



Abstractness and Messages Describing Consequences Promote Healthier Behavioral Intentions

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ABSTRACT

Many health-risk behaviors present a self-control conflict in which the short-term outcomes of an action conflict with its long-term consequences. Across three studies, we find that an abstract construal level leads people to focus on long-term rather than short-term consequences when both are described in a message (vs. no message). Studies 1 and 2 explore this hypothesis through a risk behavior (snacking on sugary products), and Study 3 does the same through a health behavior (physical exercise). In Study 1, the Behavioral Identification Form scale is used to measure the construal level as a personal disposition; Studies 2 and 3 use a priming task designed by Freitas, Gollwitzer, and Trope to manipulate the construal level. All these studies show that, under an abstract mindset, people who have read a mixed-outcome message (vs. no message) tend to base their behavioral plans on long-term outcomes. Individually or in small groups (e.g. school class, therapy groups) health messages can be presented along with protocols to change construal level and thus, promote healthier intentions.

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Many health-risk behaviors present a self-control conflict in which the short-term outcomes of an action conflict with its long-term consequences. This self-control dilemma involves a decision between two mutually exclusive courses of action; people must choose between immediate and remote outcomes (Trope & Fishbach, 2000).

Construal Level and Self-Control

Being successful in terms of self-control requires decisions and actions that are in accordance with long-term consequences rather than short-term outcomes; nevertheless, immediate temptations prevent people from behaving rationally with regard to their future interests. Research has shown that an abstract construal level promotes self-control (Chiou, Wu, & Chang, 2013; Fujita, 2008; Fujita, Trope, Liberman, & Levin-Sagi, 2006; Fujita & Han, 2009; Trope & Liberman, 2000).

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Focusing on the distant future enhances self-control and construal-level theory (CLT) has shown that, when an event or object becomes more psychologically distant (e.g., temporally, spatially, socially, or hypothetically), the same target is represented in terms of its abstract, essential (high-level) properties, whereas incidental details become less available (Liberman, Trope, & Stephan, 2007; Trope & Liberman, 2003). These high-level features lead people to focus on global concerns (e.g., long-term outcomes) rather than on local rewards (e.g., short-term outcomes), thereby making decisions that are associated with greater self-control (Fujita et al., 2006).

Construal Level, Judgments, and Behavioral Intentions

CLT also argues that objects, features, and information that are congruent with a given mindset (i.e., matching hypothesis) will have a greater impact than those that are incongruent with the mindset (Eyal, Sagristano, Trope, Liberman, & Chaiken, 2009). Thus, for people with abstract (vs. concrete) mindset, the most abstract concepts, such as values (Eyal et al., 2009; Torelli & Kaikati, 2009), ideology (Ledgerwood, Trope, & Chaiken, 2010), attitudinal and normative beliefs (Lutchyn & Yzer, 2011), future-oriented emotions (Carrera, Caballero, & Muñoz, 2012), global attitudes (Carrera, Muñoz, Caballero, Fernández, & Albarracín, 2012), affective attitudes (Carrera, Caballero, Muñoz, González-Iraizoz, & Fernández, 2014) or desired attitudes (Carrera, Caballero, Fernández, & Muñoz, 2017), are more likely to predict subsequent judgments and behavioral intentions.

Research on persuasive messages has also supported this matching effect. Strathman, Gleicher, Boninger, and Edwards (1994) manipulated a temporal framing of consequences in a two-sided message and found that people who were focused on distant consequences (CFC scale) were more affected by the long-term advantages detailed in the message, regardless of the immediate consequences described. Fujita, Eyal, Chaiken, Trope, and Liberman (2008) demonstrated that when an attitude object was situated in the distant future (i.e., abstract mindset), participants focused on arguments that highlighted the high-level features. Ledgerwood, Wakslak, and Wang (2010) found that temporal distance increases the relative weight placed on aggregate (high-level) versus individualized (low-level) information. White, MacDonnell, and Dahl (2011) found that messages framed as losses (vs. gains) paired with low-level (vs. high-level) mindsets generated more positive recycling behaviors and intentions. In a similar vein, Spassova and Lee (2013) showed that, when the temporal frame of a persuasive advertisement (distant future vs. near future) matches the audience's construal level, the appeal's effectiveness is enhanced. Their results showed that a match (vs. mismatch) between a participant's mindset and an advertising message's temporal frame led him or her to evaluate the ad more positively.

