihood that you will join Fit 'n' Fine in the near future?"
- (3) "What is the likelihood that you will maintain the program for at least two months?"

The mean of the three items served as an index of total behavioral intentions (TBI) ( $\alpha = 0.92$ ).

*Task difficulty.* Participants rated the difficulty of Fit 'n' Fine on a seven-point scale. They were instructed to assess the objective difficulty of the program, not their specific ability.

*Routine exercise behavior.* The participants rated their present and past tendency to engage in physical activities on a 10-point scale, ranging from "none at all" (1) to "every day" (10). We eliminated 12 participants from the analyses, six from each group, who exercised more than four times a week and analyzed routine exercise behavior as a covariate.

## Results

*Manipulation check.* As intended, experimental participants reported higher mean SSE ( $M = 4.13$ ,  $SD = 0.62$ ) than did the control participants [ $M = 3.77$ ,  $SD = 0.80$ ;  $t(125) = 2.75$ ,  $p < 0.01$ ],  $r = 0.24$ . Following Rosenthal and Rubin (1982), we computed the binominal effect-size display (BESD) to estimate the success rate equivalent of  $r$  as an expression of the practical impact of the treatment. The BESD equivalent for the correlation of 0.24 is a success rate of 62 per cent among the experimental participants versus only 38 per cent among the control participants. The results indicate that participants in the SSE-boosting condition were 24 per cent more likely to report high SSE than were control participants.

*SSE-boosting effect on behavioral intentions.* To test  $H1$ , an analysis of covariance (ANCOVA) was conducted on TBI holding constant assessment of task difficulty and routine exercise behavior as covariates. ANCOVA revealed a significant main effect of SSE on TBI [ $F(1, 123) = 5.00$ ,  $p < 0.05$ ]. Participants in the SSE-boosting condition reported higher TBI ( $M = 5.46$ ,  $SD = 1.41$ ) than did control participants ( $M = 4.56$ ,  $SD = 1.90$ ), confirming  $H1$  [ $r = 0.26$ , BESD (for SSE-boosting effect on TBI): 63 vs 37 per cent]. Experimental participants rated each of the three behavioral intentions variables significantly higher than did the control participants [motivation to join the program:  $M = 5.32$  vs 4.48,  $t(125) = 2.55$ ,  $p < 0.015$ ; purchase intentions:  $M = 5.32$  vs 4.51,  $t(125) = 2.45$ ,  $p < 0.015$ ; intentions to maintain program participation over two months:  $M = 5.76$  vs 4.70,  $t(125) = 3.46$ ,  $p < 0.01$ ].

ANCOVA also revealed that the effect perceived program difficulty was significant [ $F(1, 123) = 15.8$ ,  $p < 0.01$ ] and that the effect of routine exercise behavior was not [ $F(1, 123) = 2.00$ ,  $p < 0.15$ ].

### *Discussion of Experiment 1*

Experiment 1 supports the hypothesis that marketing actions can enhance consumers' SSE and, as a result, increase their behavioral intentions toward DTA products. Consumers who received an advertisement containing an SSE-boosting message were more likely to express high behavioral intentions than those who do not receive such a message. Furthermore, Experiment 1 demonstrated that, as hypothesized, the effect of boosting SSE on behavioral intentions is due to a change in an internal source of SSE when external efficacy (i.e. participants' assessments of the program's difficulty) is not targeted.

### **Experiment 2**

Having demonstrated in Experiment 1 that enhancing SSE produces the hypothesized effects, Experiment 2 tested the combined effects of SSE and threatening messages with GSE as a moderator, testing *H2* and *H3*.

### *Method*

*Design and procedure.* Study 2 was a 2 (enhanced SSE: vs control)  $\times$  2 (threat vs no threat)  $\times$  2 (high vs low GSE) between-subjects experiment. We manipulated SSE and threat and measured GSE as a moderator. We randomly assigned 148 female college freshmen to four advertising messages. We conducted the experiment via computer in four stages. In Stage 1, participants completed the NGSE and LOC measures. In Stage 2, they read a short description of "Health and Success" (a fictitious product), described as a nutrition program designed especially to increase female students' awareness of nutrition. Next, they were instructed to click a Continue button to view the scores of the measures they had just completed. To manipulate SSE, we determined randomly which version of the statements and diagrams described in Experiment 1 (Figure 1) each participant saw.

