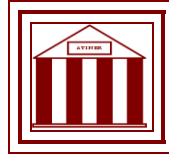


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MGT2015-1523**

**Patient Positivity and Participation in  
Health Services: Examining the  
Mediating Effects of Self- and Other-  
Efficacy**

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**Patient Positivity and Participation in Health Services:  
Examining the Mediating Effects of Self- and Other-Efficacy**

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**Abstract**

Patient participation in health care is critical to forming the outcomes of a clinical treatment, yet patient often do not participate at levels that optimize their outcomes. This study applies the theory of positive emotions to examine how patient participation behaviors derived from positive emotions is mediated by their perceived efficacy of themselves (self-efficacy, SE) and their partners (other-efficacy, OE) in health services. The model was tested using data from 150 local hospital outpatients in southern Taiwan.

Empirical results confirm that as patient relative affect levels become more positive, levels of participation increase as well. In turn, higher levels of positivity and participation improve patient perceptions of the quality of the health care and satisfaction with the co-produced clinical treatment experience. Both SE and OE significantly mediates the positive emotion impact on patient participation while OE demonstrated a higher positive effect than SE. Implications of this research offer healthcare managers on designing services to help patients in managing their emotions in ways that facilitate positivity and participation and thus improve clinical service perceptions and outcomes. Physicians need to tailor their communication behavior to encourage participation and win confidence among and from all patients.

**Keywords:** patient participation, positive emotions, self-efficacy, other-efficacy

## Introduction

The development of equality of doctor-patient relationship has increasingly invited more doctor-partner dialogues (Denis et al. 2011). In health care, patients are expected to participate by sharing information on their condition, how they feel and prefer to a treatment options. Patient participation in health care is pivotal to shaping the process and outcomes of a clinical treatment (Hausman 2004). Patient participation has been progressively recognized as a critical component in the redesign of health care processes and successfully applied to the decision-making process and the treatment of chronic illness in patient care (Longtin et al. 2010). This participation can foster collaboration and empowerment (Taylor et al., 2008), and in turn, enhance patients' perceptions of the quality of health care (Hibbard et al. 2007, Hibbard and Cunningham 2008) and improve clinical outcome (Longtin et al. 2010). But, will patients' abilities in participation impact health service outcomes? This question remains unsolved.

Human behavior as a triadic, dynamic and reciprocal interaction of personal factors, behavior, and the social network affect human functioning. Many research attentions have focused on the self-efficacy, a belief in one's abilities to perform a given behavior, in relation to personal performance in health care (Schwarzer and Fuchs 1995, Makoul and Roloff 1998, Robinson-Smith and Pizzi 2003). Success in the practice of self-management tasks in using self-efficacy sources could help patients gain a sense of control over chronic diseases (Baumann and Dang 2012). Researchers have also found that patients with greater self-efficacy desiring more active participation behavior (Maly et al. 2004, Janz et al. 2004). Instead of personal agency, people in close relationships nonetheless depend on proxy agency to achieve desired outcomes (Bray et al. 2001). The research works (Thompson et al. 1993, Christensen et al. 1996) of other-efficacy, or proxy efficacy, referred to an individual's beliefs about his or her significant other's ability to perform particular behaviors (Bandura 1982, Lent and Lopez 2002), have highlighted relationships between other-efficacy and correlation of health care behavior such self-efficacy for management of symptoms, treatment adherence. Notably, the treated other-efficacy and self-efficacy as an antecedent to its correlation behavioral adoption in nature, while very few studies focused on the mediating role of efficacy. Although Yim et al. (2012) examined the synergistic effects and self-efficacy and other-efficacy, including congruence and incongruence levels of these efficacy beliefs, on customers and employees derived enjoyment from co-participating in financial services, the influence of self-efficacy and other-efficacy on health care patient's participation behavior has less been investigated today.