The Present Research

The present research dovetails with these findings on matching by suggesting that, when a message describes opposing short- and long-term consequences, the outcomes consistent with the induced construal level (abstract vs. concrete) will receive preferential attention to form behavioral intentions. Previous research on mixed outcomes appeals measured the personal disposition to focus on distant consequences (CFC scale)

(Strathman et al., 1994) or independent versus interdependent self-concept (Spassova & Lee, 2013). We now replicate these previous findings (Study 1) by measuring construal with the Behavioral Identification Form (BIF) (Vallacher & Wegner, 1989), a well-tested procedure (Burgoon, Henderson, & Markman, 2013) to measure the personal tendency (i.e., personal trait) to construe events at a high versus low level. We also support and extend these results by manipulating the construal level using a cognitive prime (Studies 2 and 3). We note that past research on persuasive messages and mindsets (Spassova & Lee, 2013; Strathman et al., 1994) did not include a control group without a message; only White et al. (2011) added a baseline condition. A no-message control condition joined to measures about past experience of the analyzed behaviors helps us to better test the interaction between the message and the construal level. Moreover, most studies did not present messages including simultaneously mixed consequences. Spassova and Lee (2013) described only positive outcomes, and White et al. (2011) used loss-framed or gain-framed ads. In the following studies, we address these limitations adding a control condition without a message and using messages describing both positive and negative outcomes in all experiments.

We test the matching hypothesis on health-risk behaviors associated with opposing short- and long-term consequences that pose a self-control conflict. Thus, we propose that people with abstract (vs. concrete) mindset will focus on long-term (vs. short-term) outcomes and will make healthier decisions. We included a no-message condition to better evaluate the improvement in the self-control added by this type of mixed message versus the effect of the abstract construal level in isolation.

Study 1 explores this hypothesis by measuring the construal level as a personal disposition; in Studies 2 and 3, we use a well-tested priming task designed by Freitas, Gollwitzer, and Trope (2004) to induce the construal level. Studies 1 and 2 focus on positive short-term and negative long-term consequences (i.e., snacking on sugary products), and Study 3 examines negative short-term and positive long-term consequences (i.e., physical exercise). Past experience is measured as control, as it is an important predictor of health-risk behaviors (Albarracín & Wyer, 2000).

Study 1

In Study 1, the participants in the message condition read a text describing the short-term positive consequences (e.g., relaxing, good flavor) of snacking sugary products, followed by a description of their long-term negative consequences on health (e.g., diabetes, hypertension, obesity).

Method

Participants

One hundred and four undergraduate volunteers at Universidad Autónoma de Madrid (Spain) (75 female) participated in exchange for course credit (average age of 20.48 years, $SD = 2.36$). The participants were randomly assigned to the experimental conditions (message and no-message conditions). In the present studies, the sample size was in line with previous similar studies that have consistently obtained significant effects with approximately 25 participants per condition (Spassova & Lee, 2013).

