When Healthy Is Scary: the Case of Detection Versus Prevention Health Messages

Chethana Achar, University of Washington, USA
Meng-Hua Hsieh, Pennsylvania State University, USA
Nidhi Agrawal, University of Washington, USA

We identify that engaging in a healthy behavior can be scary if it involves illness detection (vs. prevention). Five experiments demonstrate an interaction such that detection (vs. prevention) health messages are more persuasive under low (vs. high)-level thought and this is driven by the scariness of detection actions.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/1024696/volumes/v45/NA-45

[copyright notice]:
This work is copyrighted by The Association for Consumer Research. For permission to copy or use this work in whole or in part, please contact the Copyright Clearance Center at http://www.copyright.com/.
When Doing Healthy is Scary: The Case of Detection versus Prevention Health Messages

Chethana Achar, University of Washington, USA
Meng-Hua Hsieh, Pennsylvania State University-Harrisburg, USA
Nidhi Agrawal, University of Washington, USA

EXTENDED ABSTRACT

Engaging in a healthy behavior is often seen as a self-control issue and conceptualized as a tension between goal-oriented self-regulation and temptation-driven indulgences (Trope & Fishbach, 2000, 2005). As a result, much of literature on health consumption has identified that higher-level, goal-focused thinking increases healthy behavior (Agrawal & Wan 2009, Fujita & Han, 2009; Zhang et al. 2010). The intuition behind this is that higher-level thought (operationalized either as the construal or the mindset with which an action is considered) increases focus on the goal, while reducing focus on lower-level thoughts of indulgences, efficacy and resource concerns (Fujita et al. 2006).

The premise here is that the higher-level outcome (e.g., losing weight) is more desirable than the lower-level process (e.g., excersiz- ing everyday, avoiding high-calorie foods) and therefore higher (vs. lower)-level focus is more likely to lead to healthy behavior. We ask: does this premise hold true to all health consumption contexts? What if a healthy action was not a pleasant one? In the current research, we identify healthcare actions with outcomes that - while healthy - may be dreadful and therefore, undesirable. Specifically, we consider the case of messages that suggest illness detection health actions.

Consider a health message about mammograms claiming that “early detection saves lives” and encouraging women with risk of breast cancer to take the screening test. This is a detection message, which promotes actions that help early detection of health problems. Prevention messages, in contrast, suggest actions that prevent a health problem from developing in the future. An example is a sunscreen ad suggesting “shield yourself with sunscreen & prevent skin cancer.” In this way, health messages can be classified as two types with a clear demarcation between preventive and detective actions (Detweiler et al. 1999; Fielding 1978).

In current research, we demonstrate that detection (vs. prevention) health actions are associated with the scary outcome of finding out that one is ill. Next, we show that as a result of this dread, a higher (vs. lower)-level thought about the action reduces the persuasiveness of a detection (vs. prevention) health message. This is a reversal of past predictions. On the other hand, a lower (vs. higher)-level thought focuses on efficacy concerns and reduces the persuasiveness of prevention (vs. detection) messages. This replicates predictions from past research. We provide converging evidence for this phenomenon through a dual mediation process.

This work makes two major theoretical contributions to consumer behavior. First, we explore the understudied psychology of detection health messages (Keller and Lehmann 2008) and show that the unique dread associated with illness detection (vs. prevention) drives their persuasiveness. Second, we contribute to the literature on construal level & persuasion (White, MacDonnell, & Dahl, 2011) by showing when the predictions of the past literature about high (vs. low)-level thought hold, and when they reverse.

Theoretical Development

While both prevention and detection advocacies are types of messages that advocate healthy behaviors, they differ in how consumers might conceptualize these actions. Complying with a detection message might lead to discovery of an illness. On the other hand, complying with a prevention message might lead to maintenance of or improvement over the current state of health. Given this, is the outcome of, say, detecting skin cancer as desirable or pleasant as preventing skin cancer?

Detection Actions Have Scary Outcomes. Research has shown that individuals perceive detection behaviors as riskier than prevention behaviors because detection behaviors involve the risk of finding out whether they are ill (Kirsch 1983; Rothman et al. 1999). For example, complying with a health message promoting mammography can be construed as a gamble because getting a mammography involves the chance that one might get a positive test result for breast cancer. On the other hand, prevention behaviors can maintain one’s current health state and have little, if any, shortcomings. For example, complying with a health message promoting sunscreen use does not present a gamble; rather, sunscreen use is considered protection from future risks.

In the context of illness-detection, health actions have the dreaded outcome of finding out that one is ill. For example, the outcome of getting a mammogram is the possible detection of breast cancer. In contrast, outcome of engaging in an illness-prevention action is desirable. For example, the use of regular sunscreen leads to prevention of cancer. As a result of this difference, consumers are likely to view detection (vs. prevention) actions as taking a gamble (Rothman, Salovey, Antone, Kecough, & Martin, 1993).