Patients in general preferred to adopt a passive role (Florin et al. 2008). This is due in part to the fact that health care services are characterized by provider-customer dual-sided knowledge and information asymmetry (Brown and Kirmani 1999). Moreover, researchers have found variance in customer participation levels in health care services (Cegala et al. 2007, Street et al.

2005). Variation in health care participation exists in part because patients may experience anxiety at different situations as receiving a diagnosis, undergoing treatment, and worries about treatment effects. This service context may lead to different levels of patient participation (Hibbard 2009). A critical influence on levels of participation is the emotional state of the customer (Price et al. 1995). For example, Gallan et al. (2012) found that as patient' relative affect levels become more positive, levels of participation increase as well, and lead to increased perceptions of satisfaction. But, few health care organizations strategically design customer experiences to manage customers' emotional states (Shaw 2007).

Broaden-and-build theory of positive emotions (Fredrickson 2001) states that positive emotions momentarily broaden people's attention and thinking, enabling individuals to draw flexibly on higher level connections and wider-than-usual ranges of percepts and ideas. Positive emotions broaden an individual's momentary thought action repertoire and have significant effects on his or her behaviors. In contrast, customers with a more negative affective state may view situations as to be more difficult to navigate that inhibit participation behaviors (Fredrickson 2001, Fredrickson and Branigan 2005).

Based on this premise, the purpose of this research is to investigate the underlying processes responsible for the effects of patient affect and relational efficacy beliefs on outcomes during a patient's co-created health service experience. This study represents a first attempt in the health service literature to examine how patient' relational efficacy beliefs mediates the relationship between positive emotions and participatory behaviors and the consequential outcomes. We contribute to the development of theory on patient value co-creation by demonstrating that (1) patient positivity activates participation behaviors in a health care services experience; (2) other-efficacy and self-efficacy serve as mediators of the effects of positivity on patient participation; (3) patient positivity and participation, in turn, drive the patient satisfaction. In addition, this study provides managerial insights for health care organizations and patients.

## **Literature Review**

### *Patient Participation and Positivity*

Patient participation is a collaborative process in which patients and service providers consider treatment options using the best available medical evidence to arrive at a choice that aligns with the patient's needs, preferences, and values. An established relationship between health care providers and patient involves shared information and knowledge, surrender of some power by the providers, and active engagement together in intellectual and/or physical activities (Sahlsten et al. 2008). More participation from both a patient and the service providers improves the level of care delivered and encourages more empathetic, honest and friendly interactions, thus producing relational values (Foreyt and Poston 1998, Street et al. 2003).

Affective state shapes one's cognition, intentions, and behavior. The broaden-and-build theory of positive emotions suggests positive emotions broaden people's attention and thinking, enabling individuals to draw flexibly on ranges of percepts and ideas (Fredrickson 1998, 2009). In turn, these broadened and flexible outlooks can help people develop survival-promoting personal resources (Fredrickson and Kurtz 2011), engage in positive action (Fredrickson and Joiner 2002) and lead to decision making that is both more efficient and more thorough (Isen 2001). Thus, in a clinical encounter we argue that positive emotion could have a positive effect on a patient's level of participation as the mental state invokes his/her action in shared information and knowledge, and decision making. On this basis, we provide the following hypothesis.

**H1: Patient positivity has a positive effect on participation.**

*The Mediating Effects of Efficacy Beliefs*

Self-efficacy (SE), a person's confidence in his or her own capabilities to organize and execute salient task-specific behaviors (Bandura 1986), has been depicted as a cognitive mediator of action because people feel more comfortable in undertaking behaviors if they are capable of performing specific tasks (Bandura 1982, 1997). In today's health care model of patient-centered care, self-efficacy enables the patient to be more involved with the health care team and in the management of his or her condition (Robinson-Smith and Pizzi 2003) and decision making (Chawla and Arora 2013, Zeuner et al. 2014). Low SE was frequently mentioned reasons for the reluctance patient participation (Belcher et al. 2005).

