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The Relation Between Health-Orientation, Provider–Patient Communication, and Satisfaction: An Individual-Difference Approach

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This article further examines the consumerist model of physician–patient interaction, documenting the role of health orientation in the realm of participatory communication in medical encounters. It articulates that physician–patient communication style mediates the positive relation between health orientation and relationship satisfaction. Based on a nationally representative sample of 2,636 respondents (48% men and 52% women) gathered in 1999, the study results support the mediating mechanism for key health-orientation variables such as health-consciousness attitude, health-information orientation, health-oriented beliefs, and healthy activities. As opposed to the development of universal communicative interventions that equip patients with communication skills, the project documents the importance of tailoring the health care provider’s communicative style depending on the needs of the patient.

Patient satisfaction in the medical context has been the subject of extensive investigation in the field of health communication (Brown, Stewart, & Ryan, 2003; Hall & Dornan, 1988; Roter & Hall, 1989; Thompson, 1994). Although patient outcomes may be measured in the context of other variables such as adherence and health status, patient satisfaction is important because of its direct influence on other patient outcomes and its close relation to provider–patient communication (Brown et al., 2003; Roter et al., 1997; Thompson, 1994). It has also been reported that patient satisfaction is correlated with the intention to switch services (Brown...

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et al., 2003) and physician selection in the future (Nitse & Rushing, 1996). Historically, patient satisfaction has primarily been studied in the realm of the provider’s communication skills (Brown et al., 2003; Roter et al., 1995, 1997; Sharf & Street, 1997), thus calling for a growing need to document the central issues in patient communication styles and the relation of such styles to patient outcomes (McGee & Cegala, 1998; Walker, Arnold, Miller-Day, & Webb, 2001).

Although extant research has interrogated the antecedents of provider–patient communication, and the relation between communication styles and patient satisfaction, seldom have the antecedents, communication styles, and satisfaction been studied under the same umbrella. This project examines the relation between health orientation and physician–patient relationship satisfaction in the context of physician–patient communicative style. It articulates that communicative style (open or closed) mediates the relation between health orientation and relationship satisfaction. Health-oriented consumers are actively involved in their health and, therefore, are more likely to communicate openly with their physicians, whereas less health-oriented consumers are likely to take a passive role in their communication with the physician, leading to greater dissatisfaction with the relationship. The active participation of the health-oriented consumer in the consultation and the open communication style shape the content and flow of interaction and ensure mutually satisfying decisions (Balint & Shelton, 1996; Laine & Davidoff, 1996; Street, 2001, 2003). It is critical to note that the treatment proposed in this article focuses on the patient and not the dyadic nature of the patient–physician interaction based on the argument that the health-oriented patient is likely to seek out physicians who practice open communication style and is likely to switch services in situations in which the physician does not reciprocate the patient’s open communication style (Nitse & Rushing, 1996).

PROVIDER–PATIENT COMMUNICATION

Extant research on provider–patient communication has conceptualized the construct both as an antecedent to health outcomes and as an outcome of provider and patient characteristics (Brown et al., 2003; Williams & Calnan, 1991). Of particular interest to health communication scholars is the role of provider–patient communication with respect to patient satisfaction with the relationship (Hall & Dornan, 1988). A study conducted by Roter et al. (1997) representing 13 sites in North America pointed out that communication patterns that balanced the psychosocial and biomedical models were most likely to contribute to patient satisfaction. In their study with older patients, Greene, Adelman, Friedman, and Charon (1994) reported similar results, documenting the role of the provider’s interpersonal, affective style as an antecedent to patient satisfaction with the relationship.
Using Norton’s (1983) classification of communicative styles, Street (2003) pointed out that how patients communicate with their providers is a product of communicative orientations at the dispositional level. Norton (1983) suggested nine different communication styles that are distinctly and systematically present within the population. Particularly relevant in the realm of physician–patient interaction is Norton’s category of the open communicative style. Open communicative style extrapolated to the physician–patient interaction refers to the active participation of the patient in a relationship that is founded on trust and receptivity (Davis, 1984; Thompson, 1994; Wheeless, 1987). In her review of the literature on interpersonal communication in health care, Thompson (1994) pointed out that the awkward and difficult nature of health care dictates that physicians and patients communicate openly to reach satisfactory outcomes. The openness of the initial interaction between the doctor and the patient is critical to the accuracy of the diagnosis and the selection of appropriate treatment options (Eisenthal, Koopman, & Stoeckle, 1990). In other words, an active patient who openly participates in the communication has more of a say in the decisions being reached and, therefore, has more control over the outcomes that he or she desires, which in turn, leads to greater satisfaction (Kaplan, Greenfield, & Ware, 1989; Street, 2001; Street & Millay, 2001; Thompson, 1994).

