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Using the Theory of Emotional Stakeholders to Experimentally Test the Influence of Proxy Communicators about Organizational Crises in Digital News Reports

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Inoculation message treatments for curbing noncommunicable disease development

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ABSTRACT

Objective.   *To study the effect of various types of inoculation message treatments on resistance to persuasive and potentially deceptive health- and nutrition-related (HNR) content claims of commercial food advertisers.*

Methods.   *A three-phase experiment was conducted among 145 students from a Midwestern U.S. university. Quantitative statistical analyses were used to interpret the results.*

Results.   *Results provide clear evidence that integrating regulatory focus/fit considerations enhances the treatment effectiveness of inoculation messages. Inoculation messages that employed a preventative, outcome focus with concrete language were most effective at countering HNR advertising claims. The findings indicate that inoculation fosters resistance equally across the most common types of commercially advertised HNR product claims (e.g., absolute, general, and structure/function claims).*

Conclusions.   *As the drive to refine the inoculation process model continues, further testing and application of this strategy in a public health context is needed to counter ongoing efforts by commercial food advertisers to avoid government regulations against deceptive practices such as dubious health/nutrition claims. This research advances inoculation theory by providing evidence that 1) good regulatory fit strengthens the effect of refutational preemption and 2) an inoculation approach is highly effective at fostering resistance to commercial advertisers' HNR content claims. This macro approach appears far superior to education or information-based promotional health campaigns targeted solely at specific populations demonstrating rising rates of noncommunicable disease.*

Key words   Health communication; health promotion; persuasive communication; chronic disease.

Currently, noncommunicable diseases (NCDs) such as cardiovascular diseases, cancers, diabetes, and chronic respiratory diseases are a primary threat to human health and development. NCDs affect populations of all ages, ethnicities, and nationalities. This research was conducted in an effort to inform public health campaign engagement efforts to target this growing public health threat.

The aforementioned diseases are reaching epidemic proportions worldwide (1). According to former World Health Organization (WHO) Assistant Director-General for Noncommunicable Diseases and Mental Health, Ala Alwan, these four diseases are the world's biggest killers, causing an estimated 35 million deaths or 60% of all deaths globally (2). Within the United States, individuals with one or more chronic conditions account for 72% of physician visits, 76% of hospital admissions, 80% of total hospital stays, 88% of prescriptions, and 96% of home health care visits (3). These conditions strain health care infrastructure and are emerging at earlier stages

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in the life cycle. NCDs can be averted by eliminating known risk factors (tobacco use, unhealthy diet, physical inactivity, and the harmful use of alcohol), so the development of successful strategies for improving health and nutrition is an important public health goal.

Poor dietary choices including sweets, snacks, and takeout foods have been associated with higher body mass index (BMI) rates in adults, children, and adolescents (4). Missing breakfast and poor nutritional quality of breakfasts have also been associated with high BMI rates (5, 6). Links have been established between higher BMI rates and obesity, a known contributor to the development of NCDs, particularly among emerging adults.

This investigation posits one way to circumvent the rising rates of NCDs is to address the health-and nutrition-related (HNR) product claims of commercial food products by inoculating the audience against their persuasive, and potentially deceptive, appeals. Three categories of HNR commercial food advertising claims were selected for this investigation as a result of their prominence and prevalence: absolute; general nutrition; and structure/function. Absolute HNR claims typically include terms such as "fat free," "reduced sodium," "high in fiber," and "an excellent source of calcium." General nutrition HNR claims use nonspecific terms such as "wholesome" and "nutritious" to imply that consumption is beneficial. Structure/function HNR claims assert various ways in which a product may affect the structure or function of the body (e.g., "calcium builds strong bones") but do not mention or imply a relationship with disease (7).

Inoculation and orientation

In biomedical terms, the use of inoculation message treatments to confer resistance to deceptive advertising would be analogous to immunizations to increase immunity from infection. Persuasive message inoculation builds resistance to counter-attitudinal influence. Initial inoculation studies posited the inoculation process worked through the interrelated mechanisms of threat and refutational preemption, which fosters counter-argumentation. These key components of inoculation message treatments have been confirmed empirically in a variety of laboratory settings (8–16).

