CHOOSING A PHYSICIAN DEPENDS ON HOW YOU WANT TO FEEL:
THE ROLE OF IDEAL AFFECT IN HEALTH-RELATED DECISION-MAKING

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Abstract

Choosing the right physician has important consequences for patient satisfaction and health outcomes. How do people decide which physician to choose? Although research has demonstrated that how people actually feel (their “actual affect”) influences their health care preferences, we predicted that how people ideally want to feel (their “ideal affect”) would play an even more important role. Consistent with this prediction, the more college students (Study 1) and community adults (Study 2) wanted to feel high arousal positive states on average ([ideal HAP]; e.g., excited), the more likely they were to choose a HAP-focused (vs. low arousal positive [e.g., calm] or LAP-focused) physician. Experimentally increasing the value of HAP also increased participants’ choice of a HAP (vs. LAP) physician (Study 3). Wanting to feel low arousal positive states (ideal LAP) did not predict physician choice until participants were given a neutral (non-emotional) option: under these conditions, ideal LAP predicted choice of the LAP physician, and ideal HAP predicted choice of the HAP physician (Study 4). Across studies 2-4, the association between ideal affect and choice was mediated by perceived physician trustworthiness. When community adults were assigned to either a HAP or LAP virtual physician (Study 5), ideal HAP predicted greater self-reported adherence to the HAP physician’s recommendations, and ideal LAP predicted greater self-reported adherence to the LAP physician’s recommendations. Across all five studies, actual affect did not predict preferences for physicians. These findings suggest that people choose and listen to physicians who express the affective states that they ideally want to feel, in part because they trust those physicians more. Together, these studies demonstrate the importance of ideal affect in health-related decision making.
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Table of Contents

Abstract ................................................................. iv
Acknowledgements ....................................................... v
Table of Contents ........................................................ vi
List of Tables ............................................................. vii
List of Illustrations ..................................................... viii
Introduction .................................................................. 1
Study 1a-b: Does Ideal Affect Shape Physician Choice? ........... 14
  Study 1a Method ....................................................... 14
  Study 1a Results ....................................................... 16
  Study 1b Method ....................................................... 17
  Study 1b Results ....................................................... 18
  Discussion ................................................................ 19
Study 2: How Does Ideal Affect Shape Physician Choice? .......... 19
  Method .................................................................. 21
  Results .................................................................. 23
  Discussion ................................................................ 26
Study 3: Does Manipulating Ideal Affect Alter Physician Choice? .. 27
  Method .................................................................. 27
  Results .................................................................. 29
  Discussion ................................................................ 33
Study 4: When Does Valuing Calm Predict Physician Choice in an American Context? .... 34
  Method .................................................................. 35
  Results .................................................................. 36
  Discussion ................................................................ 40
Study 5: Does Ideal Affect Predict Adherence to Physician Recommendations? ...... 41
  Method .................................................................. 42
  Results .................................................................. 46
  Discussion ................................................................ 48
General Discussion ...................................................... 48
Appendix A: Choosing A Physician Scenario .......................... 62
Appendix B: Pretest of the Choosing a Physician Scenario .......... 64
Appendix C: Cultural Differences in Physician Preference .......... 66
Appendix D: Pretest of the Virtual Physician Videos ................. 72
References .................................................................. 74
List of Tables

Table 1: Correlations, means, and standard deviations for ideal and actual affect in Studies 1, 2, & 4.................................................................54

Table 2: Summary of logistic regression results for ideal and actual affect predicting preference for HAP vs. LAP physician in Studies 1 (student samples) and 2 (community sample).......................................................................................55

Table 3: Summary of Study linear regression results for ideal and actual affect predicting choice of HAP, LAP, and Neutral physicians .................................................................56

Table 4: Bivariate correlations between daily reports of recalled ideal and actual affect in a community sample. .................................................................57
List of Illustrations

**Figure 1:** Percentage of participants choosing the HAP (versus LAP) physician in the Value HAP condition and Value LAP condition in Study 3 .................................................................58

**Figure 2:** Effect of ideal affect on likelihood of choosing physician mediated by perceived trustworthiness .............................................................................................................59

**Figure 3:** Screenshot of the “meet the virtual physician” webpage on the Virtual Bay Health Center website ..................................................................................................................60

**Figure 4:** Effect of ideal and actual affect on adherence to physician recommendations 61
Choosing a Physician Depends on How You Want to Feel:  

The Role of Ideal Affect in Health-Related Decision Making

Imagine that you need to choose a new primary care physician. You read the biographies of two available physicians along with their views on patient care. They both have similar credentials, but one physician aims to “increase patients’ vitality,” whereas the other aims to “ensure patients’ peace of mind.” Whom do you choose and does it matter? In this paper, we argue that in the above scenario, people will prefer and listen to the physician who expresses the affect that they ideally want to feel, or their “ideal affect.” In particular, the more people value high arousal positive [HAP] states such as excitement, the more likely they will be to choose and follow recommendations by the physician who aims to increase patients’ “vitality,” whereas the more people value low arousal positive [LAP] states such as calm, the more likely they will be to choose and follow recommendations by the physician who aims to ensure patients’ “peace of mind.” Based on Affect Valuation Theory (AVT), we conducted a series of studies to test whether people are more likely to choose, trust, and listen to a physician who expresses the affective states that people value and ideally want to feel.

Affect Valuation Theory

The term affect refers to any valenced feeling state, which can include specific emotions, moods, or less differentiated affective states. Typically, affective states (feelings, moods, emotions) are categorized along two dimensions, arousal/activation (low to high) and valence (negative to positive; Russell, 1991; Watson & Tellegen, 1985). Most research on affective decision making has focused on how individuals’ “actual affect,” or the affective states that they actually feel in the moment or on average,
influences their decisions. In this paper, however, we primarily focus on how people’s ideal affect, namely, the affective states that they ideally want to feel in the moment or on average, influences decisions. AVT distinguishes between how people actually feel and how they ideally want to feel. Indeed, across a variety of studies, we have observed only modest correlations between reports of actual affect and ideal affect (Sims, Tsai, Wang, Fung, & Zhang, 2013; Tsai, 2007; Tsai, Knutson, & Fung, 2006; Tsai, Louie, Chen, & Uchida, 2007; Tsai, Miao, & Seppala, 2007; Tsai, Miao, Seppala, Fung, & Yeung, 2007), and structural equation modeling has revealed that actual affect and ideal affect are distinct constructs (Tsai, et al., 2006).

Although both ideal affect and actual affect are critically important in emotional life, they serve different functions: whereas actual affect represents how someone is feeling in the moment or on average (“I feel good”), ideal affect provides a way of interpreting and evaluating that state or trait (“Does this feel right?” “Am I feeling as good as I want to feel?”). Whereas actual affect is a response to a meaningful event (state) or a predisposition to respond a certain way (trait), ideal affect represents goals or desired states in response to particular situations (state) or across situations (trait). Thus, considering both ideal and actual affect may provide a better understanding of affective decision making processes.

**The Role of Affect in Decision Making**

Historically, dominant models of decision making, derived primarily from economic theory, gave little consideration to our feelings or affective states. These models assumed that an individual will always select options that maximize expected utility, or those with the greatest benefit and lowest cost. However, individuals do not
always behave according to an expected utility framework, and often make choices that are cannot be predicted by these models. Tversky & Kahneman’s (1983) prospect theory suggests that these anomalies result from making decisions under constraints in which we draw upon heuristics, or preconceived, implicit strategies, that can be significantly influenced by feelings or emotions. Thus, affect was initially examined as a way to make sense of irrational decisions or inconsistencies that emerged when testing normative models of decision making.

Zajonc (1980) was among the first to recognize the “primacy” of affect in decision making and to distinguish affect and cognition as two separable processes. Zajonc and colleagues described preferences or feeling cues as primary, instantaneous, uncontrollable and independent of cognitive processes (Zajonc, 1980; Zajonc & Markus, 1982). Frameworks distinguishing affective from cognitive processing in decision making, or dual information processing approaches, are widely used. Dual processing theories delineate two internal processes underlying decision making: cognitive processes that are considered to be high-level, deliberate, rational, systematic, and often conscious, and affective processes that are described as low-level, automatic, hedonic, and usually unconscious (e.g., Damasio, 2005; Edell & Burke, 1987; Epstein, 1994; Forgas, 1995; Frederick, 2002; Holbrook & Hirschman, 1982; Kahneman & Frederick, 2002; Pham, 2004; Schwarz & Clore, 1996; Sloman, 1996; Slovic, Finucane, Peters, & MacGregor, 2007). Several studies have shown that affective processes are more influential when cognitive processes are unavailable or irrelevant, such as when people are under time pressure, or are explicitly asked to make evaluative/ hedonic versus diagnostic/ utilitarian judgments (Kempf, 1999; Lewicka, 1977, 1979; Olney, Holbrook, & Batra, 1991). For
instance, undergraduate students under cognitive load were more likely to make
“affective” choices (Shiv & Fedorikhin, 1999). In this study, participants were randomly
assigned to either a high or low cognitive load condition. In the high cognitive load
condition, participants were required to remember a seven-digit number that they had to
report to a researcher down the hall. In the low cognitive load condition, participants only
had to remember and report a two-digit number. Participants were then told to choose an
item from a food cart in the hall and to tell the researcher which item they wanted after
they reported their number. The food cart contained a piece of chocolate cake
(presumably the more affectively pleasant but less rational option) and a fruit salad
(presumably the less affectively pleasant but more rational option). Participants in the
high cognitive load condition were more likely to choose the chocolate cake than those in
the low cognitive load condition. Consistent with prospect theory, the authors concluded
that when individuals’ cognitive abilities are impaired, people rely on affective heuristic
processes and make more impulsive and less rational choices (i.e., to select the chocolate
cake).

While much of this literature assumed that affect biased, or even undermined
decision making, others have considered the instrumental value of affective processes.
That is, affect serves a useful, informational purpose that guides and aids in judgment and
decision making (Schwarz & Clore, 1996, 1983; Damasio, 2005; Slovic, Finucane,
Peters, & MacGregor, 2002; Loewenstein & Lerner, 2003; Loewenstein, Weber, Hsee, &
Welch, 2001; Pham, 2004). Recent studies have observed that compared to normal
controls, brain-damaged patients with impaired emotional functioning (e.g., difficulties
processing emotional stimuli, difficulties anticipating how they would feel in the future)
made lower quality decisions and were slower at learning to select favorable (vs. unfavorable) options (for review, see Bechara, 2004; Damasio, 2005). This research suggests that affective processes can actually promote optimal decision-making. For example, American and Canadian older adults, who have more emotion-focused goals than younger adults, made better decisions (e.g., engaged in more healthy eating behaviors) when they focused on the affective (vs. informational) properties of health care information (Löckenhoff & Carstensen, 2007; Mikels et al., 2010; Zhang, Fung, & Ching, 2009).

However, in many domains of decision making, particularly in consumerist contexts, there is no objectively “better” decision. Rather, the best decision is a simply a matter of what feels “right,” and thus, options that make someone feel good may be especially appealing. Indeed, affect has been shown to play an important role in shaping people’s preferences: the more positively people feel about a particular consumer product or service, the more likely they are to choose and prefer it (Abelson, Kinder, Peters, & Fiske, 1982; Alford & Sherrell, 1996; see Brown, Homer, & Inman, 1998, for a meta-analysis; Jayanti, 1995; Locke, 1996; see Tsai, Chim, & Sims, in press, for review). As consumerism becomes more prevalent in the United States health care industry (Madison, 2010), affect may be especially influential in patients’ health care choices.

**The role of affect in health-related decision making.** Consistent with the consumer behavior literature, how patients feel about health care providers or health messages has been linked to health preferences and choices (Agrawal, Menon, & Aaker, 2007; Hall, Roter, & Rand, 1981; Locke, 1996; Pawlikowska, Zhang, Griffiths, van Dalen, & van der Vleuten, 2012; Rothman & Salovey, 1997; Shen & Dillard, 2007). For
instance, patients’ positive feelings toward their pediatricians predicted subsequent satisfaction, cooperation and perceived quality of care (Locke, 1996). Patients’ feelings during interactions with physicians also predict subsequent health related behavior. The more satisfied and less anxious patients were during their appointments (based on coding audiotaped speech during clinical interactions), the more likely they were to return to their follow-up appointments (Hall et al., 1981). Similarly, the more patients joked and laughed with their physicians during their appointments, the more they reported understanding their physicians and the more patients believed they could better manage their own health (Pawlikowska et al., 2012).

It is less clear how patients’ more global, trait-like affective characteristics influence their preferences for physicians, although previous work suggests that affective traits are related to health decision making and behavior. For example, higher trait anxiety predicted worse management of medication regimens (Wroe, 2002). In an Italian community sample, people higher in trait anxiety were more likely to choose a riskier medication for a hypothetical patient with high blood cholesterol (Lauriola, Russo, Lucidi, Violani, & Levin, 2005). However, in other domains of decision making, being anxiety-prone is often associated with preferences for less risky options, whereas being anger-prone has been associated with preferences for more risky options (Lerner & Keltner, 2001; Maner et al., 2007; Miu, Heilman, & Houser, 2008). While most of this work has focused on negative affective characteristics (e.g., tendencies to feel anxious or angry), some studies do suggest that positive dispositional tendencies like optimism are also associated with risk perception and behavior in health care (see Segerstrom & Roach, 2008, for review). For example, optimism (but not trait positive or negative
affect) was associated with less attention to negative skin cancer images (Isaacowitz, 2005) but also with a greater tendency to perform skin cancer self-examinations (Luo & Isaacowitz, 2007). Less is known about how various positive affective characteristics (e.g., tendencies to feel excited or calm) influence health-related decision making.