In Stage 3, participants viewed one of four versions of a print advertisement for Health and Success (Appendix 2). Each version operationalized one of four experimental conditions. In the SSE-boosting + no threat arousal condition, the headline "New research shows: Maintaining healthy nutrition improves quality of life", was followed by the sub-headline "As you have been identified as a persistent person, your future success is in your hands". In the SSE-boosting + threat arousal condition, the headline was "New research shows: Failure to maintain healthy nutrition damages quality of life", followed by the sub-headline "As you have been identified as a persistent person, your future success is in your hands". In the non-SSE-boosting + no threat arousal condition, participants were shown the headline "New research shows: Maintaining healthy nutrition improves quality of life", followed by the sub-headline "Healthy nutrition contains 50 per cent carbohydrates, 30 per cent protein and 20 per cent fat". In the non-SSE-boosting and threat arousal condition, the main headline "New research shows: Failure to maintain healthy nutrition damages quality of life" was followed by the sub-headline: "Healthy nutrition contains 50 per cent carbohydrates, 30 per cent protein and 20 per cent fat". The third element in the advertisement, a short description of the service offered (accompanied by its logo), was identical in all four conditions. In Stage 4, participants completed an SSE questionnaire as a manipulation check and then indicate their assessments of the difficulty of the task and their intentions to try and to adhere to the program.

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### Measures

*Manipulation check.* As in Experiment 1, the manipulation check included two five-point measures:

- (1) a multi-item SSE index; and
- (2) a single-item SSE measure.

Participants were asked how much they agree or disagree with the following seven statements:

- (1) "I believe I can adhere to the healthy menu all day long".
- (2) "I believe I can resist unhealthy temptations".
- (3) "I believe I can avoid consuming high-calorie beverages".
- (4) "I believe I can attend the weekly supervision sessions".
- (5) "I believe I can adhere to the healthy menu all week".
- (6) "I believe I can rely on myself to execute the healthy nutrition program".
- (7) "I believe I can maintain the program over a period of two months".

A factor analysis confirmed that the items comprise one factor and can be combined into a reliable index ( $\alpha = 0.90$ ). The single-item SSE measure included one question: "Study the nutrition program Health and Success. How strongly do you believe that you can succeed in implementing this program for a period of at least two months?" Because the SSE multi-item variable and the expectancy variable were highly correlated ( $r = 0.80$ ) and showed similar standard deviations, we decided to treat the average as a measure of total SSE.

*Behavioral intentions.* The measure of behavioral intentions included three seven-point items:

- (1) "How interested are you in joining Health and Success?"
- (2) "You can join Health and Success for a trial period of two months, based on your commitment to maintain the program for that two-month period (i.e. adhering to the menu and attending the weekly sessions, which will take place at a time and place of your choosing). How likely is it that you will join Health and Success for a trial period of two months, based on your commitment to maintain the program for that two-month period in the near future?"
- (3) "How likely is it that you will maintain the program for at least two months?"

The mean of the three items comprised an index of TBI ( $\alpha = 0.88$ ).

### Results

*Manipulation check.* As intended, participants in the SSE-boosting condition reported higher SSE scores ( $M = 3.90$ ,  $SD = 0.69$ ) than control participants [ $M = 3.63$ ,  $SD = 0.78$ ;  $t(146) = 2.26$ ,  $p < 0.05$ ].

*Generalization of Experiment 1 results.* Perceived task difficulty was a significant covariate [ $F(1, 145) = 17.04$ ,  $p < 0.01$ ]. With its effect removed by ANCOVA, there was a significant main effect of SSE on TBI [ $F(1, 145) = 3.83$ ,  $p < 0.05$ ]. Participants in the high SSE condition reported higher TBI ( $M = 4.90$ ,  $SD = 1.56$ ) than did control

participants (M = 4.34, SD = 1.80), confirming *H1* [ $r = 0.16$ , BESD (for SSE-boosting effect on TBI): 58 vs 42 per cent][2].