Threat serves as a motivational trigger, emboldening the target to prepare counter-arguments in anticipation of an attack. By psychologically bolstering positive health-related attitudes, individuals are sensitized to the outcomes of behaviors that negatively affect personal health.

Regulatory focus research—with its notion of "good" and "bad" regulatory fit—has been incorporated into a variety of contexts, including social policy issues (17), health behaviors (17, 18), commercial advertising (19), and political communication (20). Regulatory focus/fit theory posits there are two fundamental self-regulatory systems: those dealing with positive-outcome focus and those dealing with negative-outcome focus (21, 22). This theory challenges the common assumption that humans automatically gravitate toward pleasure and avoid pain, positing specific goal-pursuit strategies (eagerness versus vigilance) as methods to achieve the most optimal fit between goal orientation and effort toward goal attainment, and providing a framework for integrating motivational aspects of regulatory orientation with the refutational preemption component of inoculation messages to boost treatment effectiveness.

In the inoculation context, the requisite threat mechanism sensitizes participants by making them aware of their vulnerabilities, and serves as a motivational catalyst to cognitively fortify their attitudes in anticipation of an expected counter-attitudinal attack. Refutational preemptions provide the content required to defend the held attitude against counter-attitudinal persuasive appeals, with the goal being to preserve the held attitude, whereby resistance is conferred. To the best of the authors' knowledge, no previous research has examined how regulatory focus orientations might function within the resistance process, a question that is extremely relevant in terms of the design of message content for health-based promotion campaigns. Both positive- and negative-outcome focus are expected to vary the efficacy of inoculation treatments in conferring resistance, because inoculation's threat component defensively postures an individual toward a vigilant goal pursuit strategy and bolsters counter-argumentation through negative-outcome focus. Based on the assumptions of these two theories, the following

hypothesis (*H1*) was devised: Relative to the positive-outcome–focused conditions, inoculation treatments employing a negative-outcome–focused refutational preemption will confer more resistance to a counter-attitudinal attack, demonstrated by: 1) less positive attitudes toward the attack; 2) greater elicited threat; and 3) greater counter-argumentation.

Previous research has examined how language used within positive-outcome and negative- outcome focus may influence message effectiveness (23). When a positive-outcome focus is primed, individuals are sensitized and more receptive to positive outcomes, and therefore more optimally responsive to generalized concepts imparted through language that is more abstract, which is more akin to a state of eagerness. Conversely, when a negative-outcome focus is primed, individuals are sensitized to negative outcomes and therefore more optimally responsive to specific, detailed, concrete information deemed useful in achieving goals.

For example, instructing a student that "to achieve an A grade" he/she must "come prepared to learn and participate" is a positive-outcome–focused directive—general abstract instructions for goal attainment designed to achieve the presence of a positive outcome "achieving an A." For a vigilant, negative-outcome–focused orientation, the goal would remain the same but would be framed differently (e.g., "to avoid achieving less than an A . . ."). In this scenario the student might be instructed to "read the chapter contents, engage in class discussions, and take thorough notes." These latter instructions, in contrast to the aforementioned, are specific, concrete, and designed to achieve the absence of a negative outcome ("achieving less than an A").

In the resistance context, the goal is the protection of a held attitude from a persuasive attack (within the context of this study, deceptive HNR product claims). The linguistic signatures of abstract and concrete language have been found to affect the regulatory focus of individuals, and inoculation messages function as general warnings against possible negative outcomes. Therefore, the following hypothesis (*H2*) was devised: Compared to refutation treatments employing abstract language, those that employ concrete language will confer higher levels of resistance against persuasive attack,

demonstrated by: 1) less positive attitudes toward the attack; 2) greater perceived threat; and 3) higher levels of counter-argumentation.