Positive affective characteristics of physicians also influence patient judgment and decision making. Several studies do suggest that North American patients respond more favorably to physicians who are more affectively expressive (for reviews, see Beck, Daughtridge, & Sloane, 2002; Blasi, Harkness, Ernst, Georgiou, & Kleijnen, 2001; DiMatteo, 1979; Levine & Ambady, in press; Roter, Frankel, Hall, & Sluyter, 2006). People were more satisfied with health care providers who expressed more non-verbal signs of affective states (e.g. smiled more; Griffith, Wilson, Langer, & Haist, 2003). Patients of health care providers who expressed more positive affect were more likely to keep follow-up appointments (Hall et al., 1981) and to have better physical and cognitive outcomes (Ambady, Koo, Rosenthal, & Winograd, 2002). Additionally, the more surgeons expressed concern and anxiety in audio-taped interactions, the less likely patients were to file a malpractice claim against them (Ambady, LaPlante, et al., 2002).

None of these studies, however, examined whether people’s affective characteristics interact with the affective attributes of the health care provider to influence their responses.

Additionally, most of this work is limited to influences of positive and negative affect or discrete negative emotions (e.g., fear, anger, sadness, etc.), but rarely do researchers examine different types of positive affect (e.g., excitement, contentment, calm). Furthermore, most conceptualizations of affect are rooted in a Western ideology.
that affect or emotion is synonymous with arousal (e.g., James, 1892, Watson, Clark, & Tellegen, 1988). Thus, when positive affect is differentiated, there tends to be an emphasis on high arousal positive (HAP) states, such as excitement, while low arousal positive (LAP) states, like calm are thought to occur in the absence of emotion and are neutral by default. This conceptualization of affect is consistent with a greater value placed on HAP states in Western cultures relative to Eastern cultures (Tsai, et al., 2006; Tsai, Louie, et al., 2007; Tsai, Miao, et al., 2007; Tsai, Miao, Seppala, et al., 2007). However, even within Western cultures, there is considerable variation in how much people value HAP and LAP states (Chow & Berenbaum, 2012; Feldman Barrett, 1996; Kämpfe & Mitte, 2009; Ruby, Falk, Heine, Villa, & Silberstein, 2012; Rusting & Larsen, 1995; Scheibe, English, Tsai, & Carstensen, 2012; Tsai, Sims, Fung, & Jiang, 2013; Västfjäll, Gärling, & Kleiner, 2001), suggesting that HAP and LAP may have similar, although distinct, effects on decision making.

**Ideal Affect and Decision Making**

In the current series of studies, we focus on ideal affect for several reasons. First, previous research suggests that patients’ values play a role in their responses to health treatments (Chong, Chen, Naglie, & Krahn, 2009; Krahn & Naglie, 2008). For example, patients are less likely to choose and adhere to medical treatments that conflict with their religious beliefs (Parsons, Cruise, Davenport, & Jones, 2006; Sattar, Ahmed, Majeed, & Petty, 2004), and they respond more positively to physicians who share their beliefs about patient involvement in medical decision making (Cousin, Schmid Mast, Roter, & Hall, 2012; DiMatteo, 1979; see Keisler & Auerbach, 2006, for review; Martin, Jahng, Golin, & DiMatteo, 2003; Schwartz, Hasnain, Eiser, Lincoln, & Elstein, 2006). Similarly,
health messages that are framed in congruence with people’s motivational goals are more
effective in increasing engagement in healthy behaviors than those that are not (Higgins,
2005; see Klein & Cerully, 2007, for review; Mann, Sherman, & Updegraff, 2004;

Along the same lines, we predict that patients’ affective ideals will influence how they respond to physicians (i.e., choosing them as their provider, trusting them, and adhering to their recommendations). As stated above, because affective ideals may be more implicit than other types of values and goals, people may be less explicitly aware of how or whether their affective values influence their decisions; instead, options that match participants’ ideal affect may be experienced as “better” or as “feeling right,” even when they are in all other ways the same. Consistent with this idea, older adults, who are motivated to enhance their positive emotional experience more than younger adults, were found to make better health care choices when their options were emotionally framed compared to factually framed (Mikels et al., 2010). Similarly, older adults focused more on positively framed physician attributes (i.e., attributes labeled as good or very good) over negatively framed attributes (i.e., poor or very poor) compared to younger adults (Löckenhoff & Carstensen, 2004). Interestingly, when older adults’ implicit motivation to enhance positive emotional experience was experimentally shifted to “focus on the facts and details,” their tendency to favor positive over negative physician attributes was eliminated (Löckenhoff et al., 2007).

A second reason for focusing on ideal affect is that recent evidence finds that people base their choices on how they want to feel. For example, the more people valued excited states (ideal HAP), the more they preferred exciting (vs. calm) leisure activities
(e.g., partying vs. reading) (Tsai, 2007), even after controlling for how much people actually felt excitement (actual HAP). Experimental studies also suggest that ideal affect shapes people’s consumer choices. In one study, students were assigned to one of three conditions: (1) a Value HAP condition in which they were implicitly told that they would do well on a subsequent task if they were excited (but not calm), (2) a Value LAP condition in which they were implicitly told that they would do well on the task if they were calm (but not excited), or (3) a Control condition in which they were implicitly told that they would do well if they were excited or calm. As part of a “different” study, students were then presented with pairs of consumer products (e.g., exciting vs. calm music CDs) and asked to choose the one they preferred from each pair. Students in the Value HAP condition chose more exciting products than did those in the other two conditions (Tsai et al., 2007c). Similarly, people primed to associate happiness with excitement more than calm were more likely to choose exciting over calming tea and music (Mogilner, Aaker, & Kamvar, 2012). In these cases, the links between ideal affect and consumer product and leisure preferences may seem obvious because people are in effect purchasing an emotional experience. However, we propose that people make choices based on how they want to feel even for non-recreational and more consequential decisions such as which physician to choose.

Like recreational decisions, preference for a physician should also depend on whether there is a match between someone’s ideal affect and the affective qualities of each option. Imagine a woman who highly values HAP states and she is deciding between a primary care physician who promotes good health through a calm lifestyle and engagement in LAP activities, and another who promotes good health through a vital
lifestyle and engagement in other HAP activities. Who is she most likely to choose to provider her regular health care? We predict that she will choose the HAP physician.

Why? One possible reason is a general feeling of similarity to the physician so that any matching between the affective characteristics of the patient and the physician would predict her choice (“general match” hypothesis). In this case, both how she actually feels and how she ideally wants to feel would similarly predict choice of physician. Thus, she would choose the HAP physician because she values HAP and because she tends to feel HAP. Another possible reason is that physician choice depends on a specific match between the patient’s ideal affect and the affective attributes of the physician (“ideal affect match” hypothesis). In this case, her ideal affect should be more important than her actual affect in determining her choice. A third possibility is that physician choice depends on a specific match between the patient’s actual affect and the affective attributes of the physician (“actual affect match” hypothesis). In this case, her actual affect should be more important than her ideal affect in determining her choice. By examining the independent effects of both ideal and actual affect, we can determine whether any association observed between ideal affect and physician choice is due to a general matching or specific to a match with ideal affect.

We hypothesize that preference for a physician will depend on ideal affect and not actual affect because people will evaluate the physician based on their ability to help them reach their ideal state and not a general similarity. That is, people who tend to value certain affective states will be motivated to choose a physician that increases the likelihood of experiencing those states. Presumably, this is because a physician focused on certain affective states will be more likely to prescribe treatments and engage patients
in way that maximizes their chances of feeling those states. Thus, patients will be more likely to choose a physician who can help them feel how they ideally want to feel.

How does ideal affect shape choice of physician? Previous research suggests that people evaluate others who share their values more positively than those who do not. For example, people who perceived that their physicians’ (Street, O’Malley, Cooper, & Haidet, 2008) and public health officials’ (Siegrist, Cvetkovich, & Gutscher, 2001) values and beliefs were congruent with their own were more likely to view them as trustworthy. Similarly, we predict that people will view physicians who express the affective states that they value as more trustworthy, which will increase their likelihood of choosing that physician. Indeed, the more patients trust their physicians, the more satisfied they are with their physicians and the more likely they are to continue receiving care from them (Hall, Dugan, Zheng, & Mishra, 2001; Safran et al., 1998; Thom, Ribisl, Stewart, Luke, & Physicians, 1999). We also predict that ideal affect will enhance patient trust regardless of how competent or knowledgeable patients perceive the physicians to be. In support of this possibility, while analog patients felt more engaged with a virtual physician they perceived as more caring (versus dominant), they did not perceive the caring physician to be more competent (Schmid Mast, Hall, & Roter, 2008). This study suggests that while the affective characteristics of a physician influence how people respond to a physician, they do not necessarily influence how competent or knowledgeable they are perceived. Thus, we expected that perceived trustworthiness, but not perceived knowledgeableness, of a physician would mediate the links between ideal affect and physician choice. In other words, people will choose physicians who express
the affective states they value in part because they view those physicians as more trustworthy.

**The Present Studies**

To test these hypotheses, we conducted four studies in which participants were presented with a hypothetical scenario and asked to choose a new primary care provider. In the scenario, they were required to choose between two physicians (one HAP [“exciting”] and one LAP [“calming”]) who were matched in terms of experience and training. In the fifth study, we assigned participants to either a HAP or LAP virtual physician who provided them with health care recommendations, and then we followed participants for one week to assess their daily adherence to those recommendations. We focused on different positively framed options because most people strive to feel positive rather than negative states (e.g., Feldman Barrett, 1996; Rusting & Larsen, 1995; Tsai, et al., 2006; Västfjäll, et al., 2001). In studies 1-4, we used hypothetical scenarios because: (1) they are a common way of assessing preferences in the medical decision making literature; (2) they allow us to standardize the information presented to participants; (3) they mimic many medical decisions made in everyday life (e.g., choosing a new physician based on their online directory profile; advanced health care directives), and (4) they are often used to elicit community-based preferences in cost-effectiveness analyses of health care interventions, as recommended by Gold, Siegel, Russell, & Weinstein (1996). In study 5, we used a virtual health care setting because (1) we were able to standardize the presentation of the physicians using this format; and (2) online health communication is becoming more prevalent in the practice of health care in the U.S. (e.g., Beckjord et al., 2007).
In studies 1-4, we assessed global measures of ideal affect and actual affect because we expected that global, trait-like affective characteristics would be more relevant to choosing a physician who would provide regular health care because they can expect to interact with them on a regular, ongoing basis. In study 5, we assessed daily measures of ideal affect and actual affect because we expected that more proximal affective characteristics would be more relevant to deciding whether or not to adhere to the physician’s recommendations on a given day.

Studies 1a-b: Does Ideal Affect Shape Physician Choice?

To examine the association between ideal affect and physician choice, we administered a hypothetical scenario to two different samples of college students. Based on the “ideal affect match” hypothesis, we predicted that ideal HAP would predict higher likelihood of choosing the HAP physician, whereas ideal LAP would predict higher likelihood of choosing the LAP physician. We also tested the alternative hypotheses that actual HAP and actual LAP would predict physician preference.

Study 1a Method

Participants

For credit in an introductory psychology course, one hundred and thirty-four undergraduate students (60% Female; 40% Male; 40% White, 23% Asian, 13% Hispanic, 5% Black, 14% multiracial, 5% unknown) participated in a larger survey that included measures of actual affect, ideal affect, and physician preference. Analyses are based on 104 participants who completed all measures.
Instruments

Choosing a Physician Scenario. We developed and pre-tested a hypothetical health care scenario (pre-testing results available upon request) in which participants were asked to imagine that their current physician was no longer available, and that they needed to choose a new primary care physician (see Appendix). Participants read descriptions of two physicians, modeled after real physicians’ descriptions on the website of a large health maintenance organization. Physicians were matched in terms of age, education, and record of service, but differed in their views of patient care and hobbies. Whereas the HAP physician’s views on patient care included “increasing their [patients’] activity levels and overall vitality,” the LAP physician’s views on patient care included “promoting a stress-free life-style.” Whereas the HAP physician’s hobbies included “rock-climbing” and “waterskiing,” the LAP physician’s hobbies included “meditation” and “gardening.” Descriptions were also accompanied by photographs of two different young European American male models depicting physicians with an “excited” smile (wide smile, with teeth showing) or a “calm” smile (less wide smile with no teeth showing) for the HAP and LAP physicians, respectively. Each model posed for both an excited and calm photograph. Models were counterbalanced to ensure effects were not due to the particular person in the photograph. We did not include a neutral option because pilot testing revealed that a photograph depicting a neutral expression was perceived negatively.

Ideal and Actual Affect. Using the Affect Valuation Index (AVI; Tsai et al., 2006), participants rated how often they actually feel and ideally would like to feel twenty-seven states that varied by arousal and valence during a typical week, using a 5-
point scale (1 = not at all to 5 = all the time). The HAP aggregate was comprised of enthusiastic, excited, and elated; the LAP aggregate was comprised of calm, peaceful, and serene. All aggregates had good internal consistency (ideal HAP \( \alpha = .73 \), actual HAP \( \alpha = .71 \), ideal LAP \( \alpha = .82 \), actual LAP \( \alpha = .75 \)). Table 1 shows the bivariate correlations between ideal HAP, ideal LAP, actual HAP, and actual LAP.