There was no significant difference in GSE: M = 4.19, SD = 0.048, control M = 4.20, SD = 0.056,  $t(146) = 0.17$  and  $p < 0.86$ .

*GSE as a moderator of the threat arousal effect.* Two-way ANOVA detected a significant interaction effect of GSE  $\times$  threat arousal on TBI,  $F(1,144) = 8.87$ ,  $p < 0.01$ ,  $r = 0.24$ , BESD: 62 vs 38 per cent. The means in Table I shows that threat arousal increased TBI among high-GSE participants [M = 5.40, SD = 1.32 versus M = 4.41, SD = 1.73, *simple effects test* (1,144) = 7.23,  $p < 0.01$ , one-tail], whereas threat arousal decreased TBI among participants with low GSE [M = 4.03, SD = 1.88 vs M = 4.67, SD = 1.64, *simple effects test* (1, 144) = 2.84,  $p < 0.05$ , one-tail], confirming *H2*.

*Adding SSE-boosting appeals to a threatening message for low-GSE consumers.* To test *H3*, we compared mean TBI among low GSE participants in threat arousal and the SSE-boosting condition to low GSE participants in threat arousal and the non-SSE-boosting condition. The results, Table II, show that the effect on TBI of adding an SSE-boosting treatment to a threatening message is significant for low GSE consumers (M = 4.55, SD = 1.78) compared to not adding an SSE-boosting message to a threatening message for low GSE consumers [M = 3.30, SD = 1.84;  $t(36) = 2.04$ ,  $p < 0.05$ ], in support of *H3*,  $r = 0.32$ .

We conducted two  $2 \times 2$  ANOVAs to test the interaction effect of threat arousal  $\times$  GSE on TBI, under each condition of SSE (boosted vs not boosted). ANOVA detected (Figure 2) a highly significant interaction effect of threat arousal  $\times$  GSE in the non-SSE-boosting condition [ $F(1, 64) = 7.25$ ,  $p < 0.001$ ]. As shown in Table II, for participants with high GSE, in the non-SSE-boosting condition, the message using

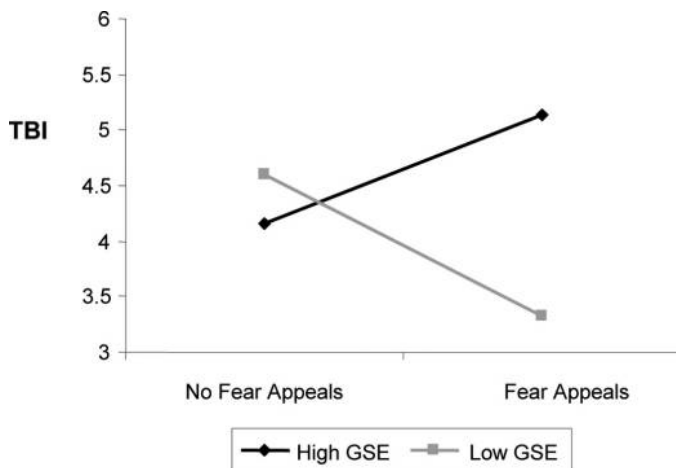
**Table I.**  
Negative-framing effect on TBI for high vs low GSE

Negative-framing	Low GSE			High GSE			M	Total SD	n
	M	SD	n	M	SD	n			
Yes negative-framing	4.03	1.88	38	5.40	1.32	40	4.73	1.75	78
No negative-framing	4.67	1.64	36	4.41	1.73	34	4.54	1.70	70
Total	4.34	1.78	74	4.95	1.59	74	4.64	1.71	148

