



# A situational construal approach to healthcare experiences<sup>☆</sup>



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## ABSTRACT

**Background:** The Situational Construal Model proposes that characteristics of persons and situations interact to influence construal of situations and resultant behavior. We apply this framework to the study of healthcare experiences in two studies.

**Methods:** In Study 1, mTurk users ( $N = 670$ ) read vignettes of positive, neutral, or negative healthcare experiences, described their construal of the vignette, and completed individual difference measures. In Study 2, mTurk users ( $N = 292$ ) recalled a recent healthcare visit and reported individual differences, visit characteristics, and outcomes following the visit.

**Results:** Across both studies, personality was related to the valenced construal of healthcare experiences. In Study 2, patient and visit characteristics predicted situational construal and self-reported visit outcomes, and situational construal statistically mediated relationships between patient and visit characteristics and outcomes.

**Conclusions:** The current work supports the application of the Situational Construal Model to healthcare situations and demonstrates the importance of both person and situation variables for understanding key healthcare outcomes.

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A physician enters a patient's room, quickly diagnoses the patient, offers treatment recommendations and a prescription, and leaves. Some patients may interpret this situation as simple, clear-cut, and marked by confidence and certainty. Other patients may construe this situation as frustrating, restrictive, and marked by issues of power and dominance. Good doctor-patient communication yields a host of positive psychological and health outcomes (Haskard-Zolnieriek and DiMatteo, 2009; Stewart, 1995), but other elements of these experiences, such as characteristics of the situation and traits of the parties involved, may influence patients' construal of healthcare encounters and their outcomes following the visit. The Situational Construal Model (Fig. 1; Funder, 2013) proposes that people's experience of all situations, including those that arise in healthcare contexts, depends on both objective features of the situation and characteristics of the perceiver, which ultimately determine how they construe the situation at hand. In the present studies, we take inspiration from this model and utilize a validated measure of

situational construal in an interactionist approach to understanding patients' healthcare experiences.

## 1. The role of personality in healthcare

Research on physician–patient interactions points to the importance of patients' psychosocial outcomes (e.g., satisfaction, well-being) for recall of health information, adherence to treatment recommendations, recovery, and health (e.g., Bartlett et al., 1984; Haskard-Zolnieriek and DiMatteo, 2009; Rathert et al., 2013; Stewart, 1995). Typical approaches to improving patients' psychosocial outcomes focus on improving physicians' communication strategies or other aspects of the quality of care (Beck et al., 2002; Ong et al., 1995). However, patients also bring their personalities, expectations, and personal history into the exam room.

A great deal of research documents the predictive power of personality for both positive and negative health behaviors and outcomes. High levels of conscientiousness predict greater adherence to treatment regimens (Christensen and Smith, 1995), healthy body weight, and even longevity (Friedman, 2000; Hampson et al., 2013). High levels of neuroticism and openness to experience predict the use of complementary or alternative medicine (Honda and Jacobson, 2005), and high neuroticism also predicts less

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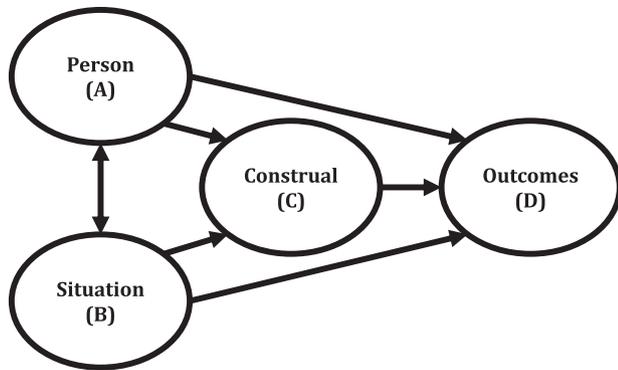


Fig. 1. The Situational Construal Model.

adherence to treatment recommendations (Weibe and Christensen, 1996). Extraversion predicts both positive and negative health behaviors, such as increased exercise but less restful sleep (Raynor and Levine, 2009; Rhodes and Smith, 2006). Personality also predicts psychosocial outcomes within healthcare contexts. For example, extraversion, low neuroticism, and high agreeableness each predict greater patient satisfaction (Al-Omiri and Alhajja, 2006; Serber et al., 2003). These and similar findings provide a strong argument for the association between person-level variables and health behaviors and outcomes (path A to D, Fig. 1).

Despite this wealth of research linking personality and health outcomes, fewer studies have examined how patients' personalities may drive their healthcare experiences. In one study, physicians were 2.7 times more likely to recommend admission to intensive care units when patients presented with more extroverted and agreeable demeanors (Escher et al., 2004). Similarly, patients' likability and apparent competence can also affect the quantity of medication physicians prescribe, provision of health education, and whether physicians encourage patients to contact their office or schedule future visits (Gerbert, 1984). Elsewhere, doctors who viewed a patient presenting concerns over chest pains in a business-like, rather than histrionic, manner were more likely to suspect a cardiac explanation; furthermore, upon receiving identical diagnostic information implicating cardiac concerns, doctors were less likely to recommend follow-up testing for the "histrionic" patient (Birdwell et al., 1993). These studies point to the possibility that patients' personal characteristics can influence the nature of patients' care, which may help explain the relationships between personality and health outcomes. Nonetheless, the relative paucity of research linking personality to specific healthcare experiences is glaring in light of the clear importance of personality in other types of interpersonal encounters (Ozer and Benet-Martínez, 2006).

