Physician, Heal Thyself: Positive Affect, Risk, and Treatment Decisions in Health Care

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Our paper looks at the influence of positive affect in a high stakes decision making domain, i.e. health care. In a series of studies, we examine the role that positive affect plays in physicians’ risk assessments and treatment recommendations. We find that positive affect plays an important role in physicians’ clinical judgments, even in standard treatment situations. We look specifically at differences in propensity to recommend traditional vs. non-traditional treatments. We also consider patient preferences to determine when physician behavior is more likely to be congruent with patient preferences for care.

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SESSION OVERVIEW

Positive emotions have been gaining more empirical attention in the last decade. The objective of this symposium is to examine the theory and application of the effects of positive emotions, both specific and general, in consumer contexts. The research presented contributes to the emotions and decision making literature by examining new effects of specific positive emotions, investigating the influence of the source of the emotion on choice, and investigating applications in health care.

The first paper shows that specific positive emotions, joy and contentment, lead to different outcomes: individuals who experience joy are more likely to use approach motivation, find gain-framed messages more compelling (and change actual behavior), and be more risk seeking; individuals who experience contentment are more likely to use avoidance motivation, find loss-framed messages more compelling, and be more risk averse. The second paper focuses on attribution of one’s positive mood, either to the self or to the environment. If happiness is attributed to the self, individuals are more likely to focus on internal sources of happiness (one’s behavior) rather than external sources of happiness (e.g., chocolate). The reverse is true for unhappiness. The third paper shows that physicians who experience positive emotions (vs. neutral emotions) toward their patients (empathy and sympathy) tend to overestimate the risk associated with high severity diseases and offer a larger range of treatments.

EXTENDED ABSTRACTS

“All Positive Emotions Are Not Created Equal: The Case of Joy and Contentment”
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Positive emotions, with happiness as their representative, have been shown to promote approach behaviors because the enhanced feelings of energy and vigor increase the subjective perception that one is capable of performing these behaviors (Cacioppo et al. 1993). In this paper we investigate two distinct positive emotions, joy and contentment, and find that they have a different influence on individuals’ choice of motivation and consequently their behavior. We focus on these emotions because while both are positive, they are distinct and therefore easy to manipulate and measure (Fredrickson and Branigan 2005). Building on previous literature (Fredrickson 1998) we suggest that joy is consistent with the approach system because it is a high arousal positive emotion that creates the urge to be playful, involves exploration, invention, and prompts individuals to be more willing to experience new things. We further suggest that contentment is more consistent with the avoidance system because it is a low arousal positive emotion that prompts individuals to savor their current life circumstances and recent successes, which prompt a mood regulation behavior.

We test our predictions in four experiments, in which we manipulated emotions using two short clips (c.f., Fredrickson and Branigan 2005), one elicits joy and the other contentment. A pretest and manipulation checks in all experiments show a significant difference in the levels of joy, contentment, and activation reported by participants, and no difference in pleasantness level.

In experiment 1A we wished to create a situation that encourages avoidance behavior (participants expected to be punished for sub-performance); in experiment 1B we wished to create a situation that encourages approach behavior (participants expected to be rewarded for good performance). The main dependent variables were nervousness level (in 1A) and happiness level (in 1B), because according to Carver and White (1994) these emotions are indicators of avoidance and approach behaviors respectively. As expected, in experiment 1A we found that participants in the contentment (vs. joy) condition reported a higher level of nervousness, indicating that when individuals experience contentment they are more likely to use avoidance motivation. Similarly, in experiment 1B we found that participants in the joy (vs. contentment) condition reported a higher level of happiness, indicating that when individuals experience joy they are more likely to use approach motivation. Next we explore whether joy and contentment lead to the downstream consequences prescribed by the approach and avoidance systems.