SE predicts the likelihood of initiating communication with a doctor (Makoul and Roloff 1998) and a person's ability to change risky health behaviors by taking personal action (Schwarzer and Fuchs 1995). Patients with high SE also have fewer episodes of negative psychological states, for example, depression, and tend to develop more realistic goals than patients with low SE (Bandura 1997). Nevertheless, focusing only on the role of SE in patients could be insufficient because the relationships between the patients and health care provider during treatment planning process involve social interdependence such as cooperative interaction. Social cognitive theory suggests individuals' perceived capabilities of partners tend to affect their performances respectively (Bandura 1977, 2001). Within health care, which involves dyadic interactions between the patient and doctor in close relationships, it is widely aware that the successful management of diseases is related to the collaborative interactions between the individual and their health providers and the active involvement of the individual (Holman and Lorig 2000).

Other-efficacy (OE), or called proxy control, is a socially mediated form of perceived control that involves the relinquishment of all or some personal control to an intermediary party to help achieve specific desired outcomes (Bray et al. 2001). While acknowledging that beliefs of personal agency will

invariably shape our cognitions, emotions, and behaviors, it has been suggested that other-efficacy beliefs may also hold important implications within cooperative relational contexts (Lent and Lopez 2002). OE refers to a belief in one's partner's (e.g., doctor, patient) capabilities to perform a given behavior and differs conceptually from SE insofar as the referent shifts from oneself to another. OE has also been linked to performance outcomes within relational contexts.

Recent researches have illustrated the relationships between OE beliefs and behavioral adaptation across a variety of domains. Particularly, high levels of OE contribute to better task performance. For example, patients' OE beliefs in their doctors' capabilities supplement their own SE in helping them manage symptoms and overcome serious illness (Thompson et al. 1993). Another medical study has proposed that patients' perceptions of health care provider own efficacy increase their adherence to prescribed treatments more if they also have confidence in the expert judgment and actions of their providers (Christensen et al. 1996). The findings demonstrate the supplemented role of OE in health care behaviors that involve social interaction with an intermediary other. While these studies have emphasized relationships between OE and correlates of medical service, it is now noteworthy to investigate the mediating effects of OE between patient positive emotion and participation.

Emotional arousal is another constituent source of information that can affect perceived self-efficacy in coping with threatening situations (Bandura 1977). Gwaltney et al. (2005) found that self-efficacy may be dependent upon affective and physical states. Researchers have also found that people in a positive mood would be likely to accelerate acquisition of new skills by promoting engagement in learning activities and investment of effort and persistence in practice because of the increased efficacy (Bandura 1981, Brown and Inouye 1978, Collins 1981, Schunk 1981). Pooley et al. (2012) empirically demonstrated that the low stress group had higher SE. High stress patients (e.g., fear or anxiety) may not want to participate in decision making because of low SE (Belcher et al. 2005).

Positive affect may promote a patient's seeing the importance of the doctor-patient interaction and increase his or her efficacy to understand doctor's skills and abilities, to improve trust and honest communication between the doctor and patient (Isen 2001), to believe that their physicians have their best interests at disease treatment (Kuder 1995) and finally lead the patient to participation in decision making.

By drawing on the broaden-and-build theory of positive emotions that contends positivity leads to modes of behavior that prepare a patient for difficult situations (Fredrickson 2003) and the social cognition theory of efficacy beliefs (Bandura 1982) that predict a direct effect of SE and OE on participation, we argue that when a patient experiences greater levels of positivity, he or she will be more likely to develop a higher confidence in both SE and OE because these cognitive mediators of action make the patient feel more comfortable in undertaking decision (Bandura 1997). That is, the greater the positivity is, the more willingness to participate a co-creation process when

the patient has higher efficacy beliefs. Thus, we posit that the effect of positivity on participation will be mediated through SE and OE.

**H2: Self-efficacy mediates the effect of positivity on participation.**

**H3: Other-efficacy mediates the effect of positivity on participation.**

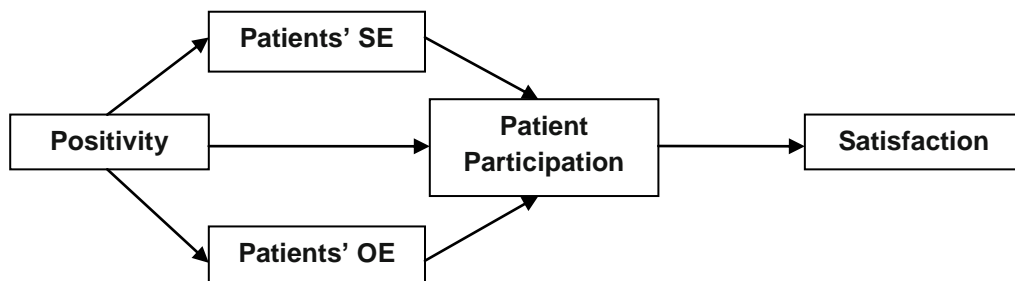
*Participation and Satisfaction*

Among the desired service outcomes of interest to theorists and practitioners are customers' perceptions of customer satisfaction. Customer satisfaction is a state that results when an experience meets or exceeds the customer's needs or wants of a service (Oliver 1993). Satisfaction has been defined as a cumulative, attitude-like judgment that is based on customers' past experiences (Gummerus et al. 2004). Customers' affective responses to services, such as their enjoyment, excitement and pleasure in using the service (Lynch et al. 2001, Wolfinbarger and Gilly 2001), are important to overall customer satisfaction. In health care services, the benefits of patients' participating in their medical encounters are numerous. At the individual level, patient participation is believed to have the potential to increase patient and provider satisfaction (Mead et al. 2002) to improve doctor-patient communication and improve patient health outcomes (Stewart 1995). Gallan et al. (2012) found that the higher levels of patient participation improve patient perceptions of the quality of the provider and satisfaction with the co-produced service experience. Other researchers have shown that customer participation positively affects levels of health care satisfaction (Dellande et al. 2004, Gallan et al. 2012). On this basis, we hypothesize that:

**H4: Patient participation positively affects satisfaction.**

The conceptual framework in Figure 1 depicts how positivity enables patients to co-create the intrinsic value of patient participation, which then affects their level of satisfaction. Drawing theoretical and empirical supports from the research of relational efficacy beliefs (Bandura 1982, Lent and Lopez 2002), this study also sets forth that the co-creation of participation from positivity is mediated through a patient's self- and other-efficacy.

**Figure 1.** *Conceptual Framework*





## **Research Methodology**

### *Sample and Procedure*

A convenience sample was obtained from a district hospital's outpatients in southern Taiwan. Particularly, patients of gynecology services were surveyed. Each survey started with the following checks for a qualified respondent: (1) she must be a chronic patient; (2) she must be a regularly visiting patient, not the first or event second-time patient. These conditions provide a compelling context to examine the extent to which customers muster emotional resources and participate in their service experiences. The questionnaire includes the measures of patient SE and OE, participation behavior, positive and negative affect, and satisfaction. A total 150 patients were invited to fill up the questionnaire.

### *Measurement*

Patient positivity were measured using the brief Positive and Negative Affect Schedule (PANAS) (Watson et al. 1988), which has been demonstrated to be a reliable and valid measure, and widely used in management literature (i.e., Groth et al. 2009). This scale has been shown to be robust to varying time frames (Ilies et al. 2006) and has shown good convergent validities with related scales (Watson et al. 1988). Subjects were asked to indicate the extent to which they experienced the items in PANAS during their service experience at the hospital. Both positive affect and negative affect scales contain ten emotions. Subjects responded on a five-point Likert scale (1=very slightly or not at all, 5=extremely) to indicate how frequently they had experienced positive emotions in the past one month.

In this study, patient participation is defined as the extent to which customers provide/share information, make suggestions, and become involved in decision making. Consistent with previous investigation (Gallen et al. 2012), we used the following items to measure patient participation: (1) During my visit to Organization X, I actively shared information I had with my participation doctor; (2) I participated in a discussion about my condition with my doctor at the Organization X; (3) While I was at the Organization X, I told my doctor what I knew about my condition; (4) I made considerable effort to discuss my condition with my doctor at Organization X; (5) I worked hard to participate in my care at Organization X; (6) I put a lot of effort into being a good patient at Organization X.

Outpatients' self-efficacy for participating in decision making was measured using the five-item decision-making participation self-efficacy scale (Arora et al. 2009). The items assessed patients' level of confidence in the following: (1) taking part in detailed discussions with the doctor about available options; (2) raising questions or concerns about the doctor's recommendations; (3) telling the doctor about options they would prefer; (4) working out any differences of opinion; and (5) taking responsibility for making the final decision. The first four items measured patients' confidence in participating in different aspects of the deliberation process. They were

considered to be conceptually distinct from the fifth item that assessed confidence in taking responsibility for the final decision that emerged as a result of the deliberation. Thus, we created two separate indicators of self-efficacy: self-efficacy for participating in the deliberation process (items 1- 4) and self-efficacy for taking responsibility for the final decision (item 5).

We adopted other-efficacy scale from Riggs et al. (1994) personal efficacy belief scale and amended it to refer to "rate your doctor", with a four-item scale to measure patients' beliefs in the ability and confidence of their doctor to assist her treatment disease as follows: (1) I have confidence in my physicians' ability to cure treatment disease; (2) I do not doubt my physicians' ability to give instructions in treatment disease; (3) My physician has excellent skills and ability to give instructions in treatment disease; (4) I am proud of my physicians' skills and ability to give instructions in treatment disease.

The four-item patient satisfaction scale was adopted from the work Oliver (1993) was employed in developing the conceptual definition and operationalization for the satisfaction construct. The measuring items include: (1) Overall, my doctor at Organization X has been very helpful to me; (2) I am pleased with the way I was treated at hospital; (3) I am very satisfied with the attention given to what I had to say by my doctor at Organization X; (4) I am very satisfied with my experience at Organization X. Respondents to the measuring items of all constructs in the survey were captured on seven-point Likert scales (1=strongly disagree, 7= strongly agree).

## **Data Analysis and Testing**

### *Respondent Profile*

A range of demographic information was collected about the respondents including their age, level of education, disposable income, occupation, marital status, number of births, length of physician relationship, number of physician visits in past 12 months. Respondents were clustered in the age group 31-40 years (50.0%), and their highest level of education was predominantly at college degree level (72.7%). Monthly disposable incomes tended to be less than NT\$ 25,001-50,000 (43.3%). The majority of patients were married (72.0%), never experienced childbirth (40.0%). Patients have known their physicians for one year (38.7%), and experienced more than three follow-up care visits in the past year (56.7%).

### *Hypothesis Testing*

Structural equation modeling (SEM) was used to validate the framework and hypotheses using the partial least squares (PLS) procedure with Smart-PLS 2.0 (Ringle et al. 2005). The variance-based PLS procedure was used because this distribution-free regression analysis technique is robust for deviations from normality (Henseler et al. 2009). PLS is an appropriate SEM technique for mediation effect analysis and model examination since it was originally based on the concept of regression and path analysis (Hair et al. 2011). The

measurement and structural models were assessed simultaneously. First, the validity and reliability of the measurement model was assessed and the structure model was then tested using the value of path coefficient ( $\beta$  value) and  $R^2$  value (Anderson and Gerbing 1988). The researchers adhered to the recommended conditions for this approach, namely to derive hypotheses from a model including constructs that have been proposed in the marketing literature and that accommodate predictive causal analysis (Wendlandt and Schrader 2007).