## 2. Situational characteristics of healthcare encounters

Few studies have examined the role of objective features of healthcare situations in predicting or determining patient perceptions (B to C path, Fig. 1). Patients' perceptions of the comfortableness of physicians' waiting rooms predict their anticipated quality of care (Arneill and Devlin, 2002), and more aesthetically-pleasing healthcare settings are associated with patients' perceptions of the quality of their care (Becker and Douglass, 2008), but further evidence for the role of situational features in patients' perceptions is scarce. In contrast, many studies link objective situational characteristics to health behaviors or outcomes (B to D path, Fig. 1; Devlin and Arneill, 2003). One landmark study documented quicker post-surgical recovery, shorter hospital stays, and less use of pain medication for patients assigned to hospital rooms

with outdoor views (Ulrich, 1984), and another found that patients became more satisfied with their primary care practitioners after the introduction of computers in examination rooms (Emran et al., 2007; Hsu et al., 2005).

Although the literature provides clues to the roles of personality and objective situational features in patients' experiences during healthcare encounters, largely absent are theoretically-driven investigations into the mechanisms by which these features affect patients' outcomes and behavior. That is, why might an extroverted, agreeable patient walk away from a doctor's visit more satisfied than a less sociable patient, and why might a computer in the examination room predict greater patient satisfaction compared to the absence of a computer during a primary care visit? The Situational Construal Model provides a framework and a related measurement tool for identifying such mechanisms.

## 3. The Situational Construal Model

The Situational Construal Model (Fig. 1; Funder, 2013) posits that person and situation variables each have a direct influence on behavior and that these variables interact to produce one's unique construal of a situation, which also has a direct influence on behavior. The present studies leverage the theoretical guidance of the Situational Construal Model and its accompanying measurement tool (the Riverside Situational Q-sort, RSQ; Wagerman and Funder, 2009) to examine person- and situation-level influences on patients' construal of healthcare experiences (A to C and B to C paths, Fig. 1). Specifically, we examined the unique roles of personal dispositions (person-level variables) and objective features of a healthcare interaction (situation-level variables) in predicting how people construe a healthcare experience (as assessed by the RSQ). We also sought initial evidence for the relationship between these construals and patient outcomes (C to D path in Fig. 1). We conducted two studies to that end. The first study presented participants with positive, neutral, and negative healthcare vignettes to manipulate the situational features of a hypothetical healthcare interaction. The second study built upon the first by asking participants to describe their most recent healthcare visit. Both studies included measures of participants' personal dispositions and their construal of the healthcare interaction, and the second study also assessed participants' responses to the experience (e.g., satisfaction, adherence).

We broadly hypothesized that personal and situational characteristics would each uniquely influence participants' construal of the healthcare interaction, and in Study 2 we further hypothesized that these construals would statistically mediate the relationship between personal and situational characteristics and patient outcomes.

## 4. Study 1

### 4.1. Method

#### 4.1.1. Participants

Participants ( $N = 670$ ) were recruited from Amazon's Mechanical Turk (mTurk), an online participant pool that allows for efficient online data collection (see Paolacci et al., 2010). Amazon's mTurk is a general purpose (not health-specific) internet-based portal used for crowdsourcing tasks and data collection. Samples collected via mTurk consist of more demographic diversity than university samples or other internet-based samples (Gosling et al., 2004), and data collected via mTurk are just as reliable as other collection methods (e.g., pen-and-paper surveys; Buhrmester et al., 2011).

Participants were paid \$.50 for their participation. The sample

was diverse in age ( $M = 37.09$ ,  $SD = 12.81$ ) but not race or ethnicity (78.1% Caucasian, 9.3% Black, 6.1% Asian, 3.6% Hispanic/Latino, .3% Native American or Alaskan, .3% Native Hawaiian or other Pacific Islander, 2.2% multiple). A majority of participants had some form of insurance (69%), with 11% indicating that they had Medicaid or Medicare and 56% indicating that they had an HMO or PPO. 73% of our sample indicated that they were employed. Due to a clerical error, gender information was not collected.

#### 4.1.2. Procedures

Prior to the introduction of the experimental manipulation, participants first completed several dispositional measures. Specifically, participants completed the Ten-Item Personality Inventory (TIPI; Gosling et al., 2003), in which they rated their agreement with two items relevant to each of the Big Five personality factors (McCrae and Costa, 2008; 1 = *strongly disagree*; 5 = *strongly agree*). Each factor in the scale was generally reliable in the present sample (neuroticism:  $\alpha = .78$ ; extraversion:  $\alpha = .74$ ; openness:  $\alpha = .69$ ; agreeableness:  $\alpha = .53$ ; conscientiousness:  $\alpha = .64$ ), comparable to, and even exceeding, the reliabilities found by Gosling et al. (2003). Participants also completed measures of health literacy (“How confident are you filling out medical forms by yourself?”; 1 = *not at*

*all*, 10 = *completely*; Chew et al., 2004;  $M = 8.43$ ,  $SD = 1.93$ ), medical help seeking tendencies (“When you notice a new health problem or symptom, how quickly do you typically seek medical help?”; 1 = *immediately*, 10 = *only after things get much worse*;  $M = 4.25$ ,  $SD = 2.29$ ), general attitudes towards doctors (8 items from the Patient Satisfaction Questionnaire III, Marshall et al., 1993; e.g., “Doctors are good about explaining the reason for medical tests”, “Doctors sometime ignore what I tell them”; 1 = *strongly disagree*, 5 = *strongly agree*;  $\alpha = .87$ ,  $M = 3.24$ ,  $SD = .78$ ), and decisional control preferences (“How much control do you want to have over the decisions about your healthcare?”; 1 = *a little control*, 10 = *total control*; Ghane et al., 2014;  $M = 8.71$ ,  $SD = 1.68$ ).

After completing the dispositional measures, participants were randomly assigned to read one of three vignettes (see Table 1 for vignettes, highlighting differences across conditions). The three scenarios were designed to be as similar as possible aside from the details intended to manipulate the valence of the hypothetical experience (e.g., friendly receptionist, preoccupied physician). After reading the assigned vignette, participants described their perception of the vignette using a revised version of the Riverside Situational Q-sort (RSQ; Wagerman and Funder, 2009). The Q-sort approach, which reduces response set biases in responding (Block,

**Table 1**  
Content comparisons for the vignettes used in study 1.

Order in vignette	Viewed by all	Viewed in the neutral condition	Viewed in positive condition	Viewed in negative condition
1	You arrive at your doctor's office, sign in at the front desk ...	...and give your insurance information and paperwork to the receptionist.	...where the receptionist smiles and greets you by name.	...where a bored-looking receptionist takes your information.
2				
3		A nurse brings you back into an examination room.	Your insurance and paperwork is handled quickly and with no problems.	Some time is spent trying to sort out some confusion about your insurance.
4				
5	The nurse checks your vital signs including your temperature, blood pressure, height, and weight. The nurse ...	...also takes down a few notes about why you are visiting the doctor today.	You only wait a few minutes before a nurse brings you back into an examination room.	You wait for quite a long time before a nurse hurries you back into an examination room.
6				
7	After the nurse records your information, s/he leaves the room.	...listens intently and takes down a few notes about why you are visiting the doctor today.	...takes down a few notes about why you are visiting the doctor today, but you believe s/he may have missed some key information.	
8				
9	S/he examines you.	The doctor then enters the room and asks a few more questions.	Soon after, the doctor enters the room and greets you. S/he takes a seat and listens carefully while you explain why you are there today.	After another long wait, the doctor enters the room. S/he takes a seat and seems to be preoccupied while you explain why you are there today.
10				
11	After the examination, the doctor leaves the room...		S/he asks a few more questions and allows you to ask questions of your own.	S/he asks a few more questions but cuts your answers short.
12				
13	When the doctor returns s/he offers some recommendations for treatment...		...but returns shortly after.	...and returns after another long wait.
14				
15	You leave the examination room and check out at the front desk.		...and listens to your concerns and questions.	...and leaves before you can ask a question or express a concern.

1961), requires users to sort items based on how characteristic they are of the relevant person, situation, or behavior. The current version of the RSQ contains 89 items that describe the psychological properties of situations (e.g., “the situation was enjoyable,” “the situation was relevant to your bodily health”; see [Supplemental Materials](#) for full set of items).

In the present study, the RSQ was modified in three ways. First, five items were added to the current version of the RSQ to capture psychological properties of particular relevance to healthcare situations (e.g., “someone present was being encouraging,” “people in the situation had good rapport”). Second, items in the RSQ were reworded for ease of interpretation. Third, the typical Q-sort technique was revised to accommodate online data collection. The survey hosting website used for the present studies (SurveyMonkey™) cannot implement a Q-sort technique in which items are ranked in comparison to other items as a forced-choice, quasi-normal distribution of responses. In the present studies, participants instead rated each RSQ item on a 9-point, Likert-type scale (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*). Block (1957) compared normative Likert ratings to ipsative Q-sort ratings and described the results of the two as “fully equivalent” (p. 52), although others have found that the Q-sort approach reduces item variance for items appearing towards the end of the scale (Serfass and Sherman, 2013), and Likert ratings may produce a positivity bias on RSQ items (Frascona, 2014). Concerns over the time and specialized programming required to complete a Q-sort online outweighed concerns over a broad positivity bias.