Procedure

Half of all participants were assigned to the message condition (16 males and 35 females), and the other half to the no-message condition (13 males and 40 females). After signing the consent form, the participants in the message condition had to read a text describing the positive short-term (e.g., pleasant feelings of relaxation and satisfaction) and negative long-term (e.g., heart problems and obesity) consequences of snacking on sugary products (see [Supplementary Material](#)). Then, participants opened an envelope containing a questionnaire, which they had to answer using a scale from 1 (*not at all*) to 7 (*very much*). Individuals in the no-message conditions did not read any messages, so they answered the questions directly. Four items were used to measure their future behavioral plans. Two items evaluated their plans to snack on sugary products: “To what extent do you have the intention to snack on sugary products (e.g., sugary drinks, candy and so on) in the following weeks?” and the same question but using the term “expectation”; both items were averaged to obtain a behavioral plan index on snacking on sugary products ($\alpha = .83$). Two similar items were included regarding snacking on sugarless products: “To what extent do you have the intention-expectation to snack on sugarless products (e.g., natural juices, fruits, nuts and so on) in the following weeks?” Both items were averaged to obtain a behavioral plan index on snacking on sugarless products ($\alpha = .80$). Personal experience was measured by two items: “How often have you snacked sugary products in the past/in the last two weeks ($\alpha = .95$)?”, and the same questions about snacking on sugarless products ($\alpha = .89$). Finally, participants completed 14 items taken from Vallacher and Wegner (1989) BIF to measure their dispositional construal level. This scale evaluates the personal disposition to represent actions through the preference to define behaviors based on motivations and final goals (high abstraction level) versus focusing on the means and contexts in which the actions occur (low abstraction level or concrete level). Each question asks participants to describe an action (e.g., “locking a door”) by choosing an option that represents the behavior abstractly (“securing the house”) or concretely (“putting a key in a lock”). The original BIF scale is composed of 25 items. We used a shortened version of the BIF scale (Fujita et al., 2006) that presented an acceptable alpha ($\alpha = .73$). This dispositional measurement has also been employed as a criterion to validate primes that manipulate the construal level (Freitas et al., 2004; Liberman & Trope, 1998). The BIF is widely accepted as the best procedure to measure chronic individual differences in the tendency to construe events at a high versus low level (Burgoon et al., 2013). Thus, participants were required to select one of the two identifications (abstract or concrete) that best described the behavior for them at the current moment. We created a construal-level index by adding each participant’s response, assigning 0 when the response was concrete and 1 when it was abstract. A higher BIF score represents a greater tendency to identify behaviors at a more abstract level.

Results and Discussion

Construal level was measured as personal disposition and participants could not be randomly assigned to each construal level. We classified the participants into two groups based on a median split of their BIF scores ($Md = 10$). As control check, we carry out an analysis of variance (ANOVA) examining personal past experience in a 2

Table 1. Means (SD) of the Global Snacking Preference Index and Behavioral Plan Indexes on Sugary Products and on Sugarless Products in Study 1.

Condition	Global snacking preference index	Behavioral plan index on sugary products	Behavioral plan index on sugarless products
Abst.-message	1.93 (2.08)	2.95 (1.44)	4.88 (1.47)
Conc.-message	0.50 (1.82)	3.51 (1.58)	4.01 (1.04)
Abst.-no message	0.70 (2.22)	3.18 (1.38)	3.89 (1.48)
Conc.-no message	1.09 (1.80)	3.38 (1.20)	4.47 (1.41)

Participants were classified into two groups based on the median split of their BIF scores.
 Abst.: abstract group; Conc.: concrete group.

(message: yes vs. no) \times 2 (construal level classified by the BIF scale: abstract vs. concrete) did not show main effects or interactions regarding past experience on sugary products, $F_s < 0.69$ or sugarless products, $F_s < 2.74$. In general, participants moderately snacked on both sugary products ($M = 3.39$, $SD = 1.78$) and sugarless products ($M = 4.12$, $SD = 1.41$).

With regard to future behavioral plans, participants showed moderate intention-expectations for snacking on sugary and sugarless products (Table 1). Given that both behaviors are not mutually exclusive (i.e., people can consume a mix of sugary and sugarless products), we decided to build a global preference index by subtracting the behavioral plan index on snacking on sugary products from the behavioral plan index on snacking on sugarless products. This global snacking preference index reveals the type of snacking that prevails in participants' future preferences (i.e., higher positive scores denote greater preferences for snacking sugarless products; Table 1).

To test the moderating effect exerted by the presence versus non-presence of the mixed-outcome message on the influence of abstractness, we carried out a hierarchical regression (all variables were standardized) in which the message condition (dummy coded: no-message as 0 and message as 1), BIF scores and their interaction were entered simultaneously while controlling past experience (i.e., in sugary and sugarless products) to predict the global snacking preference index. Past experience is an important predictor in health-risk behaviors (Albarracín & Wyer, 2000), so it was important to include it as a covariate (general past experience and experiences in the last 2 weeks were averaged).