The authors hold that inoculation messages are effective in vigilant goal pursuit strategies because the "threat" component warns recipients of the presence of negative outcomes (or the absence of positive outcomes) while the refutational preemptive mechanism provides the content needed for fortifying attitudes against expected attacks. Concrete linguistic signatures are characterized as both detailed and specific, whereas abstract linguistic signatures are characterized as more general and vague. As both types of messages are designed to prevent negative outcomes, the following hypothesis (*H3*) was devised: Message outcome focus will interact with linguistic signature such that refutation treatments employing a good fit (e.g., negative-outcome focus using concrete language, or positive-outcome focus using abstract language) will confer higher levels of resistance to expected attacks, demonstrated by: 1) less positive attitudes toward the attack; 2) greater perceived threat; and 3) higher levels of counter-argumentation.

MATERIALS AND METHODS

This research is inherently unique because it integrates insight from regulatory focus/fit theory with a main component of inoculation theory (refutation preemption) and assesses the impact of the resulting strategy on resistance toward persuasive HNR product claims to build evidence for its potential use in curbing NCD development. Study participants were 55% female, emerging adults (18–25 years old) recruited from introductory courses from a Midwestern U.S. university. All materials and methods were approved by the university's institutional review board for the protection of human subjects. Data collection required three phases extending across a five-week period conducted over two semesters. A total of 167 subjects participated in Phase 1. Of those, 152 completed Phase 2 and 145 completed Phase 3 (resulting in an 86.8% retention rate).

Pilot test

All inoculation messages were pilot tested for perceived lexical concreteness using a scale developed by Miller et al. (24) that provides a definition for concreteness plus examples of concrete and abstract statements. Participants were given a definition of concrete language, along with a few examples, and then asked to evaluate a message using a six-point Likert scale, with a score of "0" defined as "not concrete" and a score of "5" defined as "very concrete." Questions included the following: "How concrete was the message you just read about healthy food?" and "How does this message on healthy food compare to most other messages you have seen on this same subject?" (two-item, $\alpha = 0.71$). Distribution was counterbalanced.

Message construction

Four messages were prepared. The first paragraph of each inoculation message was designed to generate threat. Participants were warned that 1) although they may perceive certain food products as being healthy, many might not in fact be healthy and 2) they may be exposed to persuasive commercial appeals from food advertisers that could cause them to question their perceptions of what constitutes a healthy food choice.

The second and third paragraph of each message was used to bolster the strength of the attitude toward healthy food intake based on expected counter-arguments. Each refutational preemption raised three arguments against participants' attitudes and then provided systematic refutations to each of those arguments. The arguments were derived from the top predictors of typical food selection practices (25). The topics of cost, taste, and accessibility were preemptively refuted.

The positive-outcome focus included statements such as: "Eating healthy food is good for your health; it is easily accessible, reasonably priced, and tastes great." The negative-outcome focus included statements such as: "Eating unhealthy food is bad for your health; it is usually more expensive at drive-through windows, and has been linked to disease." In addition, each of these regulatory orientations employed a linguistic signature utilizing either concrete or abstract language. Concrete messages included statements such as: "Food advertisers commonly use terms such as 'fat-free,' 'reduced sodium,' or 'high fiber' to indi-cate what is or is not healthy." Abstract messages included statements such as: "Food advertisers use broad, general terms to indicate whether food is healthy or not."

To control for extraneous factors, and because language and other variables can affect the outcome of message processing, an index that measures English contingency by calculating the number of words and nouns in each sentence (26) was used to ensure consistency in the writing style and readability of the inoculation treatments. Each of the inoculation messages featured identical font size, typeface, layout, and paper size. Only the printed title of the fictitious source of the inoculation messages (*Center for a Healthy America*) was provided. The length of the four inoculation messages ranged from 353 to 358 words. The contingency rating ranged from 12.2 to 12.8, suggesting equivalence in readability.

Attack messages

The attack messages were laminated copies of actual grocery store item food content claims (absolute, general nutrition, and structure/function) widely promoted throughout the Americas region. Each participant received one HNR attack message. The control group received no inoculation messages but participated in all assessments.

Procedures

Phase 1 included the collection of basic demographic information and information about initial attitudes about health and nutrition. After the data collection, participants were assigned to various condition categories. As inoculation can only bolster preexisting attitudes, participants with negatively valenced attitudes toward health and nutrition were dropped from the study. Those who indicated a positive attitude toward health and nutrition (scoring 3.5 or more on the seven-point Likert scale) were randomly assigned to one of four conditions based on outcome focus (negative/positive) and linguistic signature (abstract/concrete).

