Measuring Responsiveness in the Therapeutic Relationship: A Patient Perspective

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This article reports results from a three-country study of patient perceptions of physician responsiveness. Based on existing research in the medical and social-psychological literatures, we theorized that patients' perceptions of physician responsiveness to their needs would be an important component of the patient–physician relationship and that this construct could be distinguished reliably from more global assessments of patient satisfaction. We then developed a new measure designed to assess these perceptions from the patients' point of view. This measure was administered to large samples of patients in the United States, the United Kingdom, and Canada. Results supported our hypotheses. Patient perception of physician responsiveness significantly predicted both patient satisfaction and subjective health-related problems, over and above effects attributable to general satisfaction. We also noted the absence of significant differences across the three cultures or sex, suggesting that the process we identify has considerable generality. We also describe a short version of our measure that researchers may find useful in a variety of research or clinical settings.

This article describes and utilizes a measure of patients' perceptions of the therapeutic relationship between patients and primary care physicians in terms of perceived responsiveness: whether the physician is perceived

to understand and accept patient concerns and to provide appropriate and sufficient care. Although patient satisfaction with physicians is assessed commonly, we argue that, for two reasons, the more specific construct of perceived responsiveness has incremental value over and above general satisfaction. First, perceived responsiveness concerns a set of specific interpersonal processes that are expected on a theoretical basis to be

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associated with better quality health care. Measures of general satisfaction, in contrast, refer only to a very global judgment and provide little or no insight into the particulars of the patient–physician interpersonal relationship. The second reason is empirical. Our research provides evidence for the incremental validity of a new measure of perceived responsiveness in the therapeutic relationship over and above an established measure of patients' general satisfaction with their physicians (the well-regarded RAND Patient Satisfaction Scale; Marshall, Hays, Sherbourne, & Wells, 1993).

Why assess the patient–provider relationship with measures that go beyond global satisfaction? Measures of patient satisfaction are common and well known, as are studies using them to better understand health care practices and outcomes (e.g., Baker & Streatfield, 1995; Barzilai, Goodwin, Zyzaski, & Stange, 2001; Fairchild et al., 2001; Gelb, Montgomery, Chang, Murphy, & Rogers, 2001; Jackson, Chamberlin, & Kroenke, 2001). However, global satisfaction measures are limited in their ability to help understand and improve the therapeutic relationship for at least two broad reasons.

First, as extensive studies of survey methodology have shown (e.g., see Schwarz & Strack, 1999, for an overview), general subjective ratings tend to be influenced by numerous cognitive and affective biases. For example, global measures of satisfaction are known to be affected not only by what actually happens in physician–patient interactions but also by what the patient expects from his or her physician. Given the same interaction, a patient with low expectations (perhaps because of poor experiences with physicians in the past or perhaps because of personality traits that predispose individuals to have health complaints; Watson & Pennebaker, 1989) is likely to be more satisfied than a patient whose expectations are high (perhaps because of good prior experiences). Thus, general satisfaction measures are likely to be influenced by factors unrelated to the current relationship with a physician. Measures that assess more concrete, specific processes, especially processes that are marked by visible behaviors that occur during interaction, are less susceptible to bias.

Second, a patient's rating of satisfaction is a global judgment that reveals little about why that patient is or is not satisfied, or what might foster greater satisfaction. Moreover, because satisfaction ratings focus exclusively on the patients' feelings, they tell us little about behaviors that may or may not have occurred during interaction. A more behaviorally focused measure not only suggests which features a patient is (or is not) happy about, it also implicates potential interventions. For example, if patients report that their physician does not appear to listen, then physicians might be coached in responsive listening skills. Without information about the source of the patient's feelings, devising remediations is a shot in the dark.

The measure we report explicitly focuses on the patient's perspective because the therapeutic relationship is by design intended to benefit the patient, and therefore his or her perspective on that relationship is consequential. We focus on the therapeutic relationship over time rather than on a single encounter because we believe that the former has greater relevance in generalist practice. For some time, research on patient–physician communication has emphasized analysis of single consultations (e.g., Byrne & Long, 1976; Howie, Heany, & Maxwell, 1997; Royal College of General Practitioners, 1972). Although valuable, this emphasis overlooks qualities that arise from continuous, long-term therapeutic relationships (e.g., Mainous, Baker, Love, Pereira Gray, & Gill, 2001; Pereira Gray, 1979, 1998). For example, a terse interaction may be experienced as appropriate and satisfying when patients feel confident (from a long history of interactions) that the physician is well aware of and responsive to his or her needs. This principle provides much of the rationale for the benefits of long-term relationships with primary care physicians, who, by virtue of continuity and history with the patient, are able to consider simultaneously the "whole person," that is, the physical, psychological, and social aspects of a symptom or illness. Specialist care is often more narrow and our research does not speak to it.