The interaction (Figure 1) between the BIF scores and message condition was significant ($\beta = .23$, $t(98) = 2.20$, $p = .03$); past experience in sugary and sugarless products were also relevant ($\beta = -.60$, $t(98) = -9.53$, $p < .001$ and $\beta = .45$, $t(98) = 7.04$, $p < .001$, respectively). A simple slopes analysis revealed that the BIF scores significantly predicted future preferences when the participants had read the message ($\beta = .24$, $SE = .11$, $t(100) = 2.86$, $p < .05$), but not among participants in the no-message condition ($\beta = -.06$, $SE = .08$, $t(100) = -0.54$, ns). These results reveal that after reading a message describing the consequences of snacking on sugary products (positive outcomes in the short-term and negative outcomes in the long term), the more abstract way of thinking that was involved, the more likely the participants preferred to snack on sugarless products in the following weeks (see positive scores in the global snacking preference index in Table 1). This influence was not found in the no-message condition.

These results showed that when people have an abstract way of thinking (as personal disposition) and read a mixed-outcome message, they focus on distant rather than on immediate outcomes.

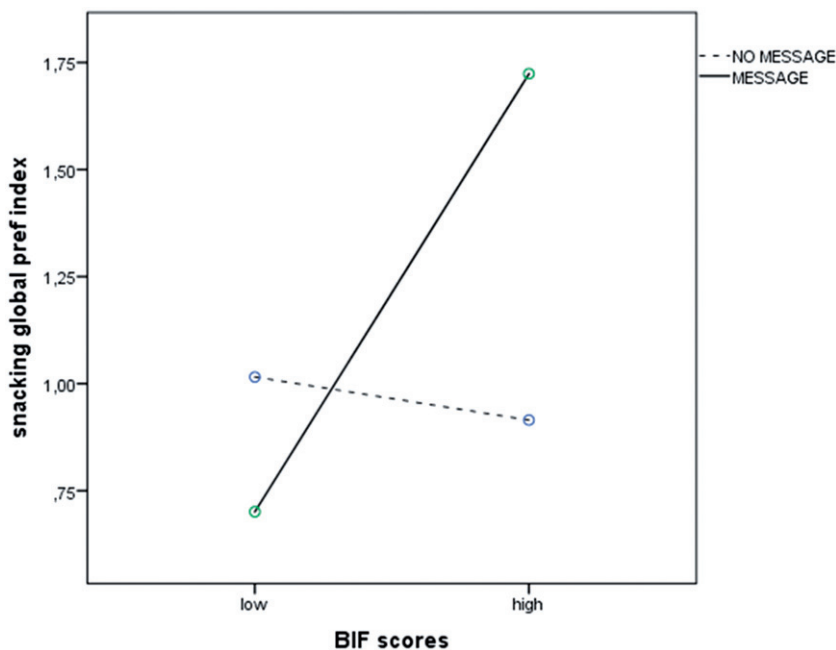


Figure 1. Interaction Between Message Condition and BIF Scores on Snacking Preference Index.

Study 2

In Study 2, we followed the same procedure and design used in Study 1 and tested the same behavior (i.e., snacking). However, this time, we decided to manipulate the construal level by using a cognitive prime.

Method

Participants

One hundred undergraduate volunteers at Universidad Autónoma de Madrid (Spain) participated in exchange for course credit (average age of 20.73 years, $SD = 2.14$). Fifty participants were randomly assigned to the no-message conditions, i.e., half to each construal-level condition (22 females and 3 males to the abstract prime vs. 21 females and 4 males to the concrete prime). The other 50 participants (18 females and 7 males to the abstract prime vs. 20 females and 5 males to the concrete prime) were assigned to read the same text used in Study 1.