Sherman et al. (2006) show that when a health message is congruent with individuals’ motivation, it is more effective in promoting health behaviors. Specifically, approach motivation was found to be congruent with gain-framed messages while avoidance motivation is congruent with loss-framed messages. Experiment 2 employed a 2 emotion: joy vs. contentment) x 2 framing: gains vs. losses) between subject design to test the prediction that participants who experience joy will find a gain-framed message more appealing, and participants who experience contentment will find a loss-framed message more appealing. Participants read an article about flossing, which either stressed the benefits of flossing or the negative outcomes of not flossing. Results show that there were no main effects of emotions or framing, but there was a significant interaction of emotions x framing on article effectiveness (measured during the experiment) and actual behavior (# of times participants flossed in the week following the experiment.)

The aim of experiment 3 was to test the influence of joy and contentment on risk propensity. Previous research (Friedman and Förster 2002; Dweck and Legget 1988) suggests that when individuals use approach motivation they tend to be more risk seeking because they welcome challenge and use explorative processing; when individuals use avoidance motivation they tend to be more risk-averse because they use systematic and perseverant processing to avoid negative outcomes. We hypothesize that in the gain domain joy leads to risk seeking while contentment leads to risk avoidance, and the reverse in the loss domain. We are currently collecting data to test our hypothesis. Initial results are in the direction hypothesized.

In experiment 4 we tested whether there is a differential effect of our target positive emotions on variety seeking, a behavior more congruent with the approach system. Kahn and Isen (1993) show that positive emotions, with happiness as their representative, lead to variety seeking. We suggest that this holds for joy but not for contentment, because individuals who experience joy are more likely to use approach motivation and be more risk seeking—trying different known and unknown brands, while individuals who experience contentment are more likely to use avoidance motivation and be more risk averse—confining their choices to a small set of familiar and liked brands. We tested this hypothesis by asking participants to make choices from a list of brands of crackers, some were known American brands and the other were fake brands.
Results show that compared with participants in the contentment condition, those in the joy condition chose more brands, more unfamiliar brands, and switched more.

In sum, our research shows that not all positive emotions were created equal. While we find that joy leads to consequences similar to those found in the literature for happiness (approach motivation, congruency with the gain-frame, risk seeking (in the gain domain), and variety seeking), contentment leads to a different set of consequences (avoidance motivation, congruency with the loss-frame, risk avoidance (in the gain domain), and the choice of a small number familiar brands). Our findings imply that these are two distinct, equally strong, while equally positive emotions. Implications of our results will be discussed.

“Do You “Work to Live” or “Live to Work”? The Role of Mood and Confidence in Causal Agency”
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Take a trip to the Workaholics Anonymous website (http://www.workaholics-anonymous.org/knowing.html) and take their test on whether you are a workaholic. You will probably discover that you are a workaholic. ABC News reports that a growing number of Americans are discovering that they live to work rather than work to live. Recent research also suggests that for the most part, people are likely to over-engage in activities that presumably better them in the long term at the cost of activities that help them feel better in the moment. Are people working harder because this will provide material well-being that will allow them to indulge in the moment, or do they derive happiness from engaging in activities usually associated with immediate effort and negative feelings?

We investigate when and why people might demonstrate a tendency to over-engage in actions that are in their long-term interests over those that might improve their immediate feelings. Our basic proposition is that there are two modes of happiness—internal happiness which results from feelings of personal development, including things that are in our long-term interests, and external happiness which results from the consumption of material goods that immediately make us feel better—and one is the default of the other. People’s choice of internal rather than external modes of happiness depends on their confidence in the self as the agency responsible for their happiness. In contrast, the choice of external rather than internal modes of happiness depends on their confidence in the environment as the agency causing their happiness.