**Notes:**  $F(1,144) = 8.87$ ;  $p < 0.01$

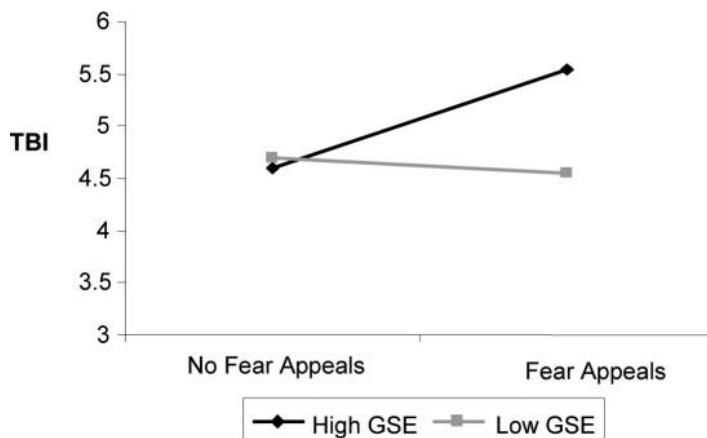
**Table II.**  
Interaction of negative-framing and SSE boosting for high vs low GSE

SSE-boosting Negative-framing	Yes			No			M	Total SD	n
	M	SD	n	M	SD	n			
<i>Low GSE</i>									
Yes	4.55	1.78	22	3.33	1.84	16	4.03	1.88	38
No	4.72	1.85	19	4.60	1.42	17	4.67	1.64	36
Total	4.63	1.79	41	3.99	1.74	33	4.34	1.78	74
<i>High GSE</i>									
Yes	5.65	1.13	21	5.12	1.48	19	5.40	1.32	40
No	4.65	1.34	18	4.15	2.10	16	4.42	1.73	34
Total	5.18	1.78	39	4.68	1.83	35	4.95	1.59	74
Total	4.90	1.60	80	4.34	1.80	68	4.65	1.71	148



**Figure 2.**  
Fear-appeals-by-GSE  
interaction effect on TBI  
for non-SSE-boosting  
conditions

threat arousal significantly increased TBI ( $M = 5.12$ ,  $SD = 1.48$ ) compared to a nonthreatening message [ $M = 4.15$ ,  $SD = 2.10$ , *simple effects test* (1, 64) = 3.13,  $p < 0.05$ , one-tail]. In contrast, among participants with low GSE, in the non-SSE-boosting condition, the threatening message decreased TBI significantly ( $M = 3.33$ ,  $SD = 1.84$ ), compared to a non-threatening message [ $M = 4.60$ ,  $SD = 1.42$ , *simple effects test* (1, 64) = 4.37,  $p < 0.05$ , one-tail]. However, in the SSE-boosting condition, the ANOVA results (Figure 3) demonstrated that the threatening message  $\times$  GSE interaction was moderated and not significant [ $F(1, 76) = 2.8$ ,  $p < 0.10$ ]. As presented in Table II, for participants with high GSE, in the SSE-boosting condition, threatening message increased TBI ( $M = 5.65$ ,  $SD = 1.13$ ), compared to a non-threatening message [ $M = 4.65$ ,  $SD = 1.34$ , *simple effects test* (1, 76) = 4.36,  $p < 0.05$ , one-tail]. In contrast, among participants with low GSE in the SSE-boosting condition, the threatening message did not significantly decrease TBI ( $M = 4.55$ ,  $SD = 1.78$ ), compared to a non-threatening message [ $M = 4.72$ ,  $SD = 1.85$ , *simple effects test* (1, 76) = 0.19,  $p < 0.33$ , one-tail].



**Figure 3.**  
Fear-appeals-by-GSE  
interaction effect on TBI  
for SSE-boosting  
conditions



### *Discussion of Study 2*

Persuasive messages can be framed either positively (a gain-frame) or negatively (a loss-frame). A negatively framed message emphasizes the undesirable consequences associated with noncompliance. Therefore, it is based on creating threat and arousing fear. Previous findings regarding the effectiveness of message framing on persuasion have been inconsistent. In Experiment 2, we tested GSE as a moderator to explain this inconsistency. The results demonstrated that the message using negative-framing (threatening message) increased the TBI among participants with high GSE whereas among participants with low GSE, the threatening message decreased TBI. However, under the SSE-boosting condition, the threatening message  $\times$  GSE interaction was moderated and not significant: for high GSE individuals, under the SSE-boosting condition, the message using threat increased TBI and among low GSE individuals in the SSE-boosting condition, threat did not significantly decrease TBI. Therefore, the combination of using threat and SSE enhancement is the optimal strategy when addressing a heterogeneous audience.