**Procedure**

Participants completed the AVI and physician scenario, which were intermixed with several other questionnaires not relevant to this study. The order in which participants rated their ideal and actual affect was counterbalanced, as was the presentation order of HAP and LAP physician scenarios. After reviewing the physician scenario, participants were asked, “If you had to choose, which physician would you prefer?”

**Study 1a Results**

To assess whether ideal affect predicted physician choice, we conducted a logistic regression analysis in which each choice (LAP option= 0, HAP option = 1) was regressed onto ideal HAP, ideal LAP, actual HAP, and actual LAP. Complete regression results including effect sizes are presented in Table 2. As predicted, the more participants valued HAP, the more likely they were to choose the HAP (vs. LAP) physician, \( B = 0.85, SE = 0.33, p = 0.01 \). However, ideal LAP did not significantly predict choice of the HAP (vs. LAP) physician, \( B = -0.40, SE = 0.30, p = 0.19 \), although the association was in the predicted direction. We also found no significant association between actual HAP and choice of physician, \( B = -0.67, SE = 0.41, p = 0.10 \), and no association between actual LAP and choice of physician, \( B = 0.24, SE = 0.35, p = 0.50 \).
Consistent with our first hypothesis, ideal HAP predicted choice of the HAP (vs. LAP) physician; however, contrary to this hypothesis, ideal LAP did not predict physician choice. Further, ideal HAP predicted physician choice above and beyond actual HAP. Although actual HAP predicted a lower likelihood of choosing the HAP physician, this association only approached significance. Actual LAP did not predict physician choice.

The lack of association between ideal LAP and physician choice may have been due to the physician photographs. Although in pilot testing the LAP physician was perceived as less HAP and more LAP than the HAP physician, participants may still have perceived the LAP physician as more neutral than calm. Therefore, in Study 1b, we administered the same scenario excluding the physician photographs. This also allowed us to assess the degree to which our findings depended on photos of physicians’ faces.

**Study 1b Method**

**Participants**

For credit in an introductory psychology course, ninety-eight undergraduate students (41% Female, 26% Male, 32% Unknown; 29% White, 17% Asian, 4% Black, 4% Hispanic, 11% multiracial, 35% unknown) participated in a larger survey that included measures of actual affect, ideal affect, and physician preference.

**Instruments**

**Choosing a Physician Scenario.** We used the same scenarios as in Study 1a, without the physician photographs. We included an additional section on outside interests to further emphasize either a HAP or LAP focus (see Appendix A). Pretesting confirmed
that the HAP physician conveyed HAP states more and LAP states less than the LAP physician (see Appendix B).

**Ideal and Actual Affect.** As in Study 1a, participants completed the AVI. The HAP aggregate was comprised of enthusiastic, excited, and energetic\(^1\); the LAP aggregate was comprised of calm, peaceful, and serene. All aggregates had good internal consistency (ideal HAP \(\alpha = .73\), actual HAP \(\alpha = .70\), ideal LAP \(\alpha = .75\), actual LAP \(\alpha = .68\)). Table 1 shows the bivariate correlations between ideal HAP, ideal LAP, actual HAP, and actual LAP.

**Procedure**

Participants first completed the physician scenario. The presentation order of HAP and LAP scenarios was counterbalanced. Participants then completed the AVI in which they rated ideal affect and then actual affect.

**Study 1b Results**

We conducted the same analysis as Study 1a. Based on stem and leaf plots, we removed one outlier whose rating of ideal HAP was extremely low \((z = -2.70)\) and one outlier with a low standardized residual \((z = -2.38, \text{Cook’s } D = 0.56)\). Regression results are presented in Table 2. As predicted, and consistent with Study 1a, the more participants valued HAP, the more likely they were to choose the HAP (vs. LAP) physician, \(B = 1.29, SE = 0.51, p = 0.01\). However, ideal LAP again did not significantly predict choice of the HAP (vs. LAP) physician, \(B = -0.52, SE = 0.36, p = 0.14\). Actual HAP did not significantly predict choice of physician, \(B = -0.71, SE = 0.43, p = 0.10\), and there was no association between actual LAP and choice of physician, \(B = 0.26, SE = \)

\(^1\)We replaced elated with energetic because we expected the term energetic to be more relevant to health care choices. 

18
0.39, \( p = 0.51 \). These findings are remarkably similar to those of Study 1a and suggest that the exclusion of the physician photographs did not influence the observed associations.

**Study 1 Discussion**

Consistent with the “ideal affect match” hypothesis, ideal HAP was associated with choice of the HAP (vs. LAP) physician for both Studies 1a and 1b. Contrary to prediction, ideal LAP was not. Contrary to the “actual match” and “general match” hypotheses, we also found no significant association between actual affect and physician choice.

While we found some support for our prediction that ideal affect shapes preference for a physician, Studies 1a and b had some limitations. First, the studies were conducted on college students. Younger adults have been shown to value HAP states relative to LAP states more than other age groups in the U.S. (Mogilner, Kamvar, & Aaker, 2011; Scheibe et al., 2012); consequently, the degree to which participants valued LAP may have been less salient, and therefore, had less of an effect on their choice of physician. Second, neither Study 1a nor 1b examined whether the association between ideal HAP and physician choice was due to perceived physician trustworthiness. Therefore, in the next study, we administered our measures to an American community sample that varied in terms of age. We also examined whether ideal affect shaped physician choice by increasing how trustworthy people perceived each physician to be.

**Study 2: How Does Ideal Affect Shape Physician Choice?**

We conducted the next study on a sample of community-residing adults ranging from 19 to 90 to assess whether a sample that is more variable in ideal affect (Scheibe et
al., 2012; Tsai, et al., 2013) and health experiences base physician preference on both ideal HAP and ideal LAP. Additionally, we measured whether the degree to which participants perceived the HAP and LAP physicians as trustworthy mediated the association between ideal affect and physician choice. We also measured perceived knowledgeableness of each physician as a comparison attribute. By comparing the effect of ideal affect on perceived trustworthiness to perceived knowledgeableness, we can determine whether ideal affect shapes physician choice through perception of trustworthiness specifically or through a positive perception of attributes more generally. We measured perceived knowledgeableness in particular because previous research has found that the interpersonal qualities of physicians are not necessarily indicators of perceived competence (Schmid Mast, et al., 2008). Thus, while we expected ideal affect to shape perceived trustworthiness in these scenarios, we did not expect it to shape perceived knowledgeableness.

Based on the “ideal affect match” hypothesis, we predicted that: 1) ideal HAP would predict higher likelihood of choosing the HAP physician, whereas ideal LAP would predict higher likelihood of choosing the LAP physician, and (2) the effect of ideal affect on physician choice would be mediated by perceived trustworthiness. (i.e., the more people valued HAP, the more they would trust a physician who promotes HAP, which would make them more likely to choose the HAP (vs. LAP) physician; similarly, the more people valued LAP, the more they would trust a physician who promotes LAP, which would make them more likely to choose the LAP (vs. HAP) physician). We also tested the alternative hypotheses that actual HAP and actual LAP would predict physician preference.
Study 2 Method

Participants

We recruited 102 adults equally distributed across younger (18-39 years), middle-aged (40-59 years), and older (60+ years) ages (age $M = 48$ years, $SD = 18$ years; Range = 19-90 years; 50% European American, 50% Chinese American2; 50% Female; 50% Male) from the San Francisco Bay Area.

We administered the PRIME-MD (Spitzer, Williams, & Linzer, 1995) to evaluate potential participants’ levels of psychological functioning, and we excluded individuals reporting any signs of psychiatric illness. We also administered the Telephone Interview for Cognitive Status (Brandt, Spencer, & Folstein, 1988) to evaluate cognitive functioning in adults 60+ years of age, and we excluded participants scoring ≤ 21, which can be associated with cognitive impairment.

Instruments

Choosing a Physician Scenario. We used the same physician scenarios as in Study 1, with some slight modifications. To better match physician descriptions, we replaced “stress-free lifestyle” with “calm and relaxed lifestyle” in the LAP physician description so that both HAP and LAP physicians focused solely on promoting positive states. Additionally, because pilot testing indicated that the hobbies of the HAP physician (e.g., snowboarding) were perceived as younger than those of the LAP physician (e.g., gardening), we excluded the hobbies section.

2We recruited two distinct cultural groups: European Americans and Chinese Americans in order to examine cultural differences in preference for the HAP (vs. LAP) physician. See Appendix C for a description of these findings.
Prior to choosing between the two physicians, participants also rated their likelihood of trusting each physician on a scale from 1 (extremely unlikely) to 7 (extremely likely) and how knowledgeable they considered each physician to be on a scale from 1 (extremely unknowledgeable) to 7 (extremely knowledgeable). While perceived trustworthiness and knowledgeableness ratings were moderately correlated for both the HAP ($r = 0.65, p < 0.001$) and LAP ($r = 0.65, p < 0.001$) physicians, they did not completely overlap.

**Ideal and Actual Affect.** We again assessed ideal and actual affect using the AVI. In this sample, the HAP aggregate included enthusiastic, excited, and elated\(^3\) and the LAP aggregate included calm, peaceful, and serene. Internal consistencies for actual and ideal HAP and LAP were high (ideal HAP $\alpha = .73$, actual HAP $\alpha = .66$, ideal LAP $\alpha = .79$, actual LAP $\alpha = .71$). Table 1 shows the bivariate correlations between ideal HAP, ideal LAP, actual HAP, and actual LAP. Consistent with previous research, ideal and actual affect were only moderately correlated.

**Procedure**

As in Study 1, participants read the physician scenario, rated each physician and then chose one of the two physicians. Participants then completed several filler questionnaires, the AVI, and a demographic questionnaire. The presentation order of the HAP and LAP scenarios was counterbalanced.

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\(^3\) In this sample, we replaced “energetic” with “elated” because we were concerned that older participants might view “energetic” as a physical rather than affective state.
Study 2 Results

Does Ideal Affect Predict Physician Choice in a Community Sample?

To assess whether ideal affect predicted physician choice, we conducted a logistic regression analysis, in which we regressed physician choice (LAP = 0, HAP = 1) onto actual HAP, actual LAP, ideal HAP and ideal LAP. At the next step, we included ethnicity (European American, Chinese American) and interaction terms between ethnicity and each of the predictors in the regression model as outlined by Frazier, Tix & Barron (2004). We also examined another model in which we included age and interaction terms between age and each predictor. Moderation analyses revealed that the associations between ideal affect and physician preference were not moderated by ethnicity or age. Regression results are presented in Table 2.

For physician choice, consistent with Studies 1a and 1b, the more participants valued HAP, the more likely they were to choose the HAP physician, $B = 1.15, SE = 0.43, p < 0.01$. Also consistent with Studies 1a and 1b, there was no significant association between ideal LAP and physician choice, $B = -0.12, SE = 0.33, p = 0.72$. No significant associations were found between actual HAP ($B = 0.18, SE = 0.46, p = 0.69$) or actual LAP ($B = -0.38, SE = 0.46, p = 0.40$) and physician choice.

Does Perceived Trustworthiness Mediate the Relationship Between Ideal Affect and Physician Choice?

Next, we examined whether perceived physician trustworthiness mediated the relationship between ideal HAP and physician choice. We included ratings of physician trustworthiness for the HAP and LAP options as mediators in our model. As suggested by
Baron and Kenny (1986), we conducted a series of regression analyses. All analyses controlled for actual HAP, ideal LAP, and actual LAP.

We first conducted a linear regression to estimate the effect of ideal HAP on physician trustworthiness (path a). This coefficient was significantly positive for the HAP physician, such that the more people valued HAP states, the more they felt they could trust the HAP physician, $B_{a1} = 0.42, SE = 0.15, t = 2.77, p < 0.01$. Ideal HAP was not associated with perceived trustworthiness of the LAP physician, $B_{a2} = 0.10, SE = 0.18, t = 0.53, p = 0.60$, suggesting that the association was specific to the HAP physician.

Next, we conducted a logistic regression in which physician choice was regressed onto physician trustworthiness (path b) and ideal HAP (path c'). Above and beyond ideal HAP, we found that HAP physician trustworthiness predicted higher likelihood of choosing the HAP physician, $B_{b1} = 1.73, SE = 0.50, z = 3.44, p < 0.001$, and LAP physician trustworthiness predicted lower likelihood of choosing the HAP (vs. LAP) physician, $B_{b2} = -1.77, SE = 0.45, z = -3.87, p < 0.001$. As described above, logistic regression analyses also showed that the more people valued HAP, the more likely they were to choose the HAP physician (path c), $B_{c'} = 1.15, SE = 0.43, z = 2.67, p = 0.03$. However, when including HAP physician trustworthiness in the model (path c'), the effect of ideal HAP on physician choice was reduced, $B_{c'} = 1.12, SE = 0.54, z = 2.09, p = 0.04$. The model suggested an indirect effect of ideal HAP on physician choice through perceived trustworthiness of the HAP physician, Nagelkerke $R^2 = 0.48, N = 102$). This conclusion was confirmed by estimating the 95% confidence interval for the indirect effect based on 10,000 bootstrap resamples (Preacher & Hayes, 2008). The indirect effect of ideal HAP on physician choice through HAP physician trustworthiness was estimated as 0.73 ($SE =$
0.60), with a 95% confidence interval [0.19, 1.73] that did not include 0. Thus, as predicted, ideal HAP shaped physician choice in part through perceived trustworthiness. Using a moderated mediation SPSS macro developed by Preacher, Rucker and Hayes (2007), we added interaction terms for ethnicity and ideal HAP and for ethnicity and physician trustworthiness to the above model and found no significant interactions with ethnicity. Thus, regardless of ethnicity, individuals who valued HAP more trusted the HAP physician more, and therefore, were more likely to choose the HAP (vs. LAP) physician.