Phase 2 took place over a two-week period immediately following Phase 1 randomization. In Phase 2, participants received one of four different inoculation messages in text format.

Phase 3 commenced 7–14 days after the Phase 2 inoculation treatment. A delay is necessary to allow participants time to generate arguments to defend their positions (27). In Phase 3, all participants and members of the control group received a counter-attitudinal attack message, and criterion variables were measured (threat, attitude toward attack, and counter-argumentation).

Predictor variables

Predictor variables included treatment condition (inoculation/control), outcome focus (positive/negative), and linguistic signature of the message (concrete/abstract).

Initial attitudes. To gauge attitudes toward health and nutrition, participants were asked to indicate their overall impression of health consciousness on a four-item, seven-point semantic differential scale employing the following polar adjectives: "negative"/"positive," "dislike"/"like," "bad"/"good," and "undesirable"/"desirable." This scale has demonstrated good internal consistency in past research (28) and did so in the current study as well ($n = 143$; four-item, $\alpha = 0.93$).

Threat was assessed using five bipolar adjacent pairs ("nonthreatening"/"threatening"; "not harmful"/"harmful"; "unintimidating"/"intimidating"; "not risky"/"risky," and "safe"/"dangerous") measured on a seven-point semantic differential scale used in past inoculation research (29–31). The results demonstrated good internal consistency ($n = 146$; five-item, $\alpha = 0.93$).

Criterion variables

Criterion variables were measured after the inoculation treatments in Phase 2 ("threat") and after the attack message in Phase 3.

Counter-argumentation. Extant inoculation literature has assessed counter-argumentation using several approaches, including thought-listing, checklisting, and hybrid models (31, 32). The current study employed a check-off procedure in which subjects were instructed to 1) check off arguments opposed to their position on the subject; 2) revisit the list and check off how they would counter-argue against those positions;

and 3) score each argument from 1–7 based on the respective strength of argument quality (with "1" defined as "weak" and 7 defined as "strong"). This procedure has been used in past inoculation research (14, 31).

The assessment was conducted in Phase 3, following the distribution of the attack messages to all participants and control group members, using a questionnaire designed to measure attitudes toward the persuasive attack based on six bipolar adjacency pairs ("unacceptable"/"acceptable," "foolish"/"wise," "negative"/"positive," "unfavorable"/"favorable," "wrong"/"right," and "bad"/"good") measured on a seven-item semantic differential scale (33). The results indicated good internal consistency ($n = 146$; six-item, $\alpha = 0.89$).

RESULTS

Multiple strategies were used to analyze the data. The section below reports the pilot test results of the messages used in the experiment to assess the manipulation of concreteness (i.e., the linguistic signature); the check on the perceived threat; and the multivariate and univariate analyses used to assess the hypotheses.

Pilot testing and manipulation check

Messages were pilot tested among 26 participants to ensure the linguistic signatures, both abstract and concrete, were in fact distinct. A paired sample t-test revealed a significant mean difference between the abstract and the concrete messages ($t(25) = 10.85$, $P < 0.001$, $r = 0.58$), indicating the abstract messages were perceived to be significantly less concrete (i.e., more abstract) (mean (M) = 2.53, standard deviation (SD) = 0.95) than the concrete messages (M = 4.21, SD = 0.68).

Given that threat is a requisite mechanism within the inoculation process, a manipulation check was conducted to ensure a significant level of threat was elicited by the inoculation treatments. An independent sample t-test revealed significant differences between the participant and control groups ($t(142) = 4.10$, $P < 0.001$, $r = 0.33$). Compared to the control group (M = 2.81, SD = 1.54), the participant group perceived increased levels of threat (M = 4.00, SD = 1.38).

$H1$ hypothesized that the refutational frame, as either a negative-outcome focus or a positive- outcome focus, would vary

the effectiveness of an inoculation pretreatment. A 2×2 (inoculation/control $\times$ negative-/positive-outcome focus) multivariate analysis of variance was computed on the following variables: attitude toward the attack, perceived threat, and Phase 3 counter-argumentation. Test results indicated a significant effect for outcome focus (F-test (F)(3,86) = 6.04, $P = 0.001$, partial $\eta^2 = 0.17$). Univariate results for outcome focus revealed significant differences for negative- and positive-outcome focus on perceived threat (F(1,88) = 7.60, $P < 0.05$, partial $\eta^2 = 0.08$); attitude toward the attack (F(1,88) = 4.50, $P < 0.05$, partial $\eta^2 = 0.08$); and Phase 3 counter-argumentation (F(1,88) = 8.56, $P < 0.05$, partial $\eta^2 = 0.09$).

Participants assigned to the negative-outcome focus condition generated significantly more Phase 3 counter-arguments (M = 4.52, SD = 1.89) than those assigned to the positive-outcome focus condition (M = 3.36, SD = 1.41), indicating higher levels of resistance to the persuasive attempt. In addition, participants assigned to the negative-outcome focus condition held attitudes that were more negative toward the attacking source (M = 4.48, SD = 1.25) compared to participants assigned to the positive-outcome focus condition (M = 5.08, SD = 1.04). Finally, as expected, participants assigned to the negative-outcome focus condition perceived elevated levels of threat (M = 4.34, SD = 1.15) compared to those assigned to the positive-outcome focus condition (M = 3.58, SD = 1.42).

According to $H2$, the outcome focus of the refutational preemption within the message would vary the treatment's efficacy, and the linguistic signature of the inoculation messages, as either abstract or concrete, would affect the resistance process. To assess the influence of linguistic signature, a multivariate analysis of variance was computed on attitude toward attack, perceived threat, and Phase 3 counter-argumentation. Multivariate test results indicated a significant effect for the linguistic signature (F(3,86) = 3.17, $P < 0.05$, partial $\eta^2 = 0.10$). Subsequent analysis of the univariate results indicated a significant main effect for linguistic signature on participant attitudes toward the attacking source (F(1,88) = 4.89, $P < 0.05$, partial $\eta^2 = 0.05$) and on Phase 3 counter-argumentation (F(1,88) = 4.31, $P < 0.05$, partial $\eta^2 = 0.04$). No significant effect on perceived threat (F(1,88) = 0.75, $P = 0.38$) was found for this variable.

FIGURE 1. Phase 2 elicited threat, Phase 3 attitude toward (resistance to) attack, and counter-argumentation as a function of regulatory focus and linguistic signature (no inoculation control, concrete-promotion, concrete-prevention, abstract-promotion, abstract-prevention) in a study conducted among 145 university students to test the effect of inoculation message treatments on resistance to persuasive and potentially deceptive health- and nutrition-related (HNR) content claims of commercial food advertisers, Pittsburg, Kansas, USA, 2012[a]

Inoculation treatment differences across regulatory focus and linguistic signature conditions
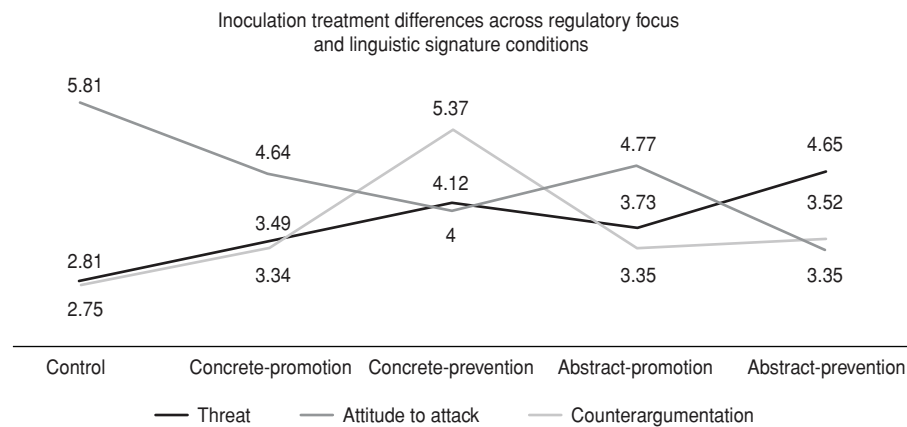
[a] Elicited threat and attitude toward (resistance to) persuasive attacks were gauged using seven-point scales; higher scores indicate greater elicited threat. Counter-argumentation was assessed using a checklist procedure; higher scores signify more counter-argumentation.