Open communication creates an environment for negotiation of roles and outcomes during the different stages of physician–patient interaction (Ballard-Reisch, 1990; Brashers, Haas, & Neidig, 1999). Beisecker and Beisecker (1990) posited that active patient participation in decision making leads to actively informed patients who are able to contribute substantively to the process of decision making; they call this style of collaborative participation the consumerist (Beisecker & Beisecker, 1990) style. Such collaborative communication between the patient and the physician ensures open discussion of health options and coconstruction of mutually satisfying decisions (Balint & Shelton, 1996). Active patient participation in the medical encounter leads to receiving more patient-centered care, greater commitment to treatment regimens, greater satisfaction with the visit, and experiencing better health after the visit (Street, 2001; Street & Millay, 2001). In his examination of AIDS counseling and decision making, Ratzan (1993) similarly argued that by actively collaborating in the decision making process, patients are able to achieve their desired goals, creating a win–win situation within the medical encounter. Highlighting the theme of active patient participation, Street (1989) pointed out that expressiveness and higher communicative involvement are positively related with patient satisfaction. Patients who actively participate in medical encounters are more likely to be satisfied with their interaction and experience better health following the visit (Kaplan, Greenfield, & Ware, 1989; Street, 2001; Street & Millay, 2001). Street and colleagues identified three forms of speech—asking questions, expressing concerns, and assertive utterances—as the most important features of participative encounters (Street, 1991; Street, Voigt, Geyer, Manning, & Swanson, 1995).
In a meta-analysis of the different studies on patient satisfaction, Hall and Dornan (1988) suggest 12 dimensions of satisfaction that include characteristics of the provider and characteristics of the system. Documenting different patterns of physician–patient interaction, Roter et al. (1997) pointed out that open and balanced communication styles were the strongest predictors of physician–patient relationship satisfaction, whereas a consumerist pattern of physician–patient relationship was the second strongest predictor. Common to both the balanced and consumerist patterns of communication is the active role of the patient in the relationship (Brashers et al., 1999; Emanuel & Emanuel, 1992; Hall & Dornan, 1988). In other words, those patients who were actively engaged in the communicative process in the physician–patient encounter were most likely to be satisfied with the encounter and enjoy better health outcomes (Roter et al., 1997).

Which factors influence active patient participation in medical encounters? One line of research examines the characteristics of the patient that influence provider–patient communication (Street, 2003). Research on patient characteristics documents the roles of education, age, income, and health status in the realm of the provider–patient relationship (Ong, De Haes, Hoos, & Lammes, 1995; Roter & Hall, 1989, 1992; Street, 2001; Thompson, 1994). A considerably large number of studies have shown that patients with a higher level of education are more likely to be expressive and participative than their less educated counterparts (Beisecker & Beisecker, 1990; Stewart, 1984; Street, 1991; Street et al., 1995). In the realm of gender, studies have demonstrated that women are more likely than men to be expressive in provider–patient interactions (Stewart, 1984). Also, subjective characteristics such as self-concept and personality of the patient have been examined as correlates of patient communication styles (Giles & Street, 1994; Street, 2003). For instance, patients with an internal locus of control are more likely to ask questions and participate in information exchange as compared to patients with an external locus of control (Eaton & Tinsley, 1999; Howell-Koren & Tinsley, 1990). This research extends the dispositional line of work by exploring the role of health orientation in the context of communicative style and relationship satisfaction.