Next, we wanted to determine whether perceived knowledgeableness mediated the association between ideal HAP and physician choice to assess whether our findings were specific to perceived trustworthiness. As mentioned earlier, we did not expect perceived knowledgeableness to mediate the association between ideal HAP and physician choice because we took steps to ensure that both physicians were presented as highly knowledgeable. We included ratings of how trustworthy and how knowledgeable people perceived each physician to be as mediators in the same model. Ideal HAP did not significantly predict how knowledgeable they perceived the HAP physician, \( B_I = 0.24, SE = 0.13, t = 1.80, p = 0.08 \), or the LAP physician, \( B_I = -0.12, SE = 0.18, t = -0.66, p = 0.51 \). Further, the indirect effect of ideal HAP on choosing the HAP physician through perceived knowledgeableness of the HAP physician was not significant (indirect effect = -0.03, \( SE = 0.32, 95\% \) CI [-0.60, 0.65] included 0). Thus, perceived knowledgeableness did not mediate the association between ideal HAP and physician choice. Indeed, even when including perceived knowledgeableness of each physician in the model, perceived trustworthiness of the HAP physician remained significant (indirect effect = 0.84, \( SE = \)
0.69, 95% CI [0.17, 1.78] did not include 0). These findings suggest that as predicted, perceived trustworthiness---and not perceived knowledgeableness—mediated the relationship between ideal HAP and physician choice.

**Study 2 Discussion**

In sum, we replicated our findings in a diverse sample of community adults: Consistent with the “ideal affect match” hypothesis, the more people valued HAP, the more likely they were to choose the HAP (vs. LAP) physician. Also as predicted, this relationship was partially mediated by perception of HAP physician trustworthiness. Perceptions of HAP physician knowledgeableness did not mediate the relationship between ideal HAP and physician choice. This suggests that ideal affect may influence some but not all perceptions of physicians. As with Studies 1a-b, there was no relationship between ideal LAP and physician choice, even in an age and ethnically diverse sample. Also consistent with Studies 1a-b and contrary to the “actual affect match” and “general match” hypotheses, actual affect did not predict physician choice.

Studies 1 and 2 were conducted in an American context, which emphasizes HAP states more than other cultural contexts (e.g., Tsai, 2007). Thus, participants’ ideal LAP may not have been salient when they evaluated the physicians. Therefore, we conducted an experiment in which we manipulated the value placed on LAP and HAP to see whether under these conditions, ideal LAP would predict physician choice. Additionally, using an experimental approach allowed us to make causal inferences that we could not make in Studies 1-2 due to their correlational design.
Study 3: Does Manipulating Ideal Affect Alter Physician Choice?

In Study 3, we experimentally manipulated the value placed on HAP and LAP to assess their influence on perceived trustworthiness and choice of physician. We adapted a self-affirmation paradigm (Cohen, Aronson, & Steele, 2000), in which participants affirmed the benefits of “feeling stimulated” (HAP) or “well rested” (LAP) for general well-being.

We hypothesized that: (1) participants randomly assigned to the Value HAP condition would be more likely to choose the HAP (vs. LAP) physician compared to those randomly assigned to the Control and Value LAP conditions, whereas participants in the Value LAP condition would be less likely to choose the HAP (vs. LAP) physician compared to those in the Control and Value HAP conditions, and (2) the effect of Condition on choice of physician would be mediated by perceived trustworthiness.

Study 3 Method

Participants

One hundred and eight introductory psychology students (66.7% Female; 30.6% Male; 2.8% unknown; 38.9% White; 19.4% Asian, 6.5% Black, 21.3% Hispanic, 0.9% Native American, 9.3% multiracial; 3.7% unknown) participated for credit.

Instruments

Choosing a Physician Scenario. We used the same scenario as in Study 2. Before choosing a physician, participants also indicated how much they agreed with the following statements for each physician on a 1 (strongly disagree) to 7 (strongly agree) scale: “This physician seems knowledgeable,” and “I would trust this physician.” The correlation between perceived trustworthiness and knowledgeableness was moderate for
both the HAP physician \((r = 0.48, p < 0.001)\) and the LAP physician \((r = 0.54, p < 0.001)\).

**Ideal and Actual Affect.** As in Study 1, we assessed ideal and actual affect using the AVI to ensure that our manipulation was effective in altering ideal affect. The HAP aggregate was enthusiastic, excited, and energetic, and the LAP aggregate was calm, peaceful, and serene. Internal consistencies were high (ideal HAP \(\alpha = .80\), actual HAP \(\alpha = .83\), ideal LAP \(\alpha = .78\), actual LAP \(\alpha = .82\)).

**Procedure**

Participants completed the study online and were randomly assigned to one of three conditions: (1) Value HAP, (2) Value LAP, or (3) a control condition. In the Value HAP and Value LAP conditions, participants were explicitly told about the benefits of actually feeling either HAP, or LAP states, but were not explicitly told to value these states. In the control condition, there was no explicit mention of feeling states or emotion. All participants were told to read a summary of research findings and write one paragraph about how an experience in their own lives supported this finding. In the Value HAP condition, participants then read the following [terms were not bolded in the actual study]:

Researchers have recently discovered that “the secret to a happy, fulfilling life is feeling stimulated and invigorated.” In several studies of large, diverse samples across the adult life span, it was found that among people who reported feeling stimulated and invigorated, indices of happiness and general well-being were substantially higher. Notably, these feelings also predicted better
relationships, higher life satisfaction and improved quality of life several years later.

In the Value LAP condition, participants read the same paragraph, but the words “stimulated and invigorated” were replaced with “tranquil and well rested.” In the Control condition, these words were replaced with “having an objective outlook and sense of purpose.”

After writing their paragraphs, participants completed a filler task, the choosing a physician scenario, and the AVI.

**Study 3 Results**

Eleven participants were excluded from analyses because they did not write about a personally meaningful experience as instructed. Final analyses included 32 participants in the Value HAP condition, 31 in the Value LAP condition, and 32 in the Control condition.

**Effectiveness of the Manipulation**

To confirm that participants ideally wanted to feel HAP more than LAP in the Value HAP condition, and ideally wanted to feel LAP more than HAP in the Value LAP condition, we conducted a repeated-measures analysis of variance (ANOVA) in which ideal HAP and ideal LAP were the dependent variables, and Condition (Value HAP, Value LAP, Control) was the between-subjects factor. We removed two outliers with exceedingly large differences between ideal HAP and ideal LAP within condition (Value HAP condition $z = -2.67$; Value LAP condition $z = 2.78$). This analysis revealed a significant interaction between ideal affect and Condition $F(2, 77) = 7.40$, partial $\eta^2 = 0.16$, $p < 0.01$, such that ideal HAP was higher than ideal LAP for participants in the
Value HAP condition (ideal HAP $M = 4.04, SE = 0.08$; ideal LAP $M = 3.81, SE = 0.12$), $p = 0.06$; ideal HAP was lower than ideal LAP in the Value LAP condition (ideal HAP $M = 3.83, SE = 0.12$; ideal LAP $M = 4.27, SE = 0.09$), $p < 0.01$; and ideal HAP and LAP were rated similarly for participants in the Control condition (ideal HAP $M = 4.21, SE = 0.11$; ideal LAP $M = 4.07, SE = 0.14$), $p = 0.27$.

To ensure that these findings were not due to actual affect, or an experimental demand to endorse HAP or LAP states in general (vs. ideal HAP and LAP specifically), we conducted a repeated measures ANOVA on actual HAP and actual LAP. The interaction between actual affect and Condition was not significant ($F (2, 77) = 0.68$, partial $\eta^2 = 0.02$, $p = 0.51$). Thus, we were successful in selectively altering ideal affect and not actual affect.

**Does Manipulating Ideal Affect Influence Physician Choice?**

To test our hypotheses, we conducted a chi-square analysis to determine whether there were significant differences in physician choice by Condition. As predicted, there was a significant linear effect of Condition (HAP, Control, LAP) on physician choice (HAP, LAP), $\chi^2_{MH} (1) = 10.61$, $V = 0.37$, $p < 0.01$ (see Figure 1, left), such that the likelihood of choosing the HAP (vs. LAP) physician was greatest for participants in the HAP condition and lowest for participants in the LAP condition, with participants in the Control condition falling in between.\(^4\) We then performed univariate chi-square tests within each condition to assess whether choice of the HAP (vs. LAP) physician significantly differed from chance. Consistent with their reports of ideal affect,

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\(^4\) Pairwise comparisons revealed that the Value HAP condition significantly differed from the Value LAP condition, $p < 0.05$, but neither the Value HAP nor Value LAP conditions differed from the control condition.
participants in the Control condition were not significantly more likely to choose the HAP (vs. LAP) physician (64%), $\chi^2 (1) = 2.29, p = 0.13$. As predicted, participants in the Value HAP condition were significantly more likely to choose the HAP over the LAP physician (79%), $\chi^2 (1) = 9.14, p < 0.01$. Although participants in the Value LAP condition were less likely to choose the HAP physician (35%), this preference was not significantly different from chance, $\chi^2 (1) = 2.46, p = 0.12$, contrary to prediction.

**Does Perceived Trustworthiness Mediate the Effect of Condition on Physician Preference?**

We conducted a mediation analysis to examine whether perceived physician trustworthiness mediated the effect of Condition on physician choice. We included ratings of physician trustworthiness for the HAP and LAP options as mediators in our model.

We first conducted a linear regression to estimate the difference between the Value HAP and Value LAP condition (Value HAP = -0.5, Control = 0, Value LAP = 0.5) on physician trustworthiness (path a). This coefficient was significantly positive for Condition, such that people in the Value HAP condition felt they could trust the HAP physician more than those in the Value LAP condition, $B_{a1} = 0.63, SE = 0.29, t = 2.17, p < 0.05$. There was no significant effect of Condition on perceived LAP physician trustworthiness, $B_{a2} = 0.11, SE = 0.28, t = 0.40, p = 0.69$.

Next, we regressed physician choice onto HAP and LAP physician trustworthiness (path b) and Condition (path c'). Above and beyond the effect of Condition, we found that HAP physician trustworthiness predicted higher likelihood of choosing the HAP physician, $B_{b1} = 0.99, SE = 0.29, z = 3.38, p < 0.001$, and LAP
physician trustworthiness predicted lower likelihood of choosing the HAP (vs. LAP) physician, $B_{b2} = -0.99$, $SE = 0.29$, $z = -3.37$, $p < 0.001$. As described above, people in the Value HAP condition were more likely to choose the HAP physician than those in the Value LAP condition with the Control condition falling directly in between (path c), $B_c = 1.40$, $SE = 0.54$, $z = 2.60$, $p < 0.01$. However, when including HAP and LAP physician trustworthiness in the model (path c’), the effect of Condition (Value HAP vs. Control vs. Value LAP) on physician choice was reduced, $B_{c'} = 1.36$, $SE = 0.61$, $z = 2.22$, $p = 0.03$.

Because there was no effect of Condition on LAP physician trustworthiness, this model suggests an indirect effect of Condition on physician choice through HAP physician trustworthiness, Nagelkerke $R^2 = 0.10$, $N = 95$. This conclusion was confirmed by estimating the 95% confidence interval for the indirect effect of ideal HAP on physician choice through HAP physician trustworthiness based on 10,000 bootstrap resamples (Preacher & Hayes, 2008). The indirect effect was estimated as 0.62 ($SE = 0.37$), with a 95% confidence interval [0.04, 1.46] that did not include 0.

Next, as in Study 2, we wanted to determine whether our findings were specific to perceived trustworthiness and therefore, we examined whether perceived knowledgeableness of the HAP physician also mediated the association between Condition and physician choice. We estimated the relative indirect effect of Condition (Value HAP vs. Control vs. Value LAP) on physician choice through perceived trustworthiness and knowledgeableness of each physician. We found no significant effect of Condition on perceived knowledgeableness of the HAP physician, $B_I = -0.29$, $SE = 0.20$, $t = -1.40$, $p = 0.16$, or the LAP physician, $B_I = -0.34$, $SE = 0.19$, $t = -1.76$, $p = 0.08$.

Further, the indirect effect of Condition on physician choice through perceived
knowledgeableness was not significant for the HAP physician (indirect effect = -0.30, 
$SE = 0.33$, 95% CI $[-1.38, 0.08]$ included 0) or the LAP physician (indirect effect = - 
0.32, $SE = 0.31$, 95% CI $[-0.03, 1.27]$ included 0). The indirect effect of Condition on 
physician choice through HAP physician trustworthiness, however, was significant 
(indirect effect = 0.56, $SE = 0.39$, 95% CI $[0.01, 1.50]$ did not include 0).