Message Types and High (vs. Low)-level Thought. The important behavioral implication of viewing detection behaviors as scary is that focusing on the goal or outcome of the behaviors may reduce the likelihood of performing the goal-oriented action since individuals are reluctant to pursue that goal. This is counterintuitive to the extent literature which conceptualizes that higher level thought leads to focus on the outcome of a healthy behavior and is therefore more effective in comparison to lower-level thought which leads to focus on resources and efficacy (Agrawal & Wan 2009).

We posit that there is a message type and construal level match such that a) detection messages are more persuasive when combined with lower-level thought, and this is driven by reduced scariness of the behavior and b) prevention messages are more persuasive when combined with higher-level thought, and this is driven by goal focus.

Four experiments that systematically test this theory are reported below. In study 1, we demonstrate that participants anticipated that using a skin lotion would be scarier when they were told that it detects (vs. prevents) skin cancer. In study 2, we show that the scariness is reduced when individuals are made to elaborate on low (vs. high) level thought about a detection (vs. prevention) product and that this is moderated by disease severity. Participants were more likely to use a detection skin lotion when elaborating on how (vs. why; study 3) and use a detection dental rinse when in the process...
When Doing Healthy is Scary: The Case of Detection versus Prevention Health Messages (vs. outcome) mindset (study 4). These findings reverse for prevention messages. Study 3 also presents a dual mediation test to demonstrate that lowered scariness drives the effectiveness of detection messages whereas lowered efficacy concerns drive the effectiveness of prevention messages.

Study 1: Detection (Prevention) Actions are Scary

In Study 1a, our objective was to empirically verify the premise that the outcomes associated with detection (vs. prevention) actions are scary. For this purpose, we developed stimuli about a skin lotion (adapted from Mathur et al. 2013), which is presented as either designed to detection skin cancer (detection condition) or prevent skin cancer (prevention condition).

105 undergraduate lab participants (Mage = 21.20 years, 46 females) were assigned to a one-way (detection vs. prevention) between-subjects design. Each participant saw one of two health messages about a skin lotion. They were then asked to rate “how scary would it be to use this lotion (not scary at all = 1, very scary = 9)”, how much would you dread using this lotion “(not at all = 1, very much = 9)”. Participants anticipated that using the lotion would be scarier under the detection condition (M = 4.20) than the prevention condition (M = 2.48; t(103) = 3.20, p = .002).

This study conceptually replicates past literature that detection (vs. prevention) actions are perceived to be riskier (Rothman and Salovey 1997). This also empirically confirms the premise for the following studies. In study 2, we test if the scariness associated with detection (vs prevention) actions is changed based on high (vs. low)-level thought.

Study 2: ‘How’ (vs. Why) makes Detection (vs. Prevention) Actions less Scary

In Study 2, we tested the prediction that lower (vs. higher) construal thinking about the outcome of an action reducing the scariness associated with the outcome. Further, we used disease severity moderator as test of process. We reasoned that the scariness of engaging in detection (vs. prevention) actions would hold for high (vs. low) severity diseases. Study 2 (N = 230) had a 2 (advocacy: detection vs. prevention) X 2 (disease severity: high vs. low) X 2 (elaboration: how vs. why) design. Participants were presented with a health message about an oral rinse that either helped detecting or preventing a disease. The target disease was called dental plaque (low severity) or dental cancer (high severity). Participants were then instructed to write about how (vs. why) they would use the rinse (adapted from White, MacDonnell, & Dahl, 2011). A three-way ANOVA (F(7,218) = 4.73, p = .001) using an index of scariness (used in study 1) as the DV revealed that participants anticipated that they would be more scared using the oral rinse when it was framed as detecting (vs. preventing) and under high disease severity (b = 6.12, p = .007). Interestingly, thinking about how (vs. how) increased how scared they expected to be while using this rinse (b = 2.91, p = .004).

Study 2 provides evidence that low (vs. high)-level thinking about detection actions reduces the dread associated with them. This finding sets foundation for the following studies in which we test the thought-level and message type matching effect.


Study 3 tested that high (vs. low) construal thinking enhances healthy behaviors as response to prevention advocacies (as predicted by Fujita & Roberts, 2010), but reverses for detection advocacies (as predicted by current theory).

A panel of 205 participants were randomly assigned to one condition in a 2 (advocacy: detection vs. prevention) X 2 (elaboration: how vs. why) design. The primary dependent variable was their intentions to use the lotion by indicating their answers to “how likely are you to use this lotion”, “how interested are you in using this lotion” on a scale of 1 to 10 such that higher numbers are higher intentions.