#### 4.1.3. Creating an RSQ score template

Due to the large number of items in the RSQ, the first step in our analyses was to determine a strategy for appropriately and concisely describing participants' situational construals. Specifically, we sought a strategy that would provide an indicator of the valence (positive or negative) of participants' evaluations. We opted for a template matching approach, in which we created a target set of RSQ values representing the valence of each item, such that an item such as “the situation was enjoyable” would have a high score, and an item such as “the situation was frustrating” would have a low score.

To determine the valence of each RSQ item, we utilized the valenced healthcare vignettes by subtracting the average score for each item as rated by participants in the *positive scenario* condition from the average score for each item as rated by participants in the *negative scenario* conditions. Taking “the situation was enjoyable” as an example, the average rating of this item in the *positive scenario* condition was 6.13 (out of 9), and the average rating in the *negative scenario* condition was 1.90, thus producing a template

score of 4.23 (the difference). In contrast, on the item “the situation was frustrating,” the average rating of this item in the *positive scenario* condition was 2.45, and the average rating in the *negative scenario* condition was 7.90, thus producing a template score of −5.45. We followed this procedure for each RSQ item to create the score template. See [Supplemental Materials](#) for difference scores by RSQ item.

#### 4.1.4. Creating template match scores

Once the template was created, we then correlated participants' individual RSQ ratings with the template to produce a “template match score” indicating the overall valence of their construal of the healthcare scenario. To illustrate, imagine a participant who read the neutral scenario yet provided a high rating on the item “the situation was enjoyable” (and other positive items) and a low rating on the item “the situation was frustrating” (and other negative items). The correlation between this participant's RSQ ratings and the score template would be strong and positive, indicating a generally positive construal of the neutral scenario. Unsurprisingly, participants who read the positive healthcare vignette tended to have positive template match scores (i.e., correlations between participants' RSQ ratings and the score template), and participants who read the negative healthcare vignette tended to have negative template match scores (Table 2).

#### 4.1.5. Analytic strategy

To assess the utility of the vignettes, we conducted a one-way ANOVA to determine whether the three vignettes elicited differently valenced construal. To assess the relationships among template match scores and our dispositional measures, we conducted both correlational and multiple regression analyses.

## 5. Results

A one-way ANOVA comparing template match scores indicated significant variation in template match across conditions,  $F(2, 622) = 586.02, p < .001, \eta^2 = .65$ , and post-hoc tests confirmed that template match scores were most positive in the *positive scenario* condition, most negative in the *negative scenario* condition, and in between in the *neutral scenario* condition,  $t_s > 9.64, p_s < .001, d_s > .91$ .

### 5.1. Dispositional influences on healthcare construal

Table 2 presents the full set of correlations between dispositional measures and template match scores (Path A to C, Fig. 1). Extraversion, agreeableness (marginally), conscientiousness (marginally), health literacy, general attitudes towards doctors, and

**Table 2**  
Study 1 correlations and regression coefficients.

	Template match score	
	Bivariate correlation [95% CI]	Standardized regression coefficient [95% CI]
Vignette condition <sup>a</sup>	.77 [.74, .80]**	.76 [.71, .80]**
Personality (Big 5)		
Openness to experience	.05 [−.03, .13] <sup>†</sup>	−.03 [−.08, .02]
Conscientiousness	.07 [−.01, .15]	−.01 [−.06, .05]
Extraversion	.09 [.01, .16]*	.02 [−.03, .08]
Agreeableness	.08 [−.00, .15] <sup>†</sup>	.03 [−.01, .09]
Neuroticism	−.02 [−.10, .05]	.02 [−.04, .08]
Health literacy	.14 [.06, .22]**	.09 [.03, .14]**
General attitudes toward doctors	.23 [.15, .30]**	.18 [.13, .23]**
Decisional control preferences	.06 [−.01, .14]	−.02 [−.07, .03]
Medical help seeking	.10 [.02, .18]*	.05 [−.01, .09]

Note: <sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . Standardized regression coefficients control for dispositional variables and vignette condition.

<sup>a</sup> Positive = 1, neutral = 0, negative = −1.

medical help seeking were positively related to the valence of participants' construal of the vignettes. Neuroticism, openness, and decisional control were unrelated to the valence of construal.

To further investigate the influence of dispositional tendencies on healthcare construals, we conducted a multiple regression analysis to examine the extent to which variability in participants' template match scores were explained by vignette condition (coding *negative scenario* as  $-1$ , *neutral scenario* as  $0$ , and *positive scenario* as  $+1$ ) versus dispositional influences. The full set of predictors was entered simultaneously, predicting participants' template match scores. Vignette condition, general attitudes towards doctors, health literacy, and medical help seeking remained significant predictors of template match scores with all variables in the model; the Big Five personality variables and decisional control preferences were not significant predictors (Table 2).

## 6. Study 2

Study 1 provided the first test of the Situational Construal Model's predictions in the context of healthcare situations, focusing particularly on the contributions of dispositional and situational characteristics to participants' construal of a hypothetical healthcare scenario. In addition to providing a situational construal template for use in this and other studies of healthcare construal, the findings from Study 1 revealed unique roles of objective features of the situation (i.e., an objectively positive, negative, or neutral scenario) and dispositional characteristics (e.g., personality, general attitudes towards doctors).