HEALTH ORIENTATION

Published scholarship documents the existence of systematic individual-level differences within populations with respect to the likelihood of individuals engaging in a variety of health behaviors (Moorman & Matulich, 1993; Park & Mittal, 1985). Segmentation approaches to population characteristics point out that, whereas certain groups of individuals are more likely to engage in a multitude of healthy activities, other groups have a greater proclivity to engage in unhealthy behaviors (Dutta-Bergman, 2004b, 2004c; Moorman & Matulich, 1993). In explain-
ing this within-population variance in health behaviors, scholars articulate the role of health orientation (Burns, 1992; Janz & Becker, 1984; MacInnis, Moorman, & Jaworski, 1991; Park & Mittal, 1985). Health orientation is a motivational variable that taps into consumer interest in maintaining a healthy life and propels the enactment of health behaviors (Dutta-Bergman, 2004b, 2004c; Moorman & Matulich, 1993).

Motivation triggers an individual’s interest in a particular issue or topic, subsequently leading to active engagement in cognitions and behaviors related to the specific issue or topic (Celsi & Olson, 1988). A high level of motivation increases the attention paid by the individual to relevant information and the comprehension of such material (Celsi & Olson, 1988; Kraft & Goodell, 1993). Health-motivated consumers actively seek out relevant health information and take an active role in issues of health (Bloch, 1984; Celsi & Olson, 1988; MacInnis et al., 1991; Moorman & Matulich, 1993; Park & Mittal, 1985). Health orientation manifests itself in attitudinal, cognitive, and behavioral realms (Dutta-Bergman, 2004a; 2004b, 2004c, Petty & Cacioppo, 1986).

Health-oriented individuals are empowered to actively participate in their health choices (Dutta-Bergman, 2003, 2004a, 2004b, 2004c). The health-oriented individual has an internal locus of control and, therefore, is also likely to take an active role in the physician–patient relationship, seeking out those physicians who are likely to offer them an empowering atmosphere for active participation. The physician–patient relationship in this context is likely to be an open relationship, marked by collaborative communication and sharing of information that is important to the patient. An open communicative relationship between the physician and the patient allows for the parties to engage in a mutually enriching dialogue in reaching health decisions collaboratively. This greater patient participation in an open relationship with the physician, in turn, is likely to contribute to greater relationship satisfaction among health-active consumers (Balint & Shelton, 1996; Laine & Davidoff, 1996; Roter et al., 1997; Street, 2001, 2003). Therefore, an open doctor–patient relationship is likely to mediate the relation between health orientation and relationship satisfaction.

**H1:** Open communication between doctor and patient will mediate the relation between health conscious attitude and relationship satisfaction.

**H2:** Open communication between doctor and patient will mediate the relation between health information orientation and relationship satisfaction.

**H3:** Open communication between doctor and patient will mediate the relation between health beliefs and relationship satisfaction.

**H4:** Open communication between doctor and patient will mediate the relation between healthy activities and relationship satisfaction.
METHOD

Participants
The Porter Novelli HealthStyles database (Porter Novelli, 1999) was used for this study (for additional information about the database, see Dutta-Bergman, 2004b). In 1999, the response rate for HealthStyles was 74%. The entire sample was weighted on age, sex, race/ethnicity, income, and household size to reflect the U.S. Census population. A total of 2,636 respondents provided usable data. The sample was composed of 48.2% men and 51.8% women. The mean age of the sample was 44.87 (SD = 16.71).

Measures

Relationship satisfaction. Relationship satisfaction was measured by a single item: “I have a good relationship with my healthcare provider(s).”

Provider–patient communication. Provider–patient communication was measured by five items: “My doctor and I work together to manage my health,” “I discuss all possible treatment options with my doctor before deciding which treatment to choose,” “When I read or hear something that’s relevant to my health, I bring it up with my doctor,” “I frequently ask my doctor specific questions about my health,” and “My doctor provides me with practical health information.” When subjected to a principal axis factor analysis with Varimax rotation, a single factor was produced with an Eigenvalue > 1. The Cronbach’s alpha for the aggregated scale was .82.

Health consciousness. Health consciousness was measured by five items borrowed from earlier research (Dutta-Bergman, 2004b) and measured on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). When subjected to a principal axis factor analysis, a single factor with an Eigenvalue of 2.36 was produced that explained 47.24% of the variance. The Cronbach’s alpha for the scale was .72.

Health-information orientation. Health-information orientation was measured by eight items measured on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree; for additional details, see Dutta-Bergman, 2004b). A principal axis factor analysis produced a single factor with an Eigenvalue of 4.18. Factor loadings ranged from .55 to .80 and the factor explained 52.24% of the variance. Cronbach’s alpha for the aggregated scale was .87.
**Health-oriented beliefs.** The respondents were provided with the following instruction: “Please rate each of the following health behaviors on a scale of 1 through 5 depending on how important you think that behavior is for your overall health.” The items are presented in detail in Dutta-Bergman (2004b). Cronbach’s alpha for the aggregated scale was .82.

**Healthy activities.** Healthy activities were measured by eight items (see Dutta-Bergman, 2004b). Responses were measured using a dichotomous yes/no format, and the activities were summed to constitute the healthy activities variable.

**RESULTS**

To test H1 through H4, separate three-step regression procedures were conducted following the steps specified by Baron and Kenny (1986). Baron and Kenny laid out the following conditions that must be met to support the mediating role of a variable: (a) the independent variable must influence the dependent variable, (b) the independent variable must influence the mediator, and (c) the mediator must influence the dependent variable and reduce the influence of the independent variable when both are included as predictors in a regression analysis.

H1, which stated that physician–patient communication style would mediate the relation between health-consciousness attitude and relationship satisfaction, was tested by regression analysis. The results of the regression analyses are summarized in Table 1. As is shown in Table 1, health orientation accounted for significant variance in physician–patient communication and relationship satisfaction. In addition, the effect of health orientation on relationship satisfaction was significantly decreased after introducing physician–patient communication, generating support for H1.

According to H2, it was expected that physician–patient communication would mediate the relation between health-information orientation and relationship satisfaction. The results of the three-step regression analyses are represented in Table 2.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Regression Equations</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health consciousness influences relationship satisfaction</td>
<td>.37</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>2</td>
<td>Health consciousness influences open communication</td>
<td>.50</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>3</td>
<td>Open communication influences relationship satisfaction</td>
<td>.30</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Open communication significantly decreases the effect of health consciousness on relationship satisfaction</td>
<td>.05</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>
Health-information orientation positively predicted relationship satisfaction and accounted for significant variance in physician–patient communication. The relation between health-information orientation and relationship satisfaction was reduced after the introduction of physician–patient communication, demonstrating support for H2.

H3 stated that physician–patient communication would mediate the relation between health-oriented beliefs and relationship satisfaction and was supported by the data (see Table 3). Health-oriented beliefs positively predicted both physician–patient communicative style and relationship satisfaction. Furthermore, the positive effect of health-oriented beliefs on relationship satisfaction was significantly reduced by the introduction of physician–patient communicative style into the regression equation.

Finally, H4 stated that physician–patient communication would mediate the positive relation between health-oriented activities and relationship satisfaction. The effect of health-oriented activities on relationship satisfaction is captured in Table 4. Supporting H4, health-oriented activities were positively related with relationship satisfaction; furthermore, the effect of health-oriented activities on relationship satisfaction was significantly reduced by the introduction of physician–patient communication.

### Table 2

<table>
<thead>
<tr>
<th>Condition</th>
<th>Regression Equations</th>
<th>β</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health information orientation influences relationship satisfaction</td>
<td>.42</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>2</td>
<td>Health information orientation influences open communication</td>
<td>.59</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>3</td>
<td>Open communication influences relationship satisfaction</td>
<td>.65</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Open communication significantly decreases the effect of health information orientation on relationship satisfaction</td>
<td>.04</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