Health Intentions. ANOVA results showed that participants in the detection condition were more likely to use the lotion when they thought about how (vs. why) (M_{det-how} = 7.89; M_{det-why} = 7.29), while those in prevention condition were more likely to use the lotion when they thought about why (vs. how) (M_{prev-how} = 6.89; M_{prev-why} = 7.67; F(1, 200) = 4.17, p = .042).

Dual Mediation. We had theorized that a thinking about how (vs. why) enhances the effectiveness of detection advocacies by reducing the scariness of the action, thinking about why (vs. how) enhances the effectiveness of the prevention advocacies by reducing the perceived difficulty of the action. Scariness and efficacy concerns were measured and used as two mediators in analysis (PROCESS Model 4; Hayes 2013). In case of detection advocacies, elaboration on why (vs. how) increased how scary using the lotion was and this mediated persuasion such that higher index of scariness reduced attitudes toward the ad (b = -13; 95% CI -.39, -07). Conversely, in the case of prevention advocacies, elaboration on why (vs. how) reduced the felt difficulty of prevention actions, acting as a mediator, such that reduced difficulty improved persuasion (b = .64; 95% CI .09, 1.26).

These results show that different processes drive the effectiveness of detection (vs. prevention) health messages under high (vs. low) –level elaboration. Detection health messages are more effective when associated with lower (vs. higher)-level elaboration – in contrast to findings in the past literature – and this is driven by scariness of detection. However, in case of prevention messages, we replicated the findings from past literature that high (vs. low) level thought is more effective and is driven by lowered efficacy concerns. In study 4, we present another test of process through moderation.

Study 4: Outcome vs. Process Mindset Influences Detection (vs. Prevention) of Dental Cancer

In study 4, we used another operationalization of high (vs. low) level thinking by inducing the participants with an outcome (high-level) or process (low-level) mindset. Further, to test that the underlying process in the effect is that of dread, we used relevance as a moderator, pre-measured as ratings of their perceived dental health while recruiting participants.

Relevance as test of process. Among individuals with poor dental health, detection is more likely to lead to discovery of dental cancer, therefore they are scared and more likely to use the product when thinking about the process (vs. outcome). However, among individuals with good dental health, detection is very low likelihood; therefore they are not threatened by it and are indifferent to outcome vs. process. Similarly, among individuals with poor dental health, prevention is a salient goal but are deterred by efficacy concerns (Fujita & Roberts 2010, Agrawal & Wan 2009). Therefore, they more likely to use the product when thinking about the outcome (vs. process). However, to individuals with good dental health, prevention is not a salient goal, therefore they are indifferent to outcome vs. process.

Procedure. In a 2 (mindset: outcome vs. process) x 2 (advocacy: detection vs. prevention) x 2 (relevance: high vs. low; continuous) design, 408 online participants (Mage = 34.43 years, 189 females) were asked to evaluate a ‘dental rinse’ and focus on the outcome.
(vs. process) of using the product. They were then presented health messages that framed the product as being a dental cancer detection or dental cancer prevention rinse. The 3-way model using product use intentions as dependent variable (adapted from study 3) was significant (PROCESS Model 3; Hayes 2013; F (7,400)=2.34, p=.023). The three-way interaction among independent variables was significant (b=.54, p=.04). Among participants who thought their dental health was bad (-1 SD on dental health; high relevance) were more likely to use the detection rinse when they were in the outcome mindset (b=1.31, p=.019), while they were more likely to use the prevention rinse when they were in the process mindset (b=-1.75, p=.002). Participants who thought they had good dental health (+1 SD on dental health; low relevance) were indifferent to mindset and message type (b=.02, p>.50) in forming their intentions.

Note. Means are provided as data labels. Under low relevance, means are not significantly different between message type and mindset conditions. Under high relevance, contrasts are significant (p<.05) between mindset conditions in both detection and prevention message types.

General Discussion

Using five experiments, this paper demonstrates that a) detection (vs. prevention) actions, are perceived to be scary, b) a lower (higher) level elaboration enhances the effectiveness of detection (prevention) advocacies, and c) two different processes jointly mediate this effect. This research presents implications to consumer behavior theory by identifying that a lower-level, ‘how’ construal might lead to healthier behavior when the outcome of the healthy action is scary.

One limitation of the set of studies reported here is that the thought level was manipulated as mindset or elaboration outside the health message. Future studies can test if framing the health messages at a high versus low level will replicate this effect.

Findings presented here offer insights to health marketers about the thought-level matching effect to promote the effectiveness of detection versus prevention advocacies.

REFERENCES