Procedure

After signing the consent form, participants were randomly assigned to condition. In the message conditions they had to read the same text used in Study 1; in the no-message conditions, the message was omitted. Then, participants completed a two-part prime task. This double prime has been used and recommended by Sweeney and Freitas (2014) to better manipulate the construal level. In the first prime part, to induce an abstract mindset participants were asked to consider “why” they would maintain

Table 2. Means (SD) of the Global Snacking Preference Index and Behavioral Plan Indexes on Sugary Products and on Sugarless Products in Study 2.

Experimental condition	Global snacking preference index	Behavioral plan index on sugary products	Behavioral plan index on sugarless products
Abst.-message	2.24 (1.36)	2.76 (0.89)	5.00 (1.14)
Conc.-message	0.66 (2.03)	3.40 (1.26)	4.04 (1.55)
Abst.-no message	0.66 (2.49)	3.78 (1.64)	4.44 (1.35)
Conc.-no message	0.74 (2.23)	3.70 (1.75)	4.44 (1.52)

Abst.: abstract prime condition; Conc.: concrete prime condition.

good personal relationships, whereas in the concrete mindset condition, they were required to consider “how” they would preserve them. All questions (why and how) were presented with a diagram of vertically aligned boxes connected by arrows. Subsequently, in the second prime part, participants viewed a series of eight behaviors selected from Vallacher and Wegner’s (1989) BIF and were asked to reframe those behaviors in terms of why (abstract condition) or how (concrete condition) they were performed. The groups of participants in the no-message condition had to complete the two-part construal-level prime as the only task before the questionnaire.

After the priming induction, all participants opened an envelope containing a second questionnaire, in which they had to answer the same questions used in Study 1 on a scale from 1 (*not at all*) to 7 (*very much*). The questions regarded the extent to which they had the intention and expectation to snack on sugary products and sugarless products in the following weeks. We averaged each pair of items to obtain the behavioral plan index on snacking on sugary products ($\alpha = .82$) and on sugarless products ($\alpha = .84$). Finally, they reported their past experience in general and during the previous 2 weeks with regard to snacking on sugary products ($\alpha = .88$) and sugarless products ($\alpha = .93$).

Results and Discussion

As a control check on personal experience, a 2 (message: yes vs. no) \times 2 (construal level: abstract vs. concrete) ANOVA did not yield significant main effects or interactions for sugary products $F_s < 1.24$, nor for sugarless products $F_s < 3.55$. All participants had similar experiences regarding snacking on sugary products ($M = 3.42$, $SD = 1.38$) and sugarless products ($M = 4.22$, $SD = 1.66$).

We calculated the same global snacking preference index used in Study 1. This global index reveals the type of snacking that prevails in participants’ future preferences (Table 2). To evaluate the combined influence of the mixed-outcome message and construal level on snacking plans, we conducted a 2 (message: yes vs. no) \times 2 (construal level: abstract vs. concrete) ANOVA on the global snacking preference index (i.e., higher positive scores mean greater preferences for snacking sugarless products). The results revealed a significant interaction, $F(1, 96) = 4.00$, $p < .05$, $\eta_p^2 = .04$. Participants showed the highest scores for the global snacking preference index in the abstract-message condition (Table 2). This result shows a greater preference for snacking on sugarless products in the experimental condition where participants were in an abstract mindset and had to read a message describing the positive short- and negative long-term outcomes of snacking on sugary products. We note that results were similar when

message was read under an abstract way of thinking (i.e., personal disposition in Study1) that when the abstract mindset was induced after reading the message.

We analyzed these results separately for each type of snack. A planned-comparison test (1 vs. 3) between the message-abstract mindset and the other three conditions regarding the intention to snack on sugary products showed a significant difference, $t(96) = 2.62$, $p < .05$, $r = .26$. This follow-up on snacking on sugarless products was also significant, $t(96) = -2.11$, $p < .05$, a small effect size, $r = .21$. These results supported that when people read a message describing opposite outcomes taking place at different times and they were in an abstract mindset, they focused on distant outcomes to form their behavioral intentions and attempted to make healthier snack choices (see *Ms* and *SDs* in Table 2).