However, Study 1 was limited in two key ways. First, the target healthcare "experience" was a hypothetical one, requiring people to imagine and evaluate a scenario they may never have faced. Second, due to the hypothetical nature of the healthcare scenario, we were unable to assess the relationship between situational construal and patient outcomes. Study 2 extends the findings from Study 1 by asking participants to recall and evaluate a recent healthcare experience.

### 6.1. Method

#### 6.1.1. Participants

mTurk users ( $N = 292$ ) were paid \$.50 for their participation. The sample was diverse in age ( $M = 38.3$ ,  $SD = 14.3$ ) but not race or ethnicity (78.8% Caucasian, 2.4% Hispanic, 7.7% Black, 7.3% Asian, .4% Native Hawaiian or other Pacific Islander, .7% Native American or Native Alaskan, 2.8% multiple). A majority of participants had some form of insurance (76%), with 15% indicating that they had Medicaid or Medicare and 54% indicating that they had an HMO or PPO. 65% of our sample indicated that they were employed. Due to a clerical error, gender information was not collected.

#### 6.1.2. Procedure

As in Study 1, participants first completed a series of dispositional measures including measures of personality (neuroticism:  $\alpha = .73$ ; extraversion:  $\alpha = .72$ ; openness:  $\alpha = .52$ ; agreeableness:  $\alpha = .61$ ; conscientiousness:  $\alpha = .66$ ), health literacy ( $M = 8.79$ ,  $SD = 1.68$ ), medical help seeking tendencies ( $M = 6.55$ ,  $SD = 2.34$ ), general attitudes towards doctors ( $\alpha = .86$ ,  $M = 3.27$ ,  $SD = .79$ ), and decisional control preferences ( $M = 8.97$ ,  $SD = 1.55$ ; all response scales as described in Study 1).

Participants were then instructed to "think of a recent visit to the doctor or to a hospital, sometime within the past year or two (more recent is better)." Participants also indicated the reason for the appointment, selecting all that applied (routine check-up or physical, chronic illness care, new illness symptoms, new pain, or other). Participants most commonly described a routine check-up

or physical ( $n = 121$ ); fewer reported on healthcare visits for chronic illness care ( $n = 31$ ), new illness symptoms ( $n = 79$ ), new pain ( $n = 53$ ), or other purposes (e.g., worker's compensation, medication adjustment;  $n = 40$ ). We chose to dichotomize visit type into just routine check-up ( $n = 111$ ) versus all other types or combination of reasons ( $n = 183$ ), reasoning that healthcare experiences in which the patient is seeking a solution to a new or ongoing health problems differs in important ways from a routine visit. Participants next indicated the location of their visit, which was coded dichotomously into private practice visits ( $n = 167$ ) or other locations (county or city hospital,  $n = 53$ ; university medical center,  $n = 30$ ; HMO facility,  $n = 21$ ; VA hospital,  $n = 6$ ; general clinic,  $n = 5$ ; walk-in clinic,  $n = 4$ ; alternative medicine facility,  $n = 2$ ; total  $n = 112$ ), and the length of their relationship with their doctor, which was also coded dichotomously as no prior experience with the doctor ( $n = 99$ ) or some prior experience with doctor (2–5 visits,  $n = 91$ ; 5–15 visits,  $n = 51$ ; more than 15 visits,  $n = 53$ ; total  $n = 195$ ).

As in Study 1, participants then completed the modified RSQ, this time with regard to the healthcare experience they had described. Individual template matching scores were once again created by calculating the correlation between the participant's specific RSQ ratings and the RSQ template created in Study 1.

Finally, participants responded to nine items assessing the outcomes of their healthcare experience. These items addressed a variety of responses to the visit, including perceptions of decisional control ("How much control do you feel like the clinician gave you over the decisions about your treatment at that visit?" 1 = *no control*, 10 = *complete control*; Ghane et al., 2014), satisfaction with the visit ("How satisfied were you with the visit overall?" 1 = *completely dissatisfied*, 10 = *completely satisfied*; Huynh et al., 2014), perceptions of the physician's behavior ("Do you feel like you understood what the clinician told you at that visit?" "How much do you think the clinician you saw at that visit respected you?" "Do you feel like the doctor you saw was competent and well-trained?" "Do you feel like the doctor you saw did his/her best to keep you from worrying?" "To what extent did you feel reassured after talking to your doctor?" 1 = *not at all*, 10 = *completely*; "During your visit, did the doctor use medical terms without explaining what they meant?" 1 = *never*, 10 = *frequently*), and adherence behavior ("Following that visit, did you follow the doctor's suggestions?" 1 = *not at all*, 10 = *completely*). Due to the high internal reliability of these items, we averaged responses to create a composite of visit outcomes ( $\alpha = .88$ ,  $M = 7.55$ ,  $SD = 1.98$ ).

#### 6.1.3. Analytic strategy

To assess relationships among template match scores and our dispositional and situational measures, we conducted correlational and multiple regression analyses. We also ran these analyses to predict health outcomes. To assess the full Situational Construal Model, we conducted bootstrapped mediational analyses to determine whether the construal of healthcare situations mediates relationships between dispositional and situational variables and health outcomes.