TOWARD A PROCESS-ORIENTED APPROACH

Our approach is grounded in prior research both on the patient–physician relationship and on interpersonal processes that facilitate the formation and maintenance of close interpersonal relationships (which, we believe, parallel in certain respects the patient–physician relationship). For that reason, our research team includes researchers with significant expertise studying each of these domains. Regarding the former, we posit that the patient's perspective, rather than that of the physician or an expert observer, is associated with favorable patient outcomes (Stewart et al., 2000) and that the optimal relationship with a primary care physician is one in which the physician adequately addresses the patient's health-related concerns (e.g., Federman et al., 2001).

As for the latter, research shows that in ongoing relationships a sense of intimacy and trust develops when partners feel that the other has been understanding, validating, and caring (see reviews by Reis & Patrick, 1996; Reis & Shaver, 1988) and that in communal relationships, people value and expect that partners will perceive and be responsive to their important needs (e.g., Mills & Clark, 2001). Putting these principles together led us to propose that, to engender in patients a sense of responsiveness, a physician must

communicate the following: (a) understanding of the patient's health care needs, (b) acceptance of those needs as valid, and (c) appropriate caring and support for those needs. Thus, we set out to develop a measure specifically assessing the patient's perception of this constellation of interpersonal processes defining a therapeutic relationship, which we call perceived physician responsiveness.

We focus on perceived responsiveness because this construct has emerged as a central organizing theme in the study of close interpersonal relationships (see Reis, Clark, & Holmes, 2004, for a review) and because we wanted to demonstrate the value of this construct in another type of personal relationship, namely, between patients and their physicians. Perceived responsiveness is likely related to other important constructs studied in patient-centered communication research, such as trust. Trust is defined as patients' "belief that their physician is honest and competent, will act in their best interest, and preserve their confidentiality" (Fiscella et al., 2004, p. 1049). This definition implies that trust is the result of certain kinds of interactions, rather than a feature per se of those interactions (a conceptual distinction also made by trust researchers; see Holmes & Rempel, 1989), the latter of which is the focus of our research. We do not examine this idea in the research presented here, because we wanted to keep the measures brief and distinct in this initial investigation of the role of perceived responsiveness in primary-care relationships. We would expect that responsiveness likely contributes to trust in physicians much as it contributes to trust of romantic partners (Reis et al., 2004).

CONSIDERING THE IMPACT OF POSITIVELY AND OF NEGATIVELY WORDED ITEMS

In developing our measure, we explicitly included items worded in both negative and positive directions for several reasons: First, we did this to control for response bias. Second, because people are generally expected to behave well, and typically do so, positive interactions are more common than negative interactions. In other words, a statistically average interaction tends to be rated above absolute neutrality, as modestly positive. Thus, negative behavior tends to stand out more (Fiske, 1980) and is generally considered more diagnostic (Skowronski & Carlston, 1989). Third, because respondents tend to answer agree–disagree statements (e.g., "My doctor really listens") in hypothesis-confirming ways (e.g., Dallas & Baron, 1985; Snyder, 1984; Snyder & Swann, 1978), we were concerned about the possibility of ceiling effects on positively worded items (a possibility consistent with findings from a recent interview study of more than 2,700 patients, of whom only 5.8% said that they would not be willing to return to

the physician whom they had recently seen; Federman et al., 2001; see also Katic et al., 2001). This 5.8% reported being unhappy about specific negative behaviors on those physicians' parts (e.g., not listening or not acknowledging patients' concerns), suggesting that questions about specific negative physician behaviors were likely to be more sensitive to differences in patients' perceptions than questions about specific positive behaviors. We also anticipated that items asking about negative physician behaviors would show more variability than positively worded items and thereby would be better predictors of health outcomes.

OVERVIEW OF THE PRESENT RESEARCH

We developed a measure of patient's perceptions of physician responsiveness in the therapeutic relationship, suitable for use with adult men and women of any ages, and in countries with diverse values and health care delivery systems. This research was conducted in Canada, the United States, and England—countries with a similar language and cultural heritage but with different health care systems. The sample included more than 800 community residents of various ages who had an ongoing relationship with a primary care physician. To establish that our measure was not redundant with general satisfaction, we simultaneously administered the RAND Patient Satisfaction Scale (Marshall et al., 1993).