High confidence in the self as an agent of happiness increases actions that result in personal development and investing effort in things in ones long-term interest. This is because seeing the self as responsible for happiness leads people to believe that unless they invest in their self growth and work they cannot be happy. In contrast, high confidence in the environment as an agent of happiness increases indulgent actions because happiness is seen to result only from external sources such as the consumption of hedonic or material goods. As a consequence, happy people are more likely to engage in activities that lead to long-term personal development rather than external happiness from indulgent actions when they are confident that the self (vs. environment) causes happiness. On the other hand, people feeling unhappy who are confident that the self (vs. environment) is the cause of unhappiness look externally for happiness and reduce long-term actions over indulgent ones. Additionally, confidence in the environment as agent of unhappiness would imply a need to work to resolve the problems caused by the environment. When confidence in agency is low and people doubt that the self (vs. environment) is the agency of ones happiness, their reliance on the environment as the cause of their happiness increases and they engage in increased hedonic consumption consonant with seeking external sources of happiness. The reverse is true when people doubt that the self (vs. environment) is the agency of ones unhappiness. These predictions are tested in a series of experiments.

Experiment 1 employed a 2 (mood) x 2 (high confidence in internal vs. external agency) between-subjects design to see the effects of these factors on self-control in choice. We find that that happy participants making attributions to internal (vs. external) agency are more likely to make choices that are consonant with their long-term personal development (i.e., dieters choose an apple) rather than seek external happiness (i.e., choose a chocolate). The reverse is true for unhappy participants making attributions to internal (vs. external) agency.

Experiments 2a and 2b employ a 2 (mood) x 2 (low confidence in internal vs. external agency) between-subjects design to test our predictions but use different manipulation of confidence in agency. It is demonstrated that that when participants in a positive mood make attributions to internal (vs. external) agency but are low in confidence in agency, they are less likely to make choices endorsing personal development and long-term benefits (e.g., say they will get tested for herpes even though they think they are less likely to have the disease). The reverse is true for negative participants who have low confidence in an internal (vs. external) agency as responsible for feelings.

Experiment 3 employs a 2 (happiness to internal vs. external agency) x 2 (confidence in agency) between-subjects design to demonstrate that happy participants with a high confidence in an internal (vs. external) agency are more likely to endorse activities that result in long-term personal development even if they involve short-term effort. In contrast, happy participants with a low confidence in an internal (vs. external) agency are less likely to endorse activities that result in long-term benefits and more likely to endorse indulgent activities that conflict with long-term personal development.

Experiment 4 studied these effects while focusing on an external agency. In a 2 (mood) x 2 (high vs. low confidence in external agency) between-subjects design, it demonstrates that happy participants who are high (vs. low) in confidence in external agency are more likely to make material choices that reflect seeking external modes of happiness. Unhappy participants who are high (vs. low) in confidence in external agency show reversed effects. Across these experiments, confidence in agency is manipulated in a variety of ways, by instructions, by ease of attribution manipulations such as generating one versus seven instances implicating the agency and using dominant versus non dominant hand writing about agency, and by employing emotions that naturally vary in confidence (e.g., happiness vs. hope).

The literature has suggested that wanting to feel good leads to short-term oriented indulgent choices. We suggest that attributing happiness to the self moves individuals from focusing on external sources of happiness (e.g., chocolates) to internal sources of happiness (e.g., one’s behavior resulting in personal development). Such liberation of the self from external sources of happiness facilitates behaviors that increase personal development and including those beneficial in the long-term. Thus, agency attributions determine whether an external or internal mode of happiness governs behavior. Implications for the literatures on emotions, self-regulation, and consumer welfare will be discussed.
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Imagine you are a physician and the decisions you make each day have implications for the health and well-being of twenty to thirty patients. As a medical practitioner, your primary vehicle for improving patient health is the treatment recommendations that you make. In reviewing a course of treatment, patients often ask you about their treatment options and the risks that are involved. Clearly you want to make the best decisions possible for your patients.

Your extensive medical education (medical school, internship, and residency) has taught you a great deal about standard courses of care and the culture of medicine. You have been taught both explicitly and implicitly not to allow your emotions to cloud your clinical judgment (Landro 2005; Hafferty and Franks 1994; Smith and Kleinman 1989). Recent advances in health care have exacerbated this “affect-free” view of medical decisions by fostering increased specialization by physicians and reliance on technology, allowing doctors to provide consultations from afar without ever seeing the patient face to face.

While affective neutrality may help protect physicians from the negative affect and significant stress they face, this practice also potentially carries with it some critical costs, particularly the loss of positive affect, empathy and the benefits they offer to patient and physician. The hidden curriculum in medical culture has marginalized humanism in favor of the transmission of technical skills and ignores the most human aspects of care (Apker and Eggy 2004; Hafferty and Franks 1995) that help people heal.

We argue that some important benefits of positive affect identified in the psychology literature (Fredrickson 1998, 2001; Isen 2003) may be forgone by physicians when they employ a strategy of affective neutrality. When physicians deny feelings and fail to see their patients as people, they may be unable to fully appreciate the stakes and possible treatment risks posed to the patient, and there may indeed be costs associated with practicing affective neutrality.

The potential to experience negative affect is omnipresent in a clinical setting, where physicians deal with sick patients and communicate bad news daily. The purpose of this research is to determine if and how the introduction of positive affect (i.e., positive feelings toward patients) will influence physicians’ judgments. Building on the relevant literature on positive affect, dual-process models of information processing, and risk, we identify key factors influencing physicians’ judgments. We look at the interaction between mode of patient presentation (affect-rich/affect-poor) and disease severity (low/high) in influencing treatment considerations and perceptions of risk.

In study one, physicians were asked to either imagine that their hospital was considering using a new medical record keeping system or that the Susan B. Komen Foundation was considering the use of a new fundraising appeal (between subjects). Physicians were shown a sample photograph of a breast cancer patient and then asked to report the extent to which seeing a picture like this would influence their own judgment, other doctors’ judgments, and nurses’ judgments. Physicians reported that the photograph would influence their donation judgments but not necessarily their own medical judgments.

In study two, physicians were asked to evaluate a breast cancer patient. We conducted a 2 (mode of patient presentation: affect-rich/affect-poor) x 2 (disease severity: low/high) between subjects experiment. Physicians were presented with identical patient information but mode of patient presentation was varied using a procedure similar to Hsee and Rottenstreich (2004). Specifically, physicians saw either a picture of the patient with her two children (affect-rich) or a picture of a female symbol with two smaller symbols representing her children (affect-poor) in conjunction with the same patient file. We manipulated disease severity to be either low (Stage 0) or high (Stage III B). Physicians were then asked to make a series of judgments about the treatment options they considered and the risks that the treatments posed to the patient.

We found a two-way interaction of mode of patient presentation and disease severity for both dependent measures—breadth of consideration and perceived risk. As predicted, physicians in the affect-rich condition who evaluated a patient with a high severity disease demonstrated greater breadth of consideration in treatments. Most importantly, these same physicians also showed greater willingness to recommend the use of non-traditional therapies. These results suggest that positive affect plays an important facilitative role in the breadth of treatment options that physicians consider for severe cases of disease.

In the case of risk assessments, consistent with our prediction, physicians who evaluated a patient with a high severity disease in the affect-rich condition saw more risk than the participants in the affect-poor condition. Yet, when evaluating a patient with a low severity disease, physicians in the affect-rich condition actually saw less risk than those in the affect-poor condition. Physicians’ reports of sympathy and empathy offered evidence that may help in gaining additional insight into our pattern of results. In sum, the pattern of risk seems to be driven by physicians’ reliance on either risk as feelings or risk as analysis.

These findings have potentially important implications for consumer health and welfare; they also raise the question—under what circumstances are these physician behaviors desirable? We are conducting additional studies to determine how these influences on consideration and risk may ultimately affect clinical practice and patient care. We hope to illuminate two key questions: 1) When will an affect-rich mode of patient presentation be helpful versus harmful to physicians’ judgments and patients’ outcomes? 2) When might physicians be underestimating or overestimating risk, and which estimates are most appropriate?

Our findings offer insight into the conditions under which positive affect influences judgments of consideration and risk. Equipped with additional knowledge about the interactive effects of affect and disease severity, patients may be able to receive and physicians may be able to provide improved care, as the Hippocratic Oath suggests: “promote health and healing, reduce suffering, and not act contrary to the well-being of their own patients.”

REFERENCES