## 7. Results

### 7.1. Dispositional and situational influences on healthcare construal

Table 3 presents the full set of correlations between dispositional measures and template match scores. The results were largely consistent with Study 1, such that template match was positively correlated with extraversion (marginally), agreeableness (marginally), conscientiousness, general attitudes towards doctors, health literacy, medical help seeking, and decisional control

**Table 3**  
Study 2 correlations and regression coefficients.

	Template match score		Outcomes composite	
	Bivariate correlation [95% CI]	Standardized regression coefficient [95% CI]	Bivariate correlation [95% CI]	Standardized regression coefficient [95% CI]
Visit type <sup>a</sup>	.26 [.15, .37]**	.18 [.08, .28]**	.15 [.03, .26]*	.08 [−.01, .17]
Visit location <sup>b</sup>	.16 [.04, .27]*	.09 [−.01, .19]	.14 [.01, .25]*	−.05 [−.05, .17]
Length of relationship <sup>c</sup>	.14 [.02, .25]*	.05 [−.05, .15]	.16 [.04, .27]**	.09 [−.01, .19]
Personality (Big 5)				
Openness to experience	−.00 [−.12, .11]	.04 [−.06, .14]	−.02 [−.14, .10]	.01 [−.08, .11]
Conscientiousness	.18 [.06, .29]**	−.05 [−.17, .06]	.19 [.07, .30]**	−.09 [−.19, .02]
Extraversion	.11 [−.00, .23]	.01 [−.10, .10]	.07 [−.05, .19]	−.01 [−.11, .08]
Agreeableness	.11 [−.01, .22]	−.01 [−.12, .10]	.12 [.00, .24]*	.01 [−.10, .11]
Neuroticism	−.16 [−.27, −.04]**	−.01 [−.12, .10]	−.15 [−.26, −.03]*	.03 [−.07, .13]
Health literacy	.22 [.10, .33]**	.10 [−.02, .21] <sup>†</sup>	.24 [.12, .35]**	.11 [.01, .22]*
General attitudes toward doctors	.58 [.50, .66]**	.56 [.46, .66]**	.68 [.60, .74]**	.66 [.57, .75]**
Decisional control preferences	.11 [−.01, .22]	.01 [−.10, .12]	.21 [.10, .32]**	.12 [.02, .22]*
Medical help seeking	.17 [.06, .28]**	.01 [−.10, .10]	.15 [−.27, −.03]*	−.01 [−.10, .08]

Note: <sup>†</sup>*p* < .10. \**p* < .05. \*\**p* < .01. Standardized regression coefficients control for dispositional and visit variables.

<sup>a</sup> Checkup = 1, all other = 0.

<sup>b</sup> Private clinic = 1, all other = 0.

<sup>c</sup> Prior experience with doctor = 1, no prior experience = 0.

preferences (marginally), and negatively correlated with neuroticism. Openness remained unrelated to construal. Table 3 includes the relationships between visit type (check-up vs. other), visit location (private practice vs. other medical setting), length of relationship with doctor (no prior experience vs. prior experience), and template match scores (Path B to C, Fig. 1). Participants construed check-ups and visits in a private practice more positively than other types of healthcare visits, and participants construed visits more positively when they had prior experience with a doctor.

To further investigate the relative influence of dispositional and situational factors in situational construals, we conducted a multiple regression analysis predicting participants' template match scores from visit type, visit location, length of relationship with doctor, personality, health literacy, general attitudes towards doctors, decisional control preferences, and medical help seeking. Visit type and general attitudes towards doctors were significant predictors of template match scores with all variables in the model, and visit location and health literacy were marginally significant predictors; the remaining variables were not significant predictors (Table 3).

7.2. Dispositional, situational, and construal influences on visit outcomes

Table 3 presents the relationships between participants' dispositional, situational, and construal (template match score) variables

and visit outcomes (scored such that higher numbers represent more positive outcomes). Visit outcomes were positively correlated with conscientiousness, agreeableness, health literacy, general attitudes toward doctors, decisional control preferences, medical help seeking, visit type (checkups had more positive outcomes than other visits), visit location (private offices had more positive outcomes than other locations), length of relationship with doctor, and construal (participants who construed their visit more positively also reported more positive outcomes). Visit outcomes were negatively correlated with neuroticism. In a multiple regression model predicting visit outcomes from all predictor variables, only health literacy, general attitudes toward doctors, decisional control preferences, visit type (marginal), and length of relationship with doctor (marginal) remained significant (Table 3).

To provide an initial test of the full Situational Construal Model in the context of healthcare visits, we examined whether template match scores statistically mediated the relationships between dispositional and situational characteristics (individual analyses for each predictor) and visit outcomes. Using Preacher and Hayes' (2008) bootstrapping approach, we estimated the path coefficients in single mediator models and generated bootstrap bias-corrected 95% confidence intervals (2000 bootstrapped samples) for specific indirect effects of dispositional and situational characteristics on visit outcomes through participants' template match scores.