Hypotheses

We predicted that patient perceptions of physician responsiveness would (a) relate positively to patient satisfaction (because physician responsiveness ought to contribute to patient satisfaction), (b) relate negatively to patient's subjective health-related problems, and (c) predict subjective health status over and above the effects of patient satisfaction.

This last and key prediction represents a stringent test because we expect patient satisfaction and perceptions of responsiveness to be highly correlated. Finding incremental prediction provides evidence for the additional insight to be gained from a process-focused approach. Support for our third hypothesis would also demonstrate incremental (discriminant) validity for the new instrument.

METHOD

Participants

Data analyses were based on samples of 300 individuals (152 women, 148 men) in the United States sample, 200

individuals (139 women, 61 men) in the Canadian sample, and 319 individuals (197 women, 115 men, 7 missing a gender code) in the United Kingdom sample. No participants were currently hospitalized. On average, the Canadian sample was slightly younger than the U.S. and U.K. samples (U.S. $M = 51.6$ years; U.K. $M = 52.9$ years; Canadian $M = 47.5$ years), $F(2, 797) = 6.19, p > .01$. The percentage of participants who were currently married did not differ across samples (U.S., 57.2%; U.K., 65.3%; Canada, 63.5%), $\chi^2 (2) = 4.53$, *ns*. To assess how long patients had been with their physician, we used the following scale with U.S. respondents: 1 (*less than 1 year*), 2 (*1–2 years*), 3 (*2–5 years*), 4 (*5–10 years*), and 5 (*10 years or longer*). U.K. and Canadian respondents were asked to indicate how many years they had been with their current physician; this report was recoded using the same categories. U.S. participants had been patients of their physician for less time ($M = 3.6$) than U.K. ($M = 4.0$) and Canadian ($M = 4.2$) respondents, $F(2, 784) = 23.28, p > .01$.

Questionnaires

The survey instrument consisted of 79 questions. Embedded within this instrument were three sets of questions relevant to our research. The first set, newly prepared for this research, was designed to assess patient perceptions of physician responsiveness. These items, which were randomly interspersed with other items on the questionnaire, were developed in several steps. First, we conducted qualitative pilot studies in the United States and the United Kingdom, consisting of focus groups and interviews with patients and health care providers, asking them to describe the personal relationship between patient and provider. Transcripts of these sessions were content analyzed to prepare an initial set of items. Long interviews were conducted with eight Canadian patients and their family physicians asking for reflections on the qualities of a therapeutic relationship. We also added items from the authors' research in nonmedical settings, assessing the core constructs of perceived understanding, acceptance, caring, and responsiveness to needs. These items were then reviewed by the authors, by other colleagues, and by a further set of pilot participants. On the basis of their feedback, confusing and redundant items were rewritten, resulting in a set of 19 items. Each question had to be answered on a 1-to-5 scale. Scale-point anchors were 1 (*not at all*), 2 (*a little*), 3 (*somewhat*), 4 (*mostly*), and 5 (*completely*).

Patient satisfaction was assessed with a six-item version of the RAND Patient Satisfaction Scale, developed by Marshall et al. (1993) from a longer measure created by Ware, Snyder, and Wright (1976; see also Martin, DiMatteo, & Lepper, 2001). These items assess general feelings of satisfaction. Three are positively worded (e.g., "All things considered, the medical care I receive is excellent"), and three are negatively worded (e.g., "I am dissatisfied with some things about the medical care I receive"). This measure uses a 5-point scale similar to the one just cited and had high internal consistency in our sample ($\alpha = .84$). These items always followed the responsiveness items.

Subjective health-related problems were assessed with four items from the MOS Short-Form General Health Survey (Stewart, Hays, & Ware, 1988). Two questions concerned emotional health. Participants were asked, "During the past year, how much trouble have you had with feeling depressed?" and "During the past year, how much trouble have you had with nervousness?" The 1-to-5 scale was anchored by *none at all* and *a lot*, respectively. Two other questions assessed the degree to which the participant's physical or emotional health had interfered with "normal social activities with family, friends, neighbors or groups" and with "normal work activities (including work both outside the home and housework)." The same 1-to-5 scale was used. These questions always followed the responsiveness and satisfaction items. These four items were summed into an index of Subjective Health-Related Problems, which had high internal consistency ($\alpha = .84$).

Procedure

We used the same questionnaire in all three samples. However, to enhance future generalizability, the protocol for administration varied somewhat across the three samples. Formal approval was obtained from the relevant research ethics boards at all research sites.

U.S. sample. Data were collected in Allegheny County (Pittsburgh metropolitan area), Pennsylvania, by the University Center for Social and Urban Research, a professional survey research firm affiliated with the University of Pittsburgh. An initial random sample of noncommercial telephone numbