A Psychophysiological Perspective of the Stress-Buffering and Persuasive Impact of Positive Communication Style

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Consumers’ search for health information is often prompted by a personal encounter with health threat and plagued by stress experience. Based on a psychoneuroendocrine (PNE) model of stress, we examined the stress-buffering and persuasive impact of positive vs. neutral communication style on consumers facing health threat. We found that compared with the neutral communication style, the positive style alleviated consumers’ psychological and physiological stress reactivity. Further, the positive communication style induced superior persuasive outcome by alleviating the negative impact of negative emotions and physiological arousal on persuasion.

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EXTENDED ABSTRACT

Consumers’ search for health information is often prompted by their personal encounter with health threat. At the time when consumers resort to health information, they are often under considerable stress. Thus, health communicators must strive to alleviate stress while at the same time maximize persuasive impact. In this study we look at the stress-buffering and persuasive impact of positive communication style, via the use of positive peripheral pictures, on consumers facing health threat. Different from prior studies, we used a psychoneuroendocrine (PNE) model of stress, which views stress as an integrated process that involves affective, autonomic and endocrine changes. The PNE approach allows us not only to examine the role of positive communication style in alleviating both psychological and physiological stress reactivity but also to uncover the psychophysiological mechanisms underlying the persuasive effect of positive communication style.

Studies from positive psychology suggest that for individuals under stress, positive stimuli have the potential to alleviate psychological and physiological stress reactivity. Based on the PNE model of stress, we hypothesize that for consumers who have undergone a health threat, health communication presented in a positive style by using positive peripheral pictures will reduce psychological distress, and autonomic and endocrine reactivity than health communication presented in a neutral manner (H1).

Research evidence suggests that people under stress concurrently engage in two modes of coping, that is, approach and avoidance. Approach coping represents a cognitive and emotional orientation toward threat or threat-related information, whereas avoidance coping represents an orientation away from threat or related information. Research has shown that positive stimuli and its ensuing positive affect can broaden one’s thoughts and actions repertoire and facilitate cognitive processing of potentially threatening information. We thus hypothesize that for consumers facing health threat, positive communication style will lead to better persuasive outcome than neutral communication style (H2). We further hypothesize that the impact of positive communication style on consumers under stress will be mediated by changes in affective and physiological responses. Specifically, when communication is presented in a neutral style, the unmitigated psychophysiological responses will have negative impacts on persuasion. However, when the same information is presented in a positive style via positive peripheral pictures, the negative impact of psychophysiological reactivity will be attenuated (H3).

Hypotheses were tested through a 2x2 (stress condition: stress vs. no stress) x 2 (communication style: positive vs. neutral) between-subject design. Eighty healthy women from the local community participated in the study. Participants first preformed a mental imagery task, which was used to manipulate stress, and then a web-browsing task, which was used to manipulate communication style. In both tasks, autonomic and endocrine responses were continuously measured. Mood and endocrine responses were measured three times: before the imagery task, between the imagery and the web-browsing tasks, and after the web-browsing task. Finally, the persuasive impact of health communication was measured using a self-administered questionnaire.

Stress was manipulated using a guided mental imagery task which pertains to health-related scenarios: osteoporosis prevention (the no-stress condition) and a mammogram screening procedure (the stress condition). In the stress condition, participants were led to imagine, with the aid of computed-mediated instructions and audio-visual cues, detecting a suspicious lump in the breast, going through a mammogram screening procedure and finally reaching the point of waiting for screening results. In the no-stress condition, participants imagined several low-risk scenarios such as paying a routine visit to the physical therapist and engaging in mild exercise.

Communication style was manipulated through a consumer health information website, which offers information and recommendations on various healthy lifestyle behaviors. The positive communication style was operationalized by embedding non-content-related background color pictures of natural scenery on the periphery of the webpage. These pictures had been pre-tested to elicit positive affect relative to neutral stimuli. In the neutral communication style condition, the same information was presented without using peripheral pictures. Except for the presence/absence of pictures, the information and recommendations in both conditions were identical in all other aspects.

Psychological responses were measured using the short form of the Profile of Mood States (POMS-SF). Following standard scoring procedure we calculated an index of negative mood and an index of positive mood. Autonomic responses were measured using a computer-based physiological data acquisition system. Two measures of autonomic response were derived: skin conductance level (SCL) and heart rate variability (HRV). Endocrine response was indexed by salivary cortisol. Persuasive impact was measured in terms of attitude toward the health communication.

The analysis shows that compared with health information communicated in a neutral style, information presented in a positive style alleviated psychological, autonomic and endocrine stress reactivity. Thus H1 was supported. Moreover, for stressed consumers the positive communication style also induced superior acceptance of the persuasive messages, thereby supporting H2. A further look at the PNE mechanisms suggests that for stressed consumers, the positive communication style increased the persuasive impact relative to the neutral style by changing the nature of the effect of PNE responses on persuasion. Specifically, for stressed consumers the PNE reactivity had negative effects on persuasion when the information is presented in a neutral style, but a positive impact on persuasion when the same information is presented in a positive style. These findings supported H3.

Although the stress-buffering influence of positive stimuli is not new to researchers, it is the first time that we observed such an influence in a communication context. Perhaps more importantly, our findings shed light on the underlying psychophysiological mechanisms of the persuasive impact of positive peripheral cues. Our findings show that affective, autonomic and endocrine changes during exposure to communication each uniquely mediated the persuasive impact of positive communication style. These findings suggest that an exclusive focus on psychological aspect of stress experience, as is typical of current literature, may have neglected important mechanisms underlying attitudinal change under stress.
References