Study 3

Study 3 replicated the design and procedure described in Study 2 but focused on healthy behavior, “exercising on an ongoing basis” a behavior that promotes benefits in the long term but involves immediate costs.

Method

Participants

A total of 147 undergraduate volunteers at Universidad Autónoma de Madrid (Spain) participated in exchange for course credit (133 females, average age of 19.74 years, $SD = 3.03$). The participants were randomly assigned to condition.

Procedure

In the message condition, participants read a message describing the negative short-term (e.g., rearranging schedules) and positive long-term (e.g., improving your mood) consequences of exercising on an ongoing basis (see [Supplementary Material](#)). Then, they were required to complete the cognitive double prime described in Study 2. The participants in the no-message condition directly completed the priming task. Afterwards, all participants completed questions about their future behavioral intentions and personal past experience regarding exercising by using a 7-point scale ranging from 1 (*not at all*) to 7 (*very much*): “To what extent do you have the intention-expectation to practice physical exercise at least three days a week for approximately 40 minutes per session during the next month?” ($\alpha = .92$). We asked about past personal experience (in general/last month): “In general/the last month, have you exercised at least three days a week for approximately 40 minutes each time?” ($\alpha = .96$).

Results and Discussion

We verified a random assignment to experimental conditions by submitting their personal past experience to a 2 (message: yes vs. no) \times 2 (construal level: abstract vs. concrete) ANOVA test. We did not find significant main effects or interactions in past

Table 3. Means (SD) of Intention-Expectation Index in Study 3.

Experimental condition	Exercising
Abst.-message	5.07 (1.65)
Conc.-message	4.31 (2.01)
Abst.-no message	4.01 (2.33)
Conc.-no message	3.72 (1.95)

Abst.: abstract prime condition; Conc.: concrete prime condition.

experience, $F_s < 2.63$. The participants showed moderate practice of physical exercise ($M = 3.46$, $SD = 2.19$). As physical exercise is mainly considered a habit, we included personal past behavior in the following analysis as a covariate to control habit strength.

We calculated a 2 (message: yes vs. no) \times 2 (construal level: abstract vs. concrete) ANOVA test for behavioral plans to exercise regularly (i.e., at least 3 d a week for approximately 40 min each time in the following month), including past behavior as a covariate. The results showed a main effect when reading the message, $F(1,142) = 6.40$, $p < .05$, $\eta_p^2 = .04$; the participants who had read the message planned to exercise more regularly ($M = 4.70$, $SD = 1.86$) than those who did not read any text ($M = 3.86$, $SD = 2.13$). The influence of past experience was also significant, $F(1,142) = 161.1$, $p < .001$, $\eta_p^2 = .53$. More importantly, the interaction between the message condition and construal level condition was significant, $F(1,142) = 3.97$, $p < .05$, $\eta_p^2 = .03$. Based on the results obtained in Studies 1 and 2, we carried out a planned comparison test between the message-abstract mindset and the other three conditions regarding exercising. Results showed a significant effect, $t(143) = -2.86$, $p < .01$, a small effect size, $r = .23$. The participants who had read the message and were in an abstract mindset planned to exercise more than the others as a whole (Table 3). The 1 versus 3 comparison pattern was supported as in Study 2.

The ANOVA tests showed that when the message was not included, the construal level did not influence the future behavioral intention to exercise ($M_{\text{abst}} = 4.01$, $SD_{\text{abst}} = 2.33$ vs. $M_{\text{conc}} = 3.72$, $SD_{\text{conc}} = 1.95$), $F(1,66) = 1.66$, *ns.*; however, when the message had been read, the intention to exercise was greater for those in the abstract condition ($M = 5.07$, $SD = 1.65$) than for those in the concrete condition ($M = 4.31$, $SD = 2.01$), $F(1, 75) = 4.05$, $p < .05$, $\eta_p^2 = .05$. Past experience as a covariate was significant in the no-message condition, $F(1,66) = 101.25$, $p < .001$, $\eta_p^2 = .60$, and in the message condition, $F(1,75) = 68.12$, $p < .001$, $\eta_p^2 = .47$.