Table 4 presents the unstandardized coefficients and confidence intervals for the mediation models. In the case of visit type, visit

**Table 4**  
Unstandardized mediation coefficients (study 2).

	a	b	c	c'	Bias-corrected 95% confidence interval
Visit type	.16**	5.79**	.63**	−.26	[.50, 1.32]
Visit location	.09*	5.51**	.55*	.07	[.11, .84]
Length of relationship	.08*	5.61**	.66**	.19	[.09, .86]
Personality (Big 5)					
Openness to experience	−.00	5.73**	−.06	−.03	[−.26, .19]
Conscientiousness	.06**	5.59**	.45**	.11	[.10, .56]
Extraversion	.03	5.67**	.13	−.03	[−.01, .33]
Agreeableness	.03	5.63**	.28*	.09	[−.02, .40]
Neuroticism	−.04**	5.60**	−.29*	−.05	[−.43, −.05]
Health literacy	.04**	5.57**	.28**	.07	[.10, .31]
General attitudes toward doctors	.20**	4.28**	1.68**	.82**	[.69, 1.08]
Decisional control preferences	.02	5.56**	.27**	.15**	[.01, .24]
Medical help seeking	−.02*	5.65**	−.13*	−.02	[−.19, −.03]

Note: <sup>a</sup> Relationship between predictor and template match scores. <sup>b</sup> Relationship between template match scores and outcomes; <sup>c</sup> Total relationship between predictor and outcomes; <sup>c'</sup> Direct relationship between predictor and outcomes, controlling for template match scores. \**p* < .05. \*\**p* < .01.

location, length of relationship with doctor, conscientiousness, neuroticism, health literacy, and medical help seeking, the coefficients and confidence intervals consistently suggest mediation: strong and significant direct relationships between the dispositional or situational characteristic and template match score, strong and significant direct relationships between the template match score and visit outcomes, weak and non-significant relationships between the dispositional or situational characteristic and visit outcomes after controlling for template match score, and confidence intervals well clear of zero.

## 8. Discussion

Two studies provided a test of the Situational Construal Model in the context of healthcare encounters, assessing the role of person and situation variables in explaining the construal of healthcare experiences as well as health outcomes following these experiences. In each study, both dispositional and situational factors predicted people's construal of the healthcare encounter, lending support to the predictions of the Situational Construal Model. Study 2 also provided initial evidence for the mediating role of patients' construal of healthcare situations in the relationships between situational and dispositional factors and health outcomes.

### 8.1. The role of dispositions in patients' construals

Our findings provide convincing evidence that dispositional factors play a role in patients' perceptions of their healthcare experiences. In both studies, people who were higher in health literacy and who had more positive attitudes toward doctors construed a hypothetical medical visit (Study 1) and a personal medical visit (Study 2) more positively. Although these two patient characteristics were the most powerful predictors of construals, people who were more extraverted, conscientious, and agreeable and who more readily seek medical attention also tended to construe medical visits more positively.

On the whole, these findings suggest that patients walk into medical encounters with strong and stable tendencies to perceive their doctor's visit in a particular way, above and beyond the care they receive during the visit. Of course, the quality of the healthcare experience matters as well, as we will discuss in more detail below. However, our findings lend credence to the notion of "difficult patients," who are unlikely to feel that their needs were met even when the care was fully adequate.

Of course, it would not be particularly surprising or novel to find that patients who are more comfortable with medical terminology, who like doctors, and who are more sociable, affable, and responsible have better experiences with their doctors. It is important to note that our studies, particularly Study 1, did not assess the quality of healthcare experiences. Instead, we assessed patients' *perceptions* of their healthcare experiences, above and beyond objective features of the visit or the objective quality of care. That is, our findings suggest that even if extraverts are treated badly in the course of a medical visit, they are still more likely on average to report a positive experience. Similarly, even if people low in health literacy receive outstanding care, they may be more likely on average to report a negative experience. Study 2 was less clear in this regard, in that the retrospective methodology allowed for the possibility that relationships between dispositions and "construals" reflected true differences in care rather than simply patients' perceptions. For example, the relationship between neuroticism and construals arose only in Study 2, which may suggest that people high in neuroticism accurately perceive their healthcare visits as more unpleasant, perhaps because they are less likely to adhere to their doctors' recommendations (Weibe and Christensen, 1996).

### 8.2. The role of objective situational features in patients' construals

As predicted by the Situational Construal Model, we also found support for the role of objective features of the situation in patients' construal of a healthcare experience. Although this finding is largely intuitive, it is nonetheless important to establish that even dispositionally difficult or easy patients are responsive to the objective quality of care, the nature of the visit, the context of care, and the nature of their relationship with the doctor. Specifically, Study 2 found that patients construed their medical visits more positively when the visit was for a regular check-up (versus new symptoms or chronic illness care), when it took place in a private medical office (versus larger settings such as county or city hospitals), and when they had an established relationship with the doctor they saw that day. Of course, these features of the medical visit are not entirely independent. Nonetheless, our findings reveal that the confluence of these factors consistently predicts more positive construal of the healthcare experience.