The findings indicate participants inoculated with concrete language in the refutational preemption generated more Phase 3 counter-arguments (M = 4.38, SD = 1.86) than participants inoculated with abstract language (M = 3.42, SD = 1.49), and held more negative attitudes toward the attacking source (M = 4.48, SD = 1.34) than those inoculated with abstract language (M = 5.14, SD = 0.88) (Figure 1). No significant differences were found for linguistic signature on threat between the two conditions (concrete, M = 3.78, SD = 1.33; and abstract, M = 4.09, SD = 1.37).

To further qualify the main effects resulting from outcome focus and linguistic signature, *H3* posited a "value from fit" interaction in which messages employing a good fit between outcome focus and linguistic signature (concrete coupled with negative-outcome focus and abstract coupled with positive-outcome focus) would confer greater resistance to attack than those employing a bad fit (concrete coupled with positive-outcome focus and abstract coupled with negative-outcome focus), demonstrated by elevated counter-argumentation, more negative attitude toward the attack, and greater perceived threat.

To assess the impact of "fit" on the resistance process, a 2 (focus) x 2 (fit) multivariate analysis of variance was computed on attitude toward attack, perceived threat, and Phase 3 counter-argumentation. Results indicated a significant interaction between focus and linguistic signature ($F(3,86) = 4.05$, $P < 0.01$, partial $\eta^2 = 0.12$). Further examination of the fit condition revealed this hypothesis was partially supported in that value from fit significantly affected Phase 3 counter-argumentation ($F(1,88) = 7.70$, $P < 0.01$, partial $\eta^2 = 0.08$). However, it did not affect attitudes toward the attacking source ($F(1,88) = 1.10$, $P = 0.30$) or the perceived threat ($F(1,88) = 0.36$, $P = 0.55$). Results indicated participants in the "good fit" condition engaged in higher levels of counter-argumentation (resistance) (M = 4.31, SD = 1.83) than those in the "poor fit" condition (M = 3.41, SD = 1.52).

DISCUSSION

At the February 2011 Regional High-Level Consultation of the Americas on Non-communicable Disease Development, WHO Director General Margaret Chan made the following statement acknowledging the need for tactics to address the issue of persuasive advertising for potentially harmful products: "More and more people are living in societies that allow the sale of tobacco products and the seductive marketing of foods and beverages that are cheap, convenient, tasty, filling, and very bad

for [their] health" (34). While regulation and education have dominated response strategies by policy-makers, the current research aimed to help determine how public health campaigns that integrate inoculation insights could help curb the rising rates of NCDs. To the best of the authors' knowledge, this was the first inoculation study to integrate aspects from regulatory focus/fit theory as a rationale for the message design of refutational preemptions within inoculation messages.

These findings have important implications for health-based promotional campaigns designed to address the rising rates of NCDs by inoculating target populations against the persuasive impact of distorted or deceptive HNR content claims. The results are clear: compared to both the control group and participants who received a positive-outcome–focused inoculation treatment, participants who received a negative-outcome–focused inoculation treatment held more negative attitudes toward the attacking source, perceived greater levels of threat, and generated elevated levels of counter-arguments. Messages that employed a negative-outcome focus motivated participants to engage in a state of vigilance in anticipation of an expected counter-attitudinal attack (threat) and conferred the most resistance against persuasive HNR claims.

In addition to the macro approach used in the current research, this strategy could be targeted specifically to the food selection practices of vulnerable populations, which are demonstrating rising rates of obesity that contribute to NCD development. The findings from the current study could provide heuristic insight relevant to message development for health campaigns.