### **General discussion**

#### *Theoretical contributions*

Overall, the results suggest that:

- perceived self-efficacy can predict behavioral intention toward DTA product acceptance; and
- perceived usefulness has a positive and direct influence on behavioral intention toward DTA products acceptance.

We demonstrated that enhancing SSE via marketing messages increased participants' behavioral intentions toward DTA products. The practical importance of the findings is especially relevant in DTA situations, wherein marketers aim to motivate consumers to engage in effortful consumption tasks.

In Experiment 2, we also identified the GSE trait as a moderator to the divergent effects of negative framing (threatening message). GSE is strongly related to various self-evaluation constructs, motivation and behavior, but it has not yet gained much attention among marketing scholars. Marketers can segment consumers on the basis of their GSE and address each segment with a commensurate message. Such a targeting strategy is especially practical for specific marketing communications programs, such as direct marketing, personal selling or e-commerce. Unfortunately, with mass communications, it is impractical to prevent diffusion of media messages between various segments of the population and to segment consumers on the basis of GSE. Therefore, the effect of a threatening message, when presented to a heterogeneous audience, may be positive for high-GSE consumers yet negative for low-GSE consumers (in medical jargon, the *paradox effect*). For low-GSE individuals, a non-threatening message seems more effective than a threatening one. The threatening message was more effective only for high-GSE individuals with or without the SSE-boosting. However, the results of Experiment 2 suggest that the combination of using threat in the advertisement headline and boosting SSE in other parts of the advertisement is the optimal strategy when addressing a heterogeneous audience. The SSE boosting treatment helped low GSE individuals to cope with the threatening message and did not influence high GSE individuals' reaction to the threatening message. Therefore, the

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added value that results from adding an SSE-boosting message to a threatening message exists only in a marketing situation wherein the marketers cannot segment the recipients of the message based on their GSE, or offer each segment its own message. In short, for a threatening message to be effective, consumers need high self-efficacy; if they do not already have it in the form of high GSE, it must be provided in the ad by some type of SSE booster.

In this research, we also introduced, to marketing literature, the distinction between internal and external efficacy. Similarly to the GSE concept, we could find in the marketing literature neither reference to, nor distinction between, internal and external efficacy. Indeed, unlike such fields as organizational behavior and education, it is impractical, if not impossible, to change individuals' beliefs about themselves via commercial messages. However, as we have demonstrated and replicated, after receiving self-belief-enhancing messages, consumers showed significantly higher motivation, as well as intention to buy the DTA product. Moreover, this effect is not due to a change in consumers' perception of *the product* as easier, but rather to a change in their beliefs about *themselves*.

#### *Managerial contributions*

In the era of prevailing database marketing marketers can easily detect consumers who refrain from joining new programs and investigate the source of this reluctance. For example, a local non-profit health insurance organization launched the Starting a New Life program for elderly women. The organization sent out an e-mail communiqué about the new program to its female clients. However, many clients were reluctant to join because they believed self-fulfillment was beyond their reach. It seems that most clients were homemakers who had dedicated their lives to nurturing their families. A relevant message aimed at raising these clients' self-efficacy would include empirical evidence that the ability and skills required to be an efficient homemaker are equivalent to those needed to be an efficient manager. Moreover, different firms can use their databases to segment their clients on the basis of GSE and address each segment with a commensurate message via personal communication (e.g. e-mail or SMS).

For example, the previously mentioned non-profit is joining the program because of their confidence that they are immune) should be negatively interested in motivating elderly consumers to adopt a fitness program that focuses on weight-bearing exercises to prevent osteoporosis. Therefore, a message for high-GSE clients (who refrain from framed and consist of fear appeals (e.g. "Failure to regularly perform weight-bearing exercises jeopardizes your health"). Alternatively, a message for low-GSE clients (who withdraw from any messages concerning health issues) should be positively framed (e.g. "Regularly performing weight-bearing exercises is the path to a healthy, happy life"). Furthermore, marketers can boost consumers' sense of self (or their internal resources of SSE) even absent specific data on each consumer: in many consumption tasks, firms possess some basic knowledge regarding segments of consumers. This knowledge can be used to boost consumers' internal resource of SSE using a reliable and convincing message. For example, in one of our pre-tests, we addressed students who attend Open University (OU), an academic program based on self-monitored studying, including self-learning and e-learning. While we had no additional knowledge about these students, we used the fact that they were enrolled in OU to boost their SSE

regarding their ability to adhere to and persist at programs. The results of this pre-test demonstrated that the manipulation was effective.