**Study 3 Discussion**

When we experimentally manipulated ideal affect, we found that participants in 
the Value HAP condition were more likely to choose a physician that promoted HAP (vs. 
LAP) states, whereas those in the Control and Value LAP conditions were not more 
likely to choose one physician over the other. These findings are consistent with those of 
Studies 1-2, suggesting that ideal HAP influences physician preference. Further, 
consistent with Study 2, we found that the effect of Condition on physician choice was 
mediated through perceived trustworthiness of the HAP physician. As predicted and 
consistent with Study 2, perceived knowledgeableness did not mediate the effect. 
Contrary to prediction, when we increased the value placed on LAP, the effect of ideal 
LAP on physician choice was not significant. Thus, contrary to our predictions, 
increasing the value placed on LAP did not increase the association between ideal LAP 
and physician choice.

Together, Studies 1-3 suggest a clear relationship between ideal HAP and 
physician choice: the more participants valued HAP, the more likely they were to choose 
the HAP vs. LAP physician. However, one major limitation of these studies is that 
participants only had a choice between two physicians. Forcing participants to choose 
between HAP and LAP physicians may explain why ideal LAP did not emerge as a
significant predictor of preference for the LAP physician. Because participants were living in an American context that values HAP states, it is possible that individuals focused more on the HAP than the LAP physician (cf. Feldman Barrett, 1998) and therefore perceived the LAP physician as “not-HAP” rather than as LAP. In other words, the LAP physician may have been construed as a non-emotional option. Therefore, in the next study, we included a non-emotional or neutral option to increase the likelihood that the LAP physician was viewed as an emotional option.

Further, we wanted to clarify whether the association between ideal HAP and HAP (vs. LAP) physician choice is due to wanting to choose the HAP option, not wanting to choose the LAP option, or both. Therefore, in Study 4, we assessed physician selection using continuous ratings rather than forced choice. We predicted that ideal HAP would be selectively correlated with likelihood of selecting the HAP physician, and not with the likelihood of selecting the LAP physician.

**Study 4: When Does Valuing Calm Predict Physician Choice in an American Context?**

In this study, we asked participants to rate the extent to which they would choose each physician on a continuous scale, and we included a neutral physician who did not focus on affective states.

Based on the “ideal affect match” hypothesis, we predicted that: (1) ideal HAP would predict higher likelihood of choosing the HAP physician, whereas ideal LAP would predict higher likelihood of choosing the LAP physician, (2) ideal affect would not be associated with likelihood of choosing the neutral physician, and (3) the effect of ideal affect on physician choice would be mediated by perceived trustworthiness. We also
tested the alternative hypotheses that actual HAP and actual LAP would predict physician preference.

**Study 4 Method**

**Participants**

For credit in an introductory psychology course, 189 undergraduate students (65% Female, 35% Male; 43.6% White, 29.8% Asian, 1.6% Black, 11.2% Hispanic, 1.6% Native American, 11.7% multiracial) participated in a larger online survey that included measures of actual affect, ideal affect, and physician preference.

**Instruments**

**Choosing a Physician Scenario.** Other than the addition of a Neutral physician, the physician scenario remained the same as in Studies 1-3. For each physician, participants indicated how much they agreed with the following statement, “I would choose this physician as my health care provider,” using a seven point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). As in Studies 2-3, we also included measures of perceived trustworthiness and knowledgeableness. Perceived trustworthiness and knowledgeableness were highly correlated for the HAP physician ($r = 0.74, p < 0.001$), the LAP physician ($r = 0.79, p < 0.001$), and the Neutral physician ($r = 0.80, p < 0.001$), although not completely overlapping.

The Neutral physician was similar to the HAP and LAP physicians in terms of age, education, and record of service, but differed in views of patient care, outside interests, and hobbies. The Neutral physician’s views on patient care were to “administer medical care to [his/her] patients by providing information and making recommendations
in order to help them maintain a healthy lifestyle.” Outside interests included “work[ing]
with children offering advice about academic programs and curricula.”

**Ideal and Actual Affect.** As in the previous studies, we administered the AVI. The HAP aggregate was comprised of excited, elated, and enthusiastic. The LAP aggregate was comprised of calm, peaceful, and serene. Internal consistencies for actual and ideal HAP and LAP were high (ideal HAP $\alpha = 0.78$, actual HAP $\alpha = 0.79$, ideal LAP $\alpha = 0.84$, actual LAP $\alpha = 0.82$). Table 1 shows the bivariate correlations between ideal HAP, ideal LAP, actual HAP, and actual LAP.

**Procedure**

Participants completed the AVI and physician scenario, which were separated by several other questionnaires not relevant to this study. The order in which participants rated their ideal and actual affect was counterbalanced. The presentation order of HAP, LAP, and Neutral options was counterbalanced.

**Study 4 Results**

To assess whether ideal affect predicted physician choice, we conducted linear regression analyses in which we regressed how much participants agreed with choosing each physician as their health care provider onto ideal HAP, ideal LAP, actual HAP, and actual LAP. Based on stem and leaf plots, we removed 4 outliers identified as extreme values for actual HAP ($z = 2.86$). We removed two additional outliers identified as extreme values for choosing the Neutral physician rating ($z = -3.50$) and the HAP physician rating ($z = -3.15$). Results of the regression models predicting the HAP and LAP physician are presented in Table 3.
Consistent with our first hypothesis, ideal HAP significantly predicted choosing the HAP physician, \( B = 0.33, SE = 0.14, p = 0.02 \), while ideal LAP did not, \( B = -0.03, SE = 0.14, p = 0.80 \). Also consistent with our first hypothesis, ideal LAP significantly predicted choosing the LAP physician, \( B = 0.31, SE = 0.15, p = 0.04 \), while ideal HAP did not, \( B = 0.33, SE = 0.14, p = 0.02 \). Consistent with our second hypothesis, neither ideal nor actual affect predicted choice of the Neutral physician (ideal HAP \( B = 0.22, SE = 0.13, p = 0.86 \), ideal LAP \( B = 0.05, SE = 0.13, p = 0.70 \), actual HAP \( B = 0.13, SE = 0.15, p = 0.40 \), actual LAP \( B = -0.05, SE = 0.13, p = 0.74 \)). Consistent with our third hypothesis, actual affect did not predict choosing the HAP physician (actual HAP \( B = 0.22, SE = 0.16, p = 0.19 \), actual LAP \( B = -0.03, SE = 0.14, p = 0.85 \)) or the LAP physician (actual HAP \( B = 0.07, SE = 0.18, p = 0.69 \), actual LAP \( B = -0.14, SE = 0.15, p = 0.37 \)), suggesting that ideal affect predicts physician choice above and beyond actual affect.

**Does Perceived Trustworthiness Mediate the Effect of Ideal Affect on Physician Preference?**

Next, we tested our third hypothesis by examining whether perceived physician trustworthiness mediated the relationship between ideal HAP and HAP physician choice and between ideal LAP and LAP physician choice (see Figure 2). All analyses controlled for actual HAP and actual LAP. When examining ideal HAP and HAP physician choice, we also controlled for ideal LAP; when examining ideal LAP and LAP physician choice, we controlled for ideal HAP.\(^5\)

\(^5\)Findings were similar when examining the LAP physician rating when the HAP physician rating was included as a covariate and when examining the HAP physician rating when the LAP physician rating was included as a covariate.
HAP Physician Choice. We first conducted a linear regression to estimate the effect of ideal HAP on physician trustworthiness (path a). We found that that the more people valued HAP states, the more they felt they could trust the HAP physician, \( B_a = 0.24, SE = 0.11, t = 2.17, p = 0.03 \). Next, we regressed HAP physician choice onto physician trustworthiness (path b) and ideal HAP (path c'). Above and beyond ideal HAP, we found that a higher likelihood of choosing the HAP physician was significantly predicted by HAP physician trustworthiness, \( B_b = 0.82, SE = 0.07, t = 11.69, p < 0.001 \). As described above, linear regression analyses also showed that the more people valued HAP, the more likely they were to choose the HAP physician (path c), \( p = 0.02 \).

However, when including physician trustworthiness in the model (path c’), the effect of ideal HAP on HAP physician choice was no longer significant, \( B_{c'} = 0.14, SE = 0.10, t = 1.34, p = 0.18 \). This model suggests that how trustworthy people perceived the physician mediated the effect of ideal HAP on physician choice, \( R^2 = 0.47, F (5, 177) = 31.44, p < 0.001 \). This conclusion was confirmed by estimating the 95% confidence interval for the indirect effect of ideal HAP on choosing the HAP physician through perceived trustworthiness of the HAP physician based on 10,000 bootstrap resamples (Preacher & Hayes, 2008). The indirect effect was estimated as 0.19 (\( SE = 0.09 \)), with a 95% confidence interval [0.04, 0.38] that did not include 0.

We then examined whether perceived knowledgeableness was also a significant mediator. As in Studies 2 and 3, ideal HAP did not significantly predict how knowledgeable participants perceived the HAP physician to be, \( B = 0.17, SE = 0.10, t = 1.72, p = 0.09 \). Further, the indirect effect of ideal HAP on choosing the HAP physician through perceived knowledgeableness was not significant (indirect effect = 0.03, \( SE = \).
0.03, 95% CI [-0.001, 0.12] included 0). Perceived trustworthiness, however, remained a significant mediator (indirect effect = 0.19, SE = 0.08, 95% CI [0.05, 0.37] included 0).

**LAP Physician Choice.** When estimating the effect of ideal LAP on perceived trustworthiness of the LAP physician (path a), we found that as predicted, the more people valued LAP states, the more they felt they could trust the LAP physician, \( B_a = 0.31, SE = 0.12, t = 2.60, p = 0.01 \). Next, we regressed LAP physician choice onto LAP physician trustworthiness (path b) and ideal LAP (path c'). Above and beyond ideal LAP, we found that a higher likelihood of choosing the LAP physician was significantly predicted by LAP physician trustworthiness, \( B_b = 0.79, SE = 0.07, t = 11.32, p < 0.001 \). As described above, linear regression analyses also showed that the more people valued LAP, the more likely they were to choose the LAP physician (path c), \( p = 0.04 \). Moreover, when including LAP physician trustworthiness in the model (path c'), the effect of ideal LAP on LAP physician choice was no longer significant, \( B_c' = 0.06, SE = 0.11, t = 0.55, p = 0.58 \). This model suggests that how trustworthy people perceived the LAP physician to be mediated the effect of ideal LAP on LAP physician choice, \( R^2 = 0.44, F (5, 177) = 27.68, p < 0.001 \). This conclusion was confirmed by estimating the 95% confidence interval for the indirect effect of ideal LAP on choosing the LAP physician through perceived trustworthiness in the LAP physician based on 10,000 bootstrap resamples (Preacher & Hayes, 2008). The indirect effect was estimated as 0.25 (SE = 0.10), with a 95% confidence interval [0.06, 0.45] that did not include 0.

As above, we also examined whether perceived knowledgeableness was a significant mediator of the relationship between ideal LAP and selection of the LAP physician. Here, we found that ideal LAP did predict how knowledgeable participants
perceived the LAP physician to be, $B_a = 0.39$, $SE = 0.13$, $t = 3.02$, $p < 0.01$. However, above and beyond ideal HAP, a higher likelihood of choosing the LAP physician was not predicted by LAP physician knowledgeableness, $B_b = 0.17$, $SE = 0.10$, $t = 1.59$, $p = 0.12$. Further, the indirect effect of ideal LAP on choosing the LAP physician through perceived knowledgeableness of the LAP physician was not significant (indirect effect = 0.06, $SE = 0.05$, 95% CI [-0.01, 0.19] included 0). Perceived trustworthiness of the LAP physician, however, remained a significant mediator (indirect effect = 0.21, $SE = 0.09$, 95% CI [0.05, 0.42] did not include 0).

**Study 4 Discussion**

Consistent with the “ideal affect match” hypothesis and Studies 1-3, in Study 4, ideal HAP predicted the likelihood of selecting the HAP physician. In Studies 1-3, ideal LAP did not significantly predict physician choice. In Study 4, however, when we included a Neutral option alongside the HAP and LAP options, ideal LAP did significantly predict likelihood of selecting the LAP physician. This finding supports the possibility that in Studies 1-3, without a neutral option, participants may have viewed the LAP physician as “not HAP” rather than as LAP. In addition, Study 4 demonstrated that ideal HAP selectively influenced choice and perceived trustworthiness of the HAP physician, and that ideal LAP selectively influenced choice and perceived trustworthiness of the LAP physician. Finally, consistent with Studies 2 and 3, Study 4 demonstrated that the relationship between ideal HAP and choice of the HAP physician was mediated by perceived trustworthiness (and not perceived knowledgeableness) and that the relationship between ideal LAP and choice of the LAP physician was mediated by perceived trustworthiness (and not perceived knowledgeableness). These results
demonstrate that ideal affect shapes perceptions of certain characteristics more than others in the context of evaluating a physician.

Studies 1 through 4 provided supporting evidence of our hypothesis that ideal affect predicts choice between a HAP and LAP physician and contrary to the “actual affect match” and “general match” hypotheses, actual affect does not. Importantly, ideal LAP was related to physician choice when the LAP physician was not presented solely in contrast to a HAP physician. Nevertheless, these studies were based on hypothetical scenarios in which people chose a physician based on their first impression. It may be that ideal affect has a greater effect than actual affect in this hypothetical context in which people have the freedom to base their preferences on their ideals. In the final study, we wanted to examine whether ideal affect predicts how people actually respond to a HAP or LAP physician in a real world context.