A significant limitation of the current investigation was the reliance on the checklisting procedure as opposed to the thought-listing procedure to capture counter-argumentation. The checklisting procedure has been used in a variety of recent studies (14). Many difficulties emerged for both the participants and the researchers due to the use of this method. Although participants were given both written and verbal instructions on how to use the research instrument, many found it extremely difficult to "think through" the questions and respond accurately. In addition, the use of this method exposed participants to counter-attitudinal posi-

tions they may not have thought of on their own. While the checklisting procedure method seemed appealing in theory, based on the assumption that it would reduce errors resulting from coders' subjective evaluations of the thought-listing technique, it introduced many challenges to understanding the data.

The reported findings are of significant relevance to public health campaign directors and facilitators as well as policy-makers. As opposed to health-based initiatives designed to educate or persuade individuals, this form of strategic campaign engagement is designed to preserve and bolster health-conscious attitude bases and facilitate resistance to ambiguous or deceptive HNR product claims. The vitality and utility of this macro approach derives from 1) inoculation messages' efficacy in conferring resistance across broad population bases, 2) the duration of the effects, and 3) the distributional ease of using this strategy across a wide variety of communication mediums. Inoculation messages have been found to be effective immediately after a treatment (35), a few days after a treatment (36), a few weeks after a treatment (37), and even a few months after a treatment (38). Therefore, the potential value of this form of strategic communication engagement appears promising. Although the sizes of the inoculation effect, overall, appear to be relatively small in magnitude, they remain meaningful nonetheless (38). Even small effect sizes in this context can benefit public health when the inherent value resulting from their application has a demonstrable impact on a larger population.

While the drive to refine the inoculation process model continues, the application of this strategy in other public health contexts is needed to counter ongoing efforts by commercial food advertisers who shroud products with exaggerated or embellished HNR claims and attempt to evade government deceptive-practice regulation. NCDs are not caused by one specific dietary choice but develop as a result of an ongoing pattern of food selection practices. Prevention efforts that fortify health-conscious attitudes early in the life cycle are essential to motivating individuals to engage in healthy food selection practices later in the life cycle. Inoculation is a message strategy that can help facilitate this process.

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RESUMEN

Tratamientos mediante mensajes de inoculación para contener la aparición de enfermedades no transmisibles

Objetivo. Estudiar el efecto de diversos tipos de tratamientos basados en mensajes de inoculación sobre la resistencia a los reclamos de los anunciantes de alimentos comerciales con contenidos persuasivos y potencialmente engañosos relacionados con la salud y la nutrición (RSN).

Métodos. Se llevó a cabo un experimento en tres fases en el que participaron 145 estudiantes de una universidad del centro oeste de los Estados Unidos. Para interpretar los resultados, se utilizaron análisis estadísticos cuantitativos.

Resultados. Se obtuvieron datos probatorios claros de que la integración de las consideraciones de la teoría del enfoque/ajuste regulador mejoran la eficacia de los tratamientos basados en mensajes de inoculación. Los mensajes de inoculación que adoptaron un enfoque de prevención de resultados y utilizaron un lenguaje concreto fueron más eficaces en contrarrestar los reclamos publicitarios RSN. Se observó que la inoculación fomenta la resistencia por igual frente a los tipos más frecuentes de reclamos RSN de los productos anunciados comercialmente (reclamos absolutos, generales, y de estructura y función).

Conclusiones. Mientras se mantienen los intentos de perfeccionar el modelo del proceso de inoculación, es preciso seguir poniendo a prueba y aplicando esta estrategia en un contexto de salud pública con objeto de contrarrestar las iniciativas regulares de los anunciantes de alimentos comerciales para evitar las reglamentaciones gubernamentales contra prácticas engañosas tales como los reclamos equívocos en materia de salud y nutrición. Esta investigación promueve la teoría de la inoculación al proporcionar datos probatorios de que 1) un buen ajuste regulador fortalece el efecto de la prevención refutadora; y 2) un método de inoculación resulta ser muy eficaz en fomentar la resistencia a los reclamos con contenidos RSN de los anunciantes comerciales. Este enfoque macro se muestra muy superior a las campañas de promoción de la salud educativas o basadas en la información dirigidas exclusivamente a poblaciones específicas que presentan tasas ascendentes de enfermedades no transmisibles.

Palabras clave   Comunicación en salud; promoción de la salud; comunicación persuasiva; enfermedad crónica.