*Measurement Model*

As indicated in Table 1, convergent validity was far above the threshold with criterions. The average variance extracted (AVE) for each construct exceeded 0.50 (Fornell and Larcker 1981). All values of composite reliabilities (CR) and Cronbach’s  $\alpha$  are significantly above 0.70 (Nunnally 1978). In addition, an examination of correlation coefficients reveals that all variables of SE, OE, patient participation, and satisfaction are significantly correlated. The coefficients range between 0.15 and 0.77. Furthermore, and as shown in Table 1, the squared root AVE of the constructs in the surveyed samples are all higher than the inter-construct correlations. On this basis, the discriminant validity was also acceptable (Fornell and Larcker 1981).

**Table 1. Correlations and AVE**

Variables	AVE	CR <sup>a</sup>	PP	OE	PA	SE	SAT
<b>Patient participation (PP)</b>	0.85	0.97	<b>0.92</b>				
<b>Other-efficacy (OE)</b>	0.95	0.99	0.77**	<b>0.97</b>			
<b>Positive affect (PA)</b>		N/A <sup>b</sup>	0.30**	0.25**	<b>N/A</b>		
<b>Self-efficacy (SE)</b>	0.77	0.94	0.54**	0.55**	0.15	<b>0.88</b>	
<b>Satisfaction (SAT)</b>	0.91	0.98	0.74**	0.78**	0.22*	0.49**	<b>0.96</b>

Notes: n=150

<sup>a</sup> Fornell and Larcker's average variance extracted (pvc) and composite reliability; AVE values for PA=0.925

<sup>b</sup> Positivity is an index created from positive affect (PA) values; Cronbach's  $\alpha$  values are as follows: PA=0.929

\*p < 0.05, \*\*p < 0.01.

*Structural Model*

In order to test the hypothesized relationships, the researchers generated t-values by using bootstrapping with two times subject subsamples (Chin 1998). Tables 2 show the path coefficients for the hypothesized relationships. To assess the mediating effects in cultivation, the researchers adopted the SEM procedure. PLS Mediation was deemed to exist where the following three conditions were met: (1) the exogenous variable affects the mediating variable; (2) the mediator affects the endogenous variable; and (3) the effect between exogenous and endogenous variables is reduced when the mediator is controlled. The strongest mediation exists if there is no effect when the mediator is included (Baron and Kenny 1986).

As is shown in Table 2, indicate that positive affect has a significant effect

on self-efficacy ( $\beta=0.16, p<0.05$ ) and patient participation ( $\beta=0.21, p<0.01$ ). Positive affect has a significant effect on other-efficacy ( $\beta=0.25, p<0.01$ ) and patient participation ( $\beta=0.11, p<0.05$ ). On testing the mediation effects of self-efficacy on the relationships between positive affect and patient participation, the researchers first identified that the path coefficients between self-efficacy and patient participation are significant and positive. Secondly, when the mediator/self-efficacy is inserted, the  $R^2$  is enhanced (from 0.09 to 0.35 with  $f^2=0.09$ ) and when the mediator /other-efficacy is inserted, the  $R^2$  is enhanced (from 0.09 to 0.61 with  $f^2=0.09$ ). On this basis H1 and H2 are supported. The effect sizes of the mediator for the samples are all above the threshold value of 0.02 (Hair et al. 2011). The direct effects of positive affect on patient participation (from  $\beta=0.30$  to  $\beta=0.21$ ). The results of the analysis indicated that self-efficacy and other-efficacy partially mediates the effects of both positive affect and patient participation. The standardized PLS path coefficients, indicate that patient participation has a significant effect on satisfaction ( $\beta=0.75, p<0.01$ ). On this basis H3 are supported. All path coefficients in the structured model are significant at the  $p<0.05$  level.