**Study 5: Does Ideal Affect Predict Adherence to Physician Recommendations?**

To examine the role of ideal and actual affect outside of a hypothetical context, we conducted a fifth study on a sample of community adults who we assigned to either a virtual HAP or LAP physician. In this study, participants were recruited to evaluate a “virtual health center pilot program.” Based on the “ideal affect match” hypothesis, we predicted that (1) ideal HAP (but not ideal LAP) would predict a more positive response (i.e., adherence to recommendations) to the HAP physician, whereas ideal LAP (but not ideal HAP) would predict a more positive response to the LAP physician. We also examined whether actual affect would predict response to the HAP or LAP physician to test alternative hypotheses.
Study 5 Method

Participants

We recruited 96 adults (age $M = 56$ years, $SD = 12$ years; Range = 27 - 87 years; 52% European American, 48% Asian American; 66% Female; 34% Male) from the San Francisco Bay Area. We randomly assigned 47 participants to evaluate and receive recommendations from the HAP physician and 49 participants to evaluate and receive recommendations from the LAP physician.

Stimuli

Physician Introductory Video. We embedded introductory videos of each physician in a virtual health center website on a webpage called “Meet your Virtual Physician.” After filling out a general health assessment, participants were guided to this page to view the video. In each video, physicians conveyed their views on patient care. Videos lasted for approximately 90 seconds. The HAP physician displayed a wide, toothy smile, and spoke in an enthusiastic manner. The LAP physician displayed a closed-mouth smile, and spoke in a soothing manner. Additionally on the webpage, we included the physician descriptions (e.g., views on patient care, outside interests) used in the previous studies posted underneath the video. The same actor portrayed the HAP and LAP physician. Under the video were the same physician descriptions used in the hypothetical scenarios from Studies 1-4. Participants read that their physician received his medical degree in 1973 so that he would be perceived as having adequate experience and training. The videos were pretested to ensure that the HAP physician conveyed more enthusiasm than calm compared to the LAP physician, while demonstrating similar levels of likeability and competence (see Appendix D).
Physician Feedback Video. We also embedded feedback videos of each physician on a webpage called “Feedback.” Participants viewed this page two days after the introductory session (we wanted to increase participants’ impression that the feedback they received was personalized, and that the physician actually took the time to review participants’ responses to the health assessment). In each video, physicians encouraged participants to follow their recommendations. Videos lasted approximately 30 seconds. The HAP physician encouraged adherence by saying that following his recommendations would lead to feeling stimulated; the LAP encouraged adherence by saying that following his recommendations would lead to feeling rested.

On the feedback webpage, both physicians indicated the participants’ health was “Good” on a scale from “Poor” to “Excellent” so that we could ensure that participants would be motivated to improve their health but would not feel discouraged by a negative score. All participants received the same recommendations across conditions: (1) At least 10 minutes doing muscle strengthening activities (participants were given a link to a webpage with descriptions of the activities in which they could engage), (2) Take a 30 minute brisk walk after dinner, (3) At least 15-20 minutes napping or resting every afternoon, (4) No more than 1 caffeinated beverage per day, (5) Drink at least 1 glass of water with every meal, and (6) Abstain from eating at least 2 hours before bedtime.

Instruments

Ideal and Actual Affect. To predict daily adherence, we assessed ideal and actual affect using the AVI at the daily level (e.g., how much did you feel/ideally want to feel
The HAP aggregate included excited and enthusiastic and the LAP aggregate included calm and relaxed. Across the five days, test-retest reliability for daily ideal and actual affect were high (ideal HAP $\alpha = .91$, ideal LAP $\alpha = .92$, actual HAP $\alpha = .85$, actual LAP $\alpha = .88$). Within each day, internal consistencies of ideal and actual affect aggregates were high as well (ideal HAP $\alpha = 0.68-0.85$, ideal LAP $\alpha = 0.80-0.90$, actual HAP $\alpha = 0.71-0.86$, actual LAP $\alpha = 0.76-0.91$). Table 4 shows the bivariate correlations between ideal HAP, ideal LAP, actual HAP, and actual LAP. Daily reports of ideal and actual affect did not differ between the HAP condition (ideal HAP: $M = 3.54$, $SD = 0.65$, ideal LAP $M = 3.94$, $SD = 0.58$, actual HAP $M = 2.91$, $SD = 0.71$, actual LAP $M = 3.28$, $SD = 0.69$) and the LAP condition (ideal HAP: $M = 3.72$, $SD = 0.72$, ideal LAP $M = 4.13$, $SD = 0.62$, actual HAP $M = 2.91$, $SD = 0.73$, actual LAP $M = 3.17$, $SD = 0.75$), $ps = 0.12 - 0.95$.

Daily Adherence. For five days, participants indicated whether or not they engaged in each recommended behavior during the previous day. They also reported to what extent they engaged in each behavior (e.g., number of minutes walking, number of eight ounce glasses of water and number of meals eaten that day). We then coded whether participants did not adhere to each behavior (no adherence = 0), attempted to adhere to each behavior but did not meet the exact recommendations (some adherence = 1), or fully adhered to each behavior as recommended (full adherence = 2). Attempted adherence was counted as participants who engaged in the recommended behavior (e.g., walking) but did not complete the recommended amount (e.g., only walked for 20

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$^6$ Daily reports of ideal and actual HAP (excited, enthusiastic) and LAP (calm, relaxed) averaged across the week were moderately correlated with global reports of ideal affect assessed at the beginning of the week: Ideal HAP $r = 0.53$, ideal LAP $r = 0.50$, actual HAP $r = 0.61$, actual LAP $r = 0.48$, $ps < 0.001$.  

44
minutes instead of the recommended 30 minutes). For each day, we added the adherence score across each of the recommended behaviors so that scores ranged from 0 (no adherence to any recommendation for a given day) to 12 (full adherence to all six recommendations for a given day). Mean total adherence across the five days did not differ between the HAP condition ($M = 6.83$, $SD = 1.65$) and LAP condition ($M = 6.35$, $SD = 1.64$), $t (94) = 1.43$, $p =0.16$.

**Procedure**

Participants were told they were participating in a study to provide feedback on a pilot virtual health center. Each participant was scheduled for two phone sessions. In the first session, participants completed a general health assessment, reviewed the “Bay Area Virtual Health Center” website (see Figure 3), and then viewed an introductory video presented by their assigned virtual physician. Participants were randomly assigned to view either a physician emphasizing HAP states or a physician emphasizing LAP states. Participants only viewed and interacted with their assigned physician (i.e., participants assigned to the HAP physician did not see the LAP physician, and participants assigned to the LAP physician did not see the HAP physician). Ethnicity of the physician was matched to participants’ ethnicity (i.e., European Americans viewed a European American physician, and Asian Americans viewed an Asian American physician). Participants were then contacted two days later for the second session. During the second session, participant received feedback from their physician. Participants were given a login ID and password to enter their personalized feedback webpage. In order for participants to feel some need to follow the physician’s recommendations as well as to prevent them from feeling too discouraged by the results, all participants were told that
their health assessment results were “Good” on a scale of “Poor” to “Excellent.” Participants then viewed the feedback physician video. Participants were given the same six recommendations as described above and were asked to report whether they engaged in these health behaviors each day for five days. Because some of the recommendations involved behaviors in the evening (i.e., brisk walk after dinner) or before going to sleep (i.e., abstain from eating prior to bedtime), we instructed participants to complete their daily log the following morning. For each daily log, participants retrospectively reported whether they engaged in each recommended behavior during the previous day. Participants also retrospectively reported their ideal and actual affect for the previous day.

**Study 5 Results**

**Does Daily Ideal Affect Predict Self-Reported Adherence?**

Because we collected daily reports of adherence and ideal affect, we were able to compute within-person associations (Level 1) by regressing adherence, onto ideal affect and actual affect using hierarchical linear modeling (HLM 6.08; Raudenbush, Bryk, Cheong, & Congdon, 2004). At level 1, we entered the weighted adherence score as the dependent variable. There was significant variation in daily adherence ($u = 3.30, SD = 1.82$), $\chi^2 (85) = 816.01, p < 0.001$. We also entered ideal HAP, ideal LAP, actual HAP, and actual LAP (grand-mean centered) as the independent variables at level 1.

To determine whether Level 1 associations varied between the HAP and LAP conditions, we entered Condition (LAP = 0, HAP = 1) at Level 2. There was no effect of condition on average adherence ($b = 0.57, se = 0.39, t [94] = 1.47, p = 0.15$), such that on average, people were equally likely to adhere to the HAP physician ($M = 8.20, SD =$
and the LAP physician \((M = 7.63, SD = 0.27)\). We did find a significant effect of Condition on the association between Adherence and ideal HAP \((b = 0.87, se = 0.35, t(469) = 2.47, p = 0.01)\). Within the HAP condition, ideal HAP significantly predicted higher adherence, \(b = 0.52, se = 0.25, t(469) = 2.04, p = 0.04\). However, there was a non-significant association between adherence and ideal HAP in the LAP condition, \(b = -0.35, se = 0.24, t(469) = -1.44, p = 0.15\). We also found a significant effect of Condition on the association between adherence and ideal LAP \((b = -0.80, se = 0.36, t(469) = -2.19, p = 0.03)\). Within the LAP condition, ideal LAP significantly predicted higher adherence, \(b = 0.64, se = 0.26, t(469) = 2.48, p = 0.01\). However, there was no association between adherence and ideal LAP in the HAP condition, \(b = -0.16, se = 0.26, t(469) = -0.62, p = 0.54\). There were no significant effects of Condition on the association between actual HAP and adherence \((b = -0.47, se = 0.29, t(469) = -1.63, p = 0.10)\) or between actual LAP and adherence \((b = 0.22, se = 0.32, t(469) = 0.68, p = 0.49)\). We also conducted moderation analyses in which we included ethnicity and age at Level 2 and found no effect of ethnicity or age on the associations among adherence, ideal affect, and actual affect across conditions. Thus, higher adherence was predicted by a match (vs. mismatch) between the affective state promoted by the physician and participants’ ideal affect, but not with participants’ actual affect.

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\(^7\) Because the effect of condition on the association between actual HAP and adherence approached significance, we examined the effect of actual HAP on adherence within each condition. For the HAP condition, actual HAP was associated with lower adherence, \(b = -0.30, se = 0.20, t(469) = -1.51, p = 0.13\), and for the LAP condition, actual HAP was associated with greater adherence, \(b = 0.17, se = 0.21, t(469) = 0.81, p = 0.42\), but neither of these associations was significant.
Study 5 Discussion

Consistent with the “ideal affect match” hypothesis, in response to a virtual physician, the more people valued HAP, the more they adhered to the HAP physician’s recommendations. Similarly, the more people valued LAP, the more they adhered to the LAP physician’s recommendations. Thus, even in a real world context, ideal affect predicted response to a physician who promoted HAP or LAP states. Moreover, in line with findings from Study 4, when people viewed the LAP physician alone, rather than alongside the HAP physician as in Studies 1-3, ideal LAP emerged as a significant predictor of response to the LAP physician. Importantly, average ratings of daily ideal HAP and ideal LAP did not differ depending on which physician people were assigned, suggesting that our findings were not due to experimental demand. Consistent with findings from the hypothetical scenarios, Study 5 findings also contradict the “actual affect match” and “general match” hypotheses. Actual affect did not differentially predict how people responded to the HAP versus LAP physicians.

General Discussion

How do people select physicians? Our findings suggest that people choose physicians based on whether the affect physicians promote is consistent with how people ideally want to feel. Across college and community samples, the more people wanted to feel high arousal positive states like excitement, the more likely they were to choose and listen to a physician who promoted an exciting lifestyle vs. one who promoted a calm lifestyle. When presented with a non-emotional option or in isolation, the more people wanted to feel low arousal positive states like calm, the more likely they were to choose and listen to a physician who promoted calm states. Thus, ideal affect not only matters
for recreational choices such as which vacations to go on, or consumer choices such as which music to listen to, but also for more serious and consequential medical decisions such as which physician to see.

Interestingly, whereas ideal HAP consistently predicted preferences for the HAP physician, ideal LAP only predicted preferences for the LAP physician when adding a neutral option or when presented in isolation. It may be that in an American context that emphasizes HAP states (Tsai, 2007), the LAP physician may be seen as “not HAP,” or neutral, rather than LAP. This suggests that in cultural contexts that place a greater emphasis on LAP, the HAP option may be seen as “not LAP.” Consistent with this possibility, preliminary analyses suggest that among Hong Kong Chinese evaluating a HAP vs. LAP physician, ideal LAP predicted more positive ratings of the LAP physician, but ideal HAP did not predict ratings of the HAP physician (Sims, Tsai, & Fung, 2013).

These studies are the first to demonstrate that ideal affect shapes how different physicians are perceived. As predicted, the links between ideal affect and physician choice were mediated by perceived trustworthiness. The more people valued HAP, the more trustworthy they found the HAP physician, and the more likely they were to choose the HAP (vs. LAP) physician. Similarly, when a neutral option was included, the more people valued LAP, the more trustworthy they found the LAP physician, and the more likely they were to select the LAP physician. This is particularly striking because the HAP and LAP options differed in their affective characteristics, but were similar in every other way (e.g., physicians were equally experienced). By contrast, ideal affect did not consistently predict how knowledgeable people perceived the physicians to be. These findings suggest that ideal affect influences some but not all social inferences. While
previous research has demonstrated the importance of physician trustworthiness, few studies have examined the specific factors that lead patients to view certain physicians as more trustworthy than others. Our studies suggest that one important factor is the match between people’s ideal affect and the affective qualities of the physician.