In addition to establishing the role of dispositional and situational features in patients' construals, our approach to this research produced a template based on the RSQ measure that can be used in future studies both within and beyond healthcare contexts to assess a situation's overall valence. This general template-matching approach is not unique to this study and has been used successfully in other research exploring the relationships between personality, situations, and behavior (Bem and Funder, 1978; Morse et al., *in press*). For example, researchers recently created RSQ-based templates that indicate a situation's match to evolutionarily-derived motives (e.g., mate seeking, disease avoidance; Morse et al., *in press*). Although the majority of research using the RSQ avoids data reduction and instead treats each item individually (e.g., Sherman et al., 2010; Sherman et al., 2013), our template provides an alternative and intuitive approach to assessing the general positivity or negativity of situational construals.

### 8.3. The role of personality, situations, and construal in patients' health outcomes

Adding the last piece to the situational construal puzzle, we provided an initial test of the joint roles of dispositional and situational influences on the outcomes of healthcare visits, as mediated through patients' construals. Although the retrospective and correlational nature of Study 2 renders causal conclusions inappropriate, our mediation analyses suggest that subjective construals may in part explain the effect of personality (specifically conscientiousness and neuroticism), health literacy, and willingness to seek medical attention on outcomes such as satisfaction and adherence intentions. As a whole, our findings provide tentative support for the Situational Construal Model in the context of healthcare, such that both person and situation variables were related to situational construal, which subsequently predicted patient outcomes. More broadly, we conclude from these findings that, as in other contexts, full consideration of person, situation, and construal characteristics is necessary for a full understanding of healthcare experiences and outcomes.

### 8.4. Implications for healthcare professionals

In addition to the theoretical contributions of this work, our findings have implications for healthcare professionals. When working with patients, it may be helpful to recognize that their construal of the healthcare experience predicts key outcomes following the visit. Of course, our findings also suggest that these construals may be difficult to alter. Patients arrive at a healthcare visit carrying the baggage of their past experiences, general

attitudes, and personality, all of which play a role in shaping their construal of the visit – above and beyond the role of objective features of the healthcare experience. Simply recognizing that these factors influence patients' perceptions and outcomes may provide healthcare professionals with useful insight into the care process, and active efforts to monitor and improve patients' construal of the encounter can only be beneficial for patients' health and well-being.

### 8.5. Limitations and inspirations for future research

Our studies represent an initial effort to test the predictions of the Situational Construal Model in the context of healthcare. Our approach had several key strengths, including the use of multiple methods (hypothetical and experimental, retrospective and correlational), broad samples (in comparison to typical psychology undergraduate samples), and a strong theoretical underpinning. Nonetheless, our studies are not without their limitations. First, our use of online samples is open to critique, as their ethnic diversity did not sufficiently represent that of the population (although we found ethnicity was unrelated to template match scores or health outcomes), nor are we aware of how the general health and health behaviors of our sample may differ from that of a more traditional patient sample. Second, we neglected to record participants' gender in our studies, and thus we cannot examine its role in patients' construals or health outcomes. Finally, we ran numerous analyses in an effort to fully utilize the available data, the result of which is an increased chance of spuriously significant findings (i.e., alpha inflation). We choose not to explicitly correct for alpha inflation, leaving the reader to interpret the reliability of our findings based on a combination of effect size measures and *p*-values.

Our research leaves room for productive future endeavors. Most notably, our assessment of patient outcomes in Study 2 relied entirely on participants' self-reports, and moreover, their recollections of a medical visit that may have been a year or two in the past. Future studies can use more objective measures of health outcomes, including but not limited to objective assessments of adherence to treatment recommendations (e.g., prescription tracking, pill bottle monitors), and assess these outcomes shortly after the medical visit.

Furthermore, this line of inquiry would benefit from audio or video recordings of medical visits, which would allow for objective and subjective coding of situational features. Study 1 experimentally manipulated the features of the target healthcare experience, but in the real world these features would arise naturally in the course of a medical visit. In Study 2, we limited our examination of situational features to objective and largely indisputable visit characteristics (reason for the visit, location, and familiarity with the doctor) to minimize the limitations of retrospective reporting. Documentation of the visit itself would provide myriad opportunities for examination of situational features and their consequences for patient outcomes.

## 9. Conclusions

The content of healthcare interactions has clear consequences for patients' health outcomes, but perhaps equally important is what patients bring to their healthcare encounters. The present studies extended current approaches to the study of healthcare quality by considering the unique and dynamic roles of the person (i.e., the patient) and the situation (i.e., the healthcare encounter) in determining patients' health behavior and health outcomes. Ultimately, our findings suggest that health outcomes are not solely in the hands of medical professionals; instead, healthcare recipients should be aware that their own characteristics and characteristics

of the healthcare experience notably contribute to their health outcomes. To the extent that patients can look for the bright side in their healthcare experiences, construing even mediocre visits in a positive light, their health and well-being will likely benefit.

## Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.socscimed.2015.06.005>.

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