Raising consumer efficacy can be an effective tool also in influencing positive experience for consumers at the point of sale. Many consumers feel a sense of discomfort at the point of sale and are wondering whether the product is suitable for them (technically, economically or socially). Many sellers do not realize it and sometimes even intensify the sense of consumer discomfort with condescension. The seller's role is to empower consumers by raising their self-efficacy and give them a sense of capability and control. An example of this is reflected at "Nespresso" branches, where a consumer may feel that the product (coffee machines) is a hurdle too high for him (financially or functionally). However, sellers at these branches treat their customers with great respect, addressing them with names like "Mister" or "Sir", allowing them to experiment with the coffee machines and thus letting them feel important and capable.

In conclusion, our results suggest that by strengthening the consumer's sense of self-efficacy, marketers gain new tools to overcome consumer resistance. Implementing these tools in marketing messages and product design will motivate more consumers to try DTA products, use them more effectively and use them for a longer time.

#### *Limitations and future research*

These experiments were focused on health and fitness products and on the effectiveness of messages aimed at raising SSE among undergraduate students through verbal persuasion. To increase external validity, future research should focus on other product categories (e.g. DIY products, technological products) aimed at other segments (e.g. older consumers) and use other means of boosting consumers' SSE (e.g. modeling).

Furthermore, these were controlled experiments in which we augmented the participants' SSE through marketing messages presented via computer. Future research is needed to test how marketers can raise consumers SSE in real-life settings (e.g. a fitness club) using additional channels such as Web sites, brochures and mass media.

Moreover, the present research examined the added value of boosting participants' internal efficacy while external efficacy (i.e. task difficulty) was controlled. Future research might enhance both internal and external efficacy via marketing messages. Such studies might provide additional insights into the distinction between internal and external sources of efficacy, each construct's main effect, and their interaction and give marketers greater leverage in influencing consumers buying intentions.

#### **Notes**

1. We adopted Edén and Zuk's (1995) procedure that provided participants information designed to convince them that, on the basis of their scores and other information, they have high relevant ability for the specific assignment. A short description was given to participants to ensure a basic level of awareness and knowledge of the product's challenging characteristics and to establish the participants' overall attitudes before exposure to the advertising messages.
2. Indeed, these findings support generalization for Study 1 in which *HI* was also confirmed, as previously mentioned: "ANCOVA revealed a significant main effect of SSE on TBI [ $F(1, 123) = 5.00, p < 0.05$ ]. Participants in the SSE-boosting condition reported higher

TBI ( $M = 5.46$ ,  $SD = 1.41$ ) than did control participants ( $M = 4.56$ ,  $SD = 1.90$ ), confirming *H1*" (p. 21).

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<p><b>NEW RESEARCH SHOWS: PHYSICAL ACTIVITY THE PATH TO A SUCCESSFUL LIFE</b></p>	<p><b>NEW RESEARCH SHOWS: PHYSICAL ACTIVITY THE PATH TO A SUCCESSFUL LIFE</b></p>
<p><b>As you have been identified as a persistent person, your future success is in your hands</b></p>	<p><b>Effective physical activity includes various types of fitness such as aerobic fitness, motion fitness, and muscular fitness</b></p>
<p>Fit 'n' Fine is a physical activity program designed especially for persistent men that includes:</p> <ul style="list-style-type: none"><li>• A private session with a certified trainer followed by a weekly supervision session</li><li>• Customizing an individual physical activity for implementation four times a week</li></ul> 	<p>Fit 'n' Fine is a physical activity program designed especially for persistent men that includes:</p> <ul style="list-style-type: none"><li>• A private session with a certified trainer followed by a weekly supervision session</li><li>• Customizing an individual physical activity for implementation four times a week</li></ul> 

**Figure A1.**  
Advertising messages  
used in Experiment 1





Figure A2.  
Advertising messages  
used in Experiment 2

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