These findings supported the idea that people who had read a mixed-outcome message under an abstract mindset focused on distant future outcomes to form their behavioral intentions.

General Discussion

Health-risk behaviors are usually associated with opposing consequences that occur at different times, posing a dilemma between falling into temptation or resisting the lure. Because these mixed outcomes are often described in health promotion campaigns (Carrera, Muñoz, & Caballero, 2010), we explore how people can be persuaded to focus on distant consequences rather than immediate ones when both are described in this

type of two-sided message. Across three studies, we show how an abstract mindset promotes self-control by influencing people to focus more on the long-term (vs. short-term) outcomes detailed in the message; however, when neither type of consequence is presented (no-message condition), the effect of abstractness disappears.

Previous research on persuasive messages has tested the importance to consider the interaction between the characteristics of the audience and the type of message (Young, Subramanian, & Hinnant, 2016). For instance, extensive empirical results have shown how the level of abstraction moderates the influence of messages which include low- and high-level arguments (Fujita et al., 2008; Ledgerwood, Wakslak, et al., 2010; Spassova & Lee, 2013; Strathman et al., 1994). However, control conditions without messages were not included in those studies. We address this limitation by including control groups that are not exposed to any information.

Drawing on the research above, we conducted three studies in which participants read a mixed-outcome message; then, with an abstract or concrete mindset, they planned their behavioral intentions regarding the health-risk behavior mentioned in the message that they read. In Study 1, the participants who presented high-level construal tendencies (as measured by the BIF scale from Vallacher & Wegner, 1989) made healthier choices, preferring to snack mainly on sugarless products. Notably, this effect was not found when the mixed-outcome message was omitted.

Study 2 followed the same procedure as Study 1, although the construal level was manipulated with a cognitive double prime. The results also showed that, when the participants read a message that described opposing consequences at different times and they were under an abstract mindset, they based their behavioral intentions on long-term consequences (i.e., they preferred to snack less on sugary products and more on sugarless products). When the message was not included, this effect was not found.

In Study 3, the construal level was manipulated as in Study 2, but a healthy behavior (physical exercise) was tested instead of risky behavior. Exercise is associated with negative short-term and positive long-term outcomes. The results supported the expected matching effect. In an abstract mindset, people who had read the mixed-outcome message based their behavioral plans on the long-term outcomes, reporting stronger behavioral intentions to exercise regularly. As in Study 1 and 2, we only found a significant difference between abstract and concrete mindsets when the mixed message had been shown. The comparison between the message and no-message condition supports that an abstract mindset promotes healthier intentions when the mixed outcomes are previously presented.

Persuasive strategies combining an outcome message and construal-level manipulation have been successfully tested in actual recycling behavior (White et al., 2011). White and collaborators used a simple but brilliant procedure to manipulate the construal level and loss- or gain-framed messages in a real context (a marketing campaign in partnership with the City of Calgary's Waste and Recycling services department): a two-side door hanger on which the construal-level manipulation was presented on one side of the hanger (focusing on why or how people might recycle) and a loss-framed or gain-framed message presented on the reverse side of the hanger. This research shows that it is possible to extend results obtained in the laboratory to natural conditions. Different strategies can be used before a mixed message to change the construal level in

a natural setting. Messages framed in the distant future (Spassova & Lee, 2013) or with a moderate level of ambient noise (Mehta, Zhu, & Cheema, 2012) have been used to induce a more abstract mindset. Even specific colors, such as orange, in a commercial product may promote abstract affects (Bülbül & Menon, 2010).

In this vein, our studies suggest that an abstract construal level (as a personal trait or induced by instructions) promotes healthier behavioral intentions by leading people to focus on long-term rather than short-term outcomes when both are described in a message. Individually or in groups (e.g., school class, therapy groups) and in laboratory or natural contexts, health messages can be presented along with protocols to change the construal level and thus promote healthier intentions. We believe that this framework will contribute to future strategies that promote healthier behaviors.

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