In contrast to global ideal affect, global actual affect had a relatively small influence on physician choice. In Studies 1, 2, 4, and 5, neither actual HAP nor actual LAP significantly predicted preferences for physicians. In Study 3, even though participants in the three conditions differed in terms of their physician choice, they did not differ in terms of their actual affect. This suggests that people look for physicians whose affect matches their ideal but not their actual affect. The relatively smaller role of actual affect (compared to ideal affect) may have been due to the nature of the decisions. Because the scenarios in Studies 1-4 were hypothetical, participants may have placed less emphasis on how they actually feel on average and focused more on how they want to feel on average. However, in Study 5, we found that ideal affect was still more relevant than actual affect for people’s responses to physicians, indicating that ideal affect plays an important role, even in a real world context.

Implications for Affect and Decision Making

The present work contributes to our understanding of affect and decision making in multiple ways. First, previous research has shown that actual affect influences health decisions; our work raises the possibility that knowing how someone ideally wants to feel may be as important as knowing how someone actually feels. These results highlight the importance of including ideal affect in models of decision making. Second, our research suggests that ideal affect shapes physician choice by influencing how each physician is
perceived. Depending on one’s ideal affect and the affective characteristics of the physicians, certain physicians may appear more or less trustworthy. Although considerable work has shown that perceptions of products and services impact choice and satisfaction, few studies have examined the factors that influence such perceptions. Our work suggests that ideal affect is one such factor.

**Implications for Research on Choosing a Physician**

These findings also add to the existing literature on determinants of choosing a physician. First, while studies have found that people base their choice on the physician’s interpersonal or communicative style (Hill & Garner, 1991; Mercado, Mercado, Myers, Hewit, & Haller, 2012; Razzouk, Seitz, & Webb, 2004), our findings indicate that affective attributes are particularly important in choosing a physician. Additionally, most work suggests that patients prefer and respond more positively to physicians who express more affect. These studies are the first to show that the appeal of the physician depends on both the type of affect expressed or promoted by the physician and the type of affect valued by the patient. Thus, physicians who promote positive states that do not match their patients’ ideals may be less appealing to and consequently less effective at establishing a trusting relationship with their patients.

**Limitations and Future Directions**

One limitation of this work is our use of hypothetical scenarios and a virtual health care setting rather than real choices in medical settings. We used hypothetical scenarios because we could standardize the information presented, because many medical choices are made prospectively and based on hypothetical scenarios, and because decision analysts and policy makers often use patient or community preferences elicited
with hypothetical scenarios when estimating the cost-effectiveness of health care interventions (Gold et al., 1996). Nevertheless, it would be important to examine how our findings translate to patients’ choice of and responses to physicians in actual clinical settings. Additionally, these decisions were not about medical crises, but primary care. It would be interesting to see if actual affect played a greater role when people are making critical health decisions in the context of serious illnesses such as cancer or heart disease. In these cases, it would be important to also consider the negative states people typically experience and want to avoid.

Because we were interested in global, trait-like affective characteristics, we did not assess state actual or ideal affect (i.e., how do you actually/ideally want to feel right now?). However, future studies should include both types of assessments to see whether at the state level, ideal affect also predicts health care choices more than actual affect. These studies would also allow us to examine whether discrepancies between how people actually feel in the moment and how they want to feel more generally drive health decisions. Further, we did not measure anticipated affect. We assume that people choose a physician who matches their ideal affect because they anticipate a higher likelihood of feeling their ideal state after interacting with this physician. Future research should examine ideal affect interacts with anticipated affect to shape decision making.

While ideal affect appears to play a significant role in choosing a physician, future studies should examine how ideal affect shapes other medical choices, such as choosing a medical treatment (e.g., choosing between a stimulant and a sedative). Future work should also examine how ideal affect interacts with other factors that influence choice of a physician. For example, future studies could examine how ideal affect contributes to
and/or interacts with how involved people want to be in medical decisions and whether they are more motivated by promoting healthy outcomes or preventing unhealthy ones. Given cultural variation in ideal affect (Ruby et al., 2012; Tsai, 2007; Tsai et al., 2006; Tsai, et al., 2007a; Tsai, et al., 2007b; Tsai et al., 2007c), future work should also examine whether ideal affect may explain ethnic and cultural variation in patients’ preferences for and responses to different physicians.

Finally, we focused on physician choice, and therefore, it is unclear whether these processes are specific to this type of decision. Current work in our lab suggests that similar processes may occur for choosing leaders and friends (Chim, Tsai, & Ang, 2013). Thus, future research should examine whether our findings generalize to these and other social contexts.

Despite these limitations, our findings are the first to suggest that people choose physicians with affective characteristics that match their ideal affect because they perceive those physicians to be more trustworthy. These findings not only reveal the importance of considering patients’ ideal affect in health settings, but also broaden our basic understanding of how affective processes shape decision making.
Table 1. Correlations, means, and standard deviations among ideal and actual affect for Studies 1, 2, and 4.

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<th>Does Ideal Affect Shape Physician Choice?</th>
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<td>2. Ideal LAP</td>
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<td>Mean (SD)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3. Actual HAP</td>
<td>0.14</td>
<td>0.10</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4. Actual LAP</td>
<td>0.27**</td>
<td>0.35***</td>
<td>0.34***</td>
<td>1</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>3.37 (0.69)</td>
<td>3.73 (0.83)</td>
<td>2.52 (0.57)</td>
<td>3.10 (0.66)</td>
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<table>
<thead>
<tr>
<th>When Does Valuing Calm Predict Physician Choice in an American Context?</th>
<th>Study 4 (N=183)</th>
<th></th>
<th></th>
<th></th>
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<tr>
<td>1. Ideal HAP</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2. Ideal LAP</td>
<td>0.35**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Actual HAP</td>
<td>0.29**</td>
<td>-0.05</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4. Actual LAP</td>
<td>0.12†</td>
<td>0.26**</td>
<td>0.43**</td>
<td>1</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>3.84 (0.79)</td>
<td>4.01 (0.80)</td>
<td>2.82 (0.68)</td>
<td>2.83 (0.77)</td>
</tr>
</tbody>
</table>

Note. HAP = High Arousal Positive; LAP = Low Arousal Positive. ***p<0.001, **p<0.01, *p<0.05, †p<0.10.
Table 2. Summary of logistic regression results for ideal and actual affect predicting preference for HAP vs. LAP physician in Studies 1 (student samples) and 2 (community sample)

**Does Ideal Affect Shape Physician Choice? Study 1a (N=104)**

<table>
<thead>
<tr>
<th></th>
<th>$X^2$ (8)</th>
<th>B (SE)</th>
<th>Wald</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideal HAP</td>
<td>6.75, p = 0.56</td>
<td>0.85 (0.33)</td>
<td>6.42**</td>
<td>2.33 (1.21, 4.48)</td>
</tr>
<tr>
<td>Ideal LAP</td>
<td>-0.40 (0.30)</td>
<td>1.72</td>
<td>0.67 (0.37, 1.22)</td>
<td></td>
</tr>
<tr>
<td>Actual HAP</td>
<td>-0.67 (0.41)</td>
<td>2.74†</td>
<td>0.51 (0.23, 1.13)</td>
<td></td>
</tr>
<tr>
<td>Actual LAP</td>
<td>0.24 (0.35)</td>
<td>0.46</td>
<td>1.27 (0.64, 2.51)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.23 (1.28)</td>
<td>0.03</td>
<td>0.80</td>
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**Does Ideal Affect Shape Physician Choice? Study 1b (N=96)**

<table>
<thead>
<tr>
<th></th>
<th>$X^2$ (8)</th>
<th>B (SE)</th>
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<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideal HAP</td>
<td>13.61, p = 0.09</td>
<td>1.29 (0.51)</td>
<td>6.44**</td>
<td>3.62 (1.34, 9.76)</td>
</tr>
<tr>
<td>Ideal LAP</td>
<td>-0.52 (0.36)</td>
<td>2.17</td>
<td>0.59 (0.30, 1.19)</td>
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</tr>
<tr>
<td>Actual HAP</td>
<td>-0.71 (0.43)</td>
<td>2.73†</td>
<td>0.49 (0.21, 1.14)</td>
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</tr>
<tr>
<td>Actual LAP</td>
<td>0.26 (0.39)</td>
<td>0.43</td>
<td>1.29 (0.60, 2.78)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-1.36 (2.29)</td>
<td>0.35</td>
<td>0.26</td>
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**How Does Ideal Affect Shape Physician Choice? Study 2 (N=102)**

<table>
<thead>
<tr>
<th></th>
<th>$X^2$ (8)</th>
<th>B (SE)</th>
<th>Wald</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideal HAP</td>
<td>7.33, p = 0.50</td>
<td>1.15 (0.43)</td>
<td>7.12**</td>
<td>3.17 (1.36, 7.41)</td>
</tr>
<tr>
<td>Ideal LAP</td>
<td>-0.12 (0.33)</td>
<td>0.13</td>
<td>0.89 (0.47, 1.68)</td>
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</tr>
<tr>
<td>Actual HAP</td>
<td>0.18 (0.46)</td>
<td>0.16</td>
<td>1.20 (0.49, 2.97)</td>
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</tr>
<tr>
<td>Actual LAP</td>
<td>-0.38 (0.46)</td>
<td>0.70</td>
<td>0.68 (0.28, 1.68)</td>
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</tr>
<tr>
<td>Constant</td>
<td>-1.66 (1.90)</td>
<td>0.763</td>
<td>0.19</td>
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</tr>
</tbody>
</table>

Note. High Arousal Positive; LAP = Low Arousal Positive; ** $p \leq 0.01$, * $p < 0.05$, † $p < 0.10$
Table 3. Summary of Study 4 (N = 183) linear regression results for ideal and actual affect predicting choice of HAP, LAP, and Neutral physicians.

<table>
<thead>
<tr>
<th></th>
<th>HAP Physician</th>
<th>LAP Physician</th>
<th>Neutral Physician</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b (se)</td>
<td>t</td>
<td>b (se)</td>
</tr>
<tr>
<td>Ideal HAP</td>
<td>0.33 (0.14)</td>
<td>2.46*</td>
<td>0.03 (0.15)</td>
</tr>
<tr>
<td>Ideal LAP</td>
<td>-0.03 (0.14)</td>
<td>-0.25</td>
<td>0.31 (0.15)</td>
</tr>
<tr>
<td>Actual HAP</td>
<td>0.22 (0.16)</td>
<td>1.33</td>
<td>0.07 (0.18)</td>
</tr>
<tr>
<td>Actual LAP</td>
<td>-0.03 (0.14)</td>
<td>-0.20</td>
<td>-0.14 (0.15)</td>
</tr>
<tr>
<td>Intercept</td>
<td>3.61 (0.70)</td>
<td>5.18</td>
<td>3.60 (0.75)</td>
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</tbody>
</table>

*Note. High Arousal Positive; LAP = Low Arousal Positive; ** p < 0.01, *p < 0.05, † p < 0.10
Table 4. Bivariate correlations between daily reports of recalled ideal and actual affect in a community sample.

<table>
<thead>
<tr>
<th></th>
<th>Daily Ideal HAP</th>
<th>Daily Ideal LAP</th>
<th>Daily Actual HAP</th>
<th>Daily Actual LAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>0.40***</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>0.61***</td>
<td>0.29**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>0.23*</td>
<td>0.45***</td>
<td>0.50***</td>
<td>1</td>
</tr>
</tbody>
</table>

**Mean (SD)**

|          | 3.63 (0.69) | 4.04 (0.61) | 2.91 (0.72) | 3.22 (0.72) |

*Note. HAP = High Arousal Positive; LAP = Low Arousal Positive. ***p<0.001, **p<0.01, *p<0.05.*
Figure 1. Percentage of participants choosing the HAP (versus LAP) physician in the Value HAP condition and Value LAP condition in Study 3. The dotted line represents choosing each option at chance (50%); HAP = High Arousal Positive; LAP = Low Arousal Positive; *p < 0.05.
Figure 2. Effect of ideal affect on likelihood of choosing physician mediated by perceived trustworthiness. Top: Ideal HAP indirect effect through perceived trustworthiness = 0.19 (SE = 0.09), 95% CI [0.04, 0.38] based on 10,000 bootstrap resamples; $R^2 = 0.47$, $F(5, 177) = 31.44$, $p < 0.001$; Bottom: Ideal LAP indirect effect through perceived trustworthiness = 0.24 (SE = 0.10), 95% CI [0.08, 0.46] based on 10,000 bootstrap resamples; $R^2 = 0.42$, $F(6, 163) = 19.90$, $p < 0.001$. All analyses controlled for actual affect.
Figure 3. Screenshot of the “meet the virtual physician” webpage on the Virtual Bay Health Center website depicting a European American physician. Left: Physician promoting high arousal positive (HAP) states. Right: Physician promoting low arousal positive (LAP) states.
Figure 4. Effect of ideal and actual affect on adherence to physician recommendations.

Bars represent mean within-person unstandardized beta coefficients calculated by regressing daily adherence onto ideal HAP, ideal LAP, actual HAP, and actual LAP.

Note. HAP = High Arousal Positive, LAP = Low Arousal Positive. **p ≤ 0.01, *p < 0.05.
Appendix A

Choosing a Physician Scenario

Imagine that your current physician is no longer available, and you now have to choose a physician from the two individuals described below to provide your regular health care. Both have similar educational backgrounds, are accredited by the American Medical Association, and have been recognized by their medical center as providing outstanding care. Please read their descriptions carefully and respond to the questions that follow.