**Table 2.** *The Results of Mediation Tests*

Variables	SE	OE	PP	PP <sup>a</sup>	$f^2$
PA	0.16*		0.21**	0.30**	0.07
SE			0.52**		0.09
Total $R^2$	0.03		0.35	0.09	
PA		0.25**	0.11*	0.30**	0.07
OE			0.74**		0.09
Total $R^2$		0.06	0.61	0.09	

Notes: PA: positivity affect; SE: self-efficacy; OE; other-efficacy; PP: patient participation; \* $p < 0.05$ , \*\* $p < 0.01$ .

<sup>a</sup> after controlling mediator variable; all numbers between variables are standardized beta coefficients;  $f^2$  = effect size.

## Conclusions

### Discussion

In this research, we contribute to emerging theory on value co-creation by introducing and empirically validating patient positivity as an antecedent to patient participation. We provide empirical evidence showing that both SE and OE significantly mediate the positive emotion impact on patient participation while OE demonstrated a higher positive effect than SE. Therefore, in line with theorizing by Lent and Lopez (2002), the results suggest that OE is a critical predictor of behavioral enactment within performing patient-doctor dyads. Overall, we show that (1) patient positivity is associated with higher levels of patient participation; (2) OE and SE partially mediates the relationship between positivity and patient participation; (3) patient participation is linked positively to satisfaction. Taken together, the patient resources of positivity, relational

efficacy and participation have important effects on managerially relevant and actionable service satisfaction.

This study extends the broaden-and-build theory of positive emotions to a new context, thereby exposing it to a new variable (patient participation in a health care service) as well as to new perceptual outcomes (satisfaction). Our results expand upon emerging theory of customer value co-creation by showing that patients in uncertain circumstances who are able to muster the necessary emotional resources and confident about their physicians can generate increased levels of participatory behaviors. Thus, consistent with previous work showing that patients' relative affect levels become more positive, levels of participation increase as well. In turn, higher levels of positivity and participation improve patients' perceptions of satisfaction with the co-produced service experience (Gallan et al. 2012). We theorize that the positive emotion effect on patient participation, that is mediated by OE and SE is a result of enhanced emotional resources through dyadic trust and communications (Gaur et al. 2011). That is, in health care services, a patient is able to co-create a satisfying experience. We argue that these findings, based on the broaden-and-build theory of positive emotions, extend the theory of positivity into a service context through a relevant relational efficacy beliefs and behavioral construct (patient participation) to previously unexplored perceptual outcomes (satisfaction). Furthermore, this study has supplemented existing patient participation related research by confirming the mediating role of relational efficacy beliefs between positive emotions and patient participation.

The results of this research provide several specific implications for health care service managers and providers. First, this research posits that the relationship between positive emotions and patient participation is mediated by the SE and OE. Physicians and health care professionals should foster environments that promote trust communication and win confidence among and from all patients and enhance their confidence for participating in the health care process. Emerging discussions regarding the changing roles of patients and health care providers suggests that the "demystification" of medical and technical knowledge has presented challenges to, and opportunities for, doctor-patient interactions to be more inclusive and egalitarian (Parker-Pope 2008).

#### *Limitations and Directions for Further Research*

We believe our findings provide robust support for our theoretical model and predicted relationships. However, like any research, ours has limitations. The fact that our study is conducted in a single professional service context-health care also may limit generalizability. Since similar service contexts exist across professional services, we argue that our results are applicable to comparable settings, especially those in a similar position on a professional services continuum. Additionally, there may be multiple factors that influence an individual's affective state or relational efficacy beliefs at any given time. We did not attempt to capture antecedents to affect or relational efficacy beliefs, as it was outside the scope of our study. However, future research

should consider how factors such as enduring personality traits might influence an individual's positivity. Findings from this study also provide future directions for research that focuses on optimizing patient participation aspects of health care delivery that is responsive to patient needs, preferences and/or emotions and should be replicated among diverse patient populations.

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