### Table 3

<table>
<thead>
<tr>
<th>Condition</th>
<th>Regression Equations</th>
<th>β</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health information orientation influences relationship satisfaction</td>
<td>.27</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>2</td>
<td>Health information orientation influences open communication</td>
<td>.32</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>3</td>
<td>Open communication influences relationship satisfaction</td>
<td>.65</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Open communication significantly decreases the effect of health information orientation on relationship satisfaction</td>
<td>.06</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Extant research points out that physician–patient communication influences relationship satisfaction (Brashers et al., 1999). In addition, research also directs us toward dispositional variables such that specific communicative strategies in physician–patient interactions are likely to be associated with specific dispositional traits (Street, 1992). In this research, a dispositional approach to health communication was undertaken, with the fundamental notion of within-population differences with respect to motivation in issues of health. It was argued that health-oriented individuals will be more likely to actively engage in an open communication style with their health care providers and, hence, will be more likely to be satisfied with their relationship with the health care provider. In other words, physician–patient communicative style will mediate the positive relation between health orientation and satisfaction with the health care provider. Health orientation was examined at four different levels: health consciousness, health-information orientation, health-oriented beliefs, and healthy activities.

The study results supported the theoretical framework. In the realm of health consciousness, it was documented that the communicative relationship between physician and patient mediated the relation between health orientation and relationship satisfaction. Similarly, the nature of the relationship between the health care provider and the patient mediated the relation between health information orientation and patient satisfaction with the relationship with the physician. Physician–patient communication mediated the relation between health beliefs and relationship satisfaction. Finally, in the realm of healthy activities, a mediation mechanism was observed such that communication mediated the relation between engagement in healthy activities and physician–patient relationship satisfaction.

The results point out that systematic differences within the population need to be placed at the center of studies of physician–patient communication. Health orientation emerges as a meaningful construct in the study of doctor–patient relationships. The extent to which patients participate actively in the relationship is a prod-

**TABLE 4**

Test of Open Communication as a Mediator of the Relation Between Health Activities and Relationship Satisfaction

<table>
<thead>
<tr>
<th>Condition</th>
<th>Regression Equations</th>
<th>β</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health activities influences relationship satisfaction</td>
<td>.15</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>2</td>
<td>Health activities influences open communication</td>
<td>.19</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>3</td>
<td>Open communication influences relationship satisfaction</td>
<td>.66</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Open communication significantly decreases the effect of</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>health information orientation on relationship satisfaction</td>
<td>.02</td>
<td>.14</td>
</tr>
</tbody>
</table>
uct of their orientation toward health. Patients who are actively oriented toward health, seek out health information, hold strong health beliefs, and participate in a plethora of healthy activities are also more likely to actively participate in the doctor–patient relationship. This active participation in the relationship, in turn, leads to greater relationship satisfaction.

Application

This research documents the existence of systematic within-population differences regarding patient proclivities toward different communicative styles. Although a few studies have suggested communicative interventions that equip patients with communication skills, this research documents that open physician–patient communicative style is not the universal solution to patient needs. Instead, the fundamental message that emerges from this research is the need for tailoring the health care providers’ communicative styles depending on the needs of the patient. Whereas the health active, health-oriented segment is significantly more likely to actively participate in the communicative relationship with the doctor, the less health-active segment is likely to prefer a different communicative style.

Limitations and Directions for Future Research

One of the limitations of this research is its single-item measure of relationship satisfaction. Future research ought to incorporate multi-item measures of physician–patient relationship satisfaction. Also, patient outcomes in this article were measured by satisfaction, without taking into account other outcome variables such as patient adherence and health status. Conceptually, the different health-oriented variables were studied separately in the mediation mechanism. Future scholarship should examine the relation among the different variables introduced in this study. In addition, although open communicative style was operationalized and measured in this project, additional research is needed to document the different facets of open communicative style. Along similar lines, scholars may interrogate other communicative dimensions in the context of health orientation and relationship satisfaction. The emphasis of this project on health orientation needs to be complemented by dyadic conceptualizations of the relationship. Also, communicative style and relationship satisfaction need to be studied with respect to other outcome measures such as perceived health, patient compliance and adherence, and actual health outcomes. Given the underlying theme of orientation toward health that drives the health-motivated segment, extrapolation of the physician–patient relationship to other dimensions of communicative choice such as health-information seeking, media consumption, and
community participation might make significant contributions to the study of the health active segment.

REFERENCES