Dr. H*

Specialty: Internal Medicine  Facility: Bay Area Medical Center
Education: Doctor of Medicine, University of California San Francisco, 1991
Award for Outstanding Healthcare Provider, Bay Area Medical Center
Views on Patient Care: “My primary objective is to enhance my patients’ well-being by increasing their activity levels and overall vitality so my patients can lead healthy, dynamic lifestyles.”
Hobbies: Rock-climbing, waterskiing, snowboarding, football*
Outside interests: “I volunteer in a youth home where we help adolescents discover a passion for educational goals.”
Dr. L*

Specialty: Internal Medicine  Facility: Bay Area Medical Center
Education: Doctor of Medicine, University of California San Francisco, 1991
Distinguished Service in Health Award, Bay Area Medical Center
Views on Patient Care: “My goal as a physician is to ensure that my patients have peace of mind when it comes to their health by promoting a stress-free (calm and relaxed) lifestyle.”
Hobbies: Golfing, meditation, gardening, fishing*
Outside interests: “I spend time at a facility where I teach young people to feel more at ease with school.”

*Note. Photographs were included in Study 1a only; model in Dr. H photo also posed for Dr. L and model in Dr. L photo also posed for Dr. H; model photos were counterbalanced. Hobbies included in Study 1 only.
Appendix B

Pretest of the Choosing a Physician Scenario

To ensure that the HAP physician was perceived as promoting HAP states and the LAP physician was perceived as promoting LAP states, we pilot tested the scenarios among a separate community sample 39 participants representative of the community sample in Study 2 in terms of age, gender and ethnicity. Participants read the following instructions prior to rating each physician. “Here are some words that describe different emotions. Read each item and then mark the appropriate answer in the space next to the word. Indicate to what extent the physician you previously read about aims to promote each of these emotions. Use the following scale to record your answers:” Then participants rated each of 37 emotions adapted from the AVI on a 5 point scale ranging from Very slightly or not at all (1) to Extremely or all the time (5). The presentation order of the HAP and LAP physician was counterbalanced.

We calculated HAP (enthusiastic, excited, elated) and LAP (calm, peaceful, serene) aggregates for each physician. Internal consistency was high for ratings of the HAP physician (HAP α = 0.71; LAP α = 0.84) and the LAP physician (HAP α = 0.83; LAP α = 0.92). Repeated measures analyses of variance revealed a significant interaction between ratings of physician type (HAP vs. LAP physician scenario) and type of affect promoted (HAP vs. LAP states), F (1, 38) = 72.67, p < 0.001, partial η² = 0.66. As shown in the figure B1 below, participants perceived the HAP physician as promoting more HAP than LAP, t (39) = 6.75, p < 0.001, and the LAP physician as promoting more LAP than HAP, t (38) = 7.11, p < 0.001. Moreover, compared to the LAP physician, the HAP
physician was perceived as promoting more HAP, \( t (38) = 7.64, p < 0.001 \), and less LAP, 
\( t (38) = -6.67, p < 0.001 \).

Figure B1. Within-subjects difference in ratings of HAP and LAP for a physician who promotes HAP states versus a physician who promotes LAP states. Note. HAP = High Arousal Positive, LAP = Low Arousal Positive; ***\( p < 0.001 \).
Appendix C

Cultural Differences in Physician Preference

For many health outcomes, Asian Americans are considered the “model minority” doing as well if not better than European Americans. Yet, Asian Americans are more likely to experience difficulties with patient physician communication and report lower quality of care (e.g., timeliness of treatment) than European Americans (Ngo-Metzger, Legedza & Phillips, 2004; Saha, Arbelaez, & Cooper, 2003; Taira et al., 1997). These difficulties have consequences for patient compliance. For instance, the number of individuals who followed medical recommendations to receive a vaccination for influenza increased among European Americans (from 52% to 59%) but decreased among Asian Americans (from 41% to 35%) from 1999 to 2004. Disparities between Asian Americans and European Americans are particularly prevalent for preventable conditions including tuberculosis and hepatitis B (CDC, 2006). Many of these disparities have been attributed to cultural barriers that cannot be explained by social and biological factors (U.S. Commission on Civil Rights, 1999).

One source of ethnic differences in patient physician communication may be due to a mismatch between patient and physician values. While many studies have examined the effects of match between patient and physician medical preferences (e.g., how much patients should be involved in making decisions about their care), fewer have looked at more general values not specific to health. Research by Street et al. (2008) found that patients who felt their physician’s cultural values were similar to their own (e.g., “My doctor and I have [similar] general values in life; “My doctor and I are similar in terms of culture”) reported higher trust, satisfaction, and intent to adhere.
But what exactly are these cultural values? We propose ideal affect as one value that may explain cultural variation in patient preferences for physicians. As predicted by Affect Valuation Theory, culture shapes how people ideally want to feel (Tsai, 2007). Indeed, among college students, European Americans tend to value positive states that are high in arousal (HAP) more and positive states that are low in arousal (LAP) less than their Hong Kong Chinese counterparts, while Chinese Americans (who are oriented to both American and Chinese cultures) value HAP to the same extent as European Americans, but value LAP more than the Hong Kong Chinese (Tsai, Knutson, & Fung, 2006). However, in an age diverse sample, Chinese Americans tend to value HAP less than European Americans (Tsai, Sims, Fung, & Jiang, 2013). Further, cultural differences in ideal affect have at least partly accounted for cultural differences in preferences for music, vacations, and recreational activities (Tsai, 2007; Tsai, Chim, & Sims, in press; Tsai, Miao, Seppala, Fung, & Yeung, 2007). Thus, we predicted that cultural differences in ideal affect would account for cultural differences in choice of a physician promoting HAP (vs. LAP) states.

**Methods**

To examine cultural differences across the life span, we expanded recruitment of the sample reported in Study 2 to obtain 133 adults (age $M = 48$ years, $SD = 17$ years; Range = 19-90 years; 50.4% European American, 49.6% Chinese American; 51% Female; 49% Male). As described in Study 2, older participants were screened for cognitive functioning and all participants for psychiatric symptoms. European Americans were required to have been born and raised in the U.S. and to be of European ancestry (e.g., grandparents or great-grandparents born in Europe). Chinese Americans were
required to have been born and raised in the U.S. or in a Chinese country (e.g., China, Hong Kong, Taiwan) and to be of Chinese ancestry. Twenty-two Chinese Americans (age $M = 59$, $SD = 16$; 63.6% Female; 36.4% male) completed the measures in Chinese.

**Results**

As intended, European Americans and Chinese Americans differed in their cultural orientation. Ratings on the General Ethnicity Questionnaire indicated that European Americans were more oriented to American culture ($M = 3.82$, $SE = 0.07$) than Chinese Americans ($M = 3.40$, $SE = 0.08$), $t (125) = 4.23$, $p < 0.001$. Chinese Americans’ mean orientation to Chinese culture ($M = 3.62$, $SE = 0.07$) was marginally higher than their orientation to American culture, $t (59) = 1.87$, $p = 0.07$, as expected for a bicultural sample. European Americans and Chinese Americans were comparable across several demographic factors. An independent samples t-test showed no age difference between ethnic groups, $t (131) = 0.57$, $p = 0.57$. Chi-square analyses confirmed no ethnic differences in distribution of gender, $\chi^2 (1) = 0.01$, $p = 0.93$, or % with a college degree, $\chi^2 (1) = 0.75$, $p = 0.39$.

To examine whether European Americans would prefer the HAP (vs. LAP) physician more than Chinese Americans, we ran a series of regression analyses as outlined by Baron and Kenny (1986). We entered culture ($EA = 0$, $CA = 1$) as the independent variable and the difference score between likelihood of selecting the HAP (vs. LAP) physician as the dependent variable. Ideal HAP and LAP were entered as mediators and actual HAP, actual LAP and age as covariates. We used a multiple

---

8 We also entered interaction terms between ethnicity and age which was not significant. We did find that older age was negatively associated with preference for the HAP (vs.
mediation macro developed by Preacher and Hayes (2008) to examine each path in the
mediation model, test the indirect effects of culture through ideal affect, and estimate
95% bias-corrected confidence intervals of possible indirect effects with 10,000
bootstrapped resamples. We removed two participants whose difference scores were
exceedingly low ($z = 2.79$) including one European American and one Chinese American.

First, we examined the effect of ideal affect on physician preference to see if we
replicated results from the subsample reported in Study 2. To do so, we regressed ideal
HAP, ideal LAP, actual HAP, and actual LAP onto the difference in likelihood of
selecting the HAP vs. LAP physician score. As in the Study 2 sample examining forced
choice, we found that above and beyond ethnicity (and age) the more people wanted to
feel HAP states, the more the preferred the HAP (vs. LAP) physician, $B = 0.46, SE = 0.23, t = 2.00, p < 0.05$. Although in the expected direction, Ideal LAP was not
significantly associated with preference for the HAP (vs. LAP) physician ($B = -0.31, SE = 0.18, t = -1.67, p = 0.10$). Thus, we focused on ideal HAP as a
potential mediator of the cultural difference in physician preference. We found a
significant effect of culture on ideal HAP, such that Chinese Americans valued HAP
states significantly less than European Americans, $B_a = -0.39, SE = 0.12, t = -3.37, p = 0.001$. We also found that Chinese Americans reported a lower likelihood of selecting the
HAP (vs. LAP) physician relative to European Americans, $B_c = -0.73, SE = 0.27, t = -2.67, p < 0.01$. As depicted in figure C1 below, while both groups preferred the HAP
physician more than the LAP physician, Chinese Americans preferred the HAP (vs. LAP)
physician to a lesser extent (HAP physician $M = 5.40, SE = 0.13$ vs. LAP physician $M =$

\[ B = -0.017, SE = 0.008, t = 2.23, p = 0.03. \] However, there was no
indirect effect of age through ideal HAP on preference for the HAP (vs. LAP) physician.
4.96, $SE = 0.17, p = 0.01$) than European Americans (HAP physician $M = 5.87, SE = 0.13$ vs. LAP physician $M = 4.70, SE = 0.16, p < 0.01$).

Finally, when controlling for ideal affect, the effect of culture on HAP (vs. LAP) physician preference was significantly reduced, $B_{C'} = -0.62, SE = 0.28, t = -2.22, p = 0.03$. We also found a significant indirect effect of culture on physician preference through ideal HAP, indirect effect = -0.18, SE = .10, 95% CI [-0.44, -0.02], but not through ideal LAP, indirect effect = 0.09, SE = 0.07, 95% CI [-.003, 0.30].

These findings demonstrate that the effect of culture on physician preference is due in part to ideal HAP. Moreover, these results suggest that ideal affect may be one source of cultural variation in successful patient physician communication and health care utilization.
Figure C1. Cultural difference in likelihood of selecting a physician who promotes HAP states versus a physician who promotes LAP states (i.e., calm and relaxed lifestyle). Note. 

HAP = High Arousal Positive, LAP = Low Arousal Positive; **p < 0.01, *p < 0.05, †p < 0.10.
Appendix D

*Pretest of the Virtual Physician Videos*

To ensure that the HAP physician was perceived as promoting HAP states and the LAP physician was perceived as promoting LAP states, we pilot tested the scenarios online among a sample of 61 undergraduate college students. Participants were randomly assigned to view the HAP physician introductory video or the LAP physician introductory video. After viewing the video, participants were asked to rate the physician on a variety of attributes (e.g., “How calm is this physician? How enthusiastic is this physician?”) using a 7 point scale ranging from *not at all* (1) to *extremely* (7). In addition to calm and enthusiastic, attributes included likeable, attractive, pleasant, trustworthy, intelligent, healthy, unhappy, and how seriously participants would take the physician’s advice.

We conducted a 2 X 2 multivariate analysis of variance in which physician ethnicity (European American = 0; Chinese American = 1) and affect focus (HAP = 1; LAP = 2) were entered as fixed factors and each attribute except calm and enthusiastic were entered as dependent variables. For both the European American and Chinese American physician, there were no significant differences between the HAP and LAP physician across attributes, $F (8, 49) = 0.74, p = 0.66$, partial $\eta^2 = 0.11$. We then conducted a 2 x 2 x 2 mixed model analysis in which we entered physician ethnicity (European American = 0; Chinese American = 1) and affect focus (HAP = 1; LAP = 2) as fixed between-subjects factors and affect rating (Enthusiastic = 1; Calm = 2) as the repeated measures dependent variables. We found a significant interaction between affect focus and affect rating, $F (1, 56) = 71.44, p < 0.001$, partial $\eta^2 = 0.56$. There was no
interaction with ethnicity of physician, $F (1, 56) = 1.31, p = 0.26$, partial $\eta^2 = 0.02$. As shown in figure D1, both the European American and Chinese American participants rated the HAP physician as more enthusiastic than calm, $t (26) = 5.84, p < 0.001$, and the LAP physician as more calm than enthusiastic, $t (32) = 6.24, p < 0.001$. Moreover, compared to the LAP physician, the HAP physician was perceived as more enthusiastic, $t (59) = 4.31, p < 0.001$, and less calm, $t (58) = -8.24, p < 0.001$.

![Figure D1. Between-subjects difference in ratings of enthusiasm and calm for a physician who promotes HAP states versus a physician who promotes LAP states. Note. HAP = High Arousal Positive, LAP = Low Arousal Positive; ***$p < 0.001$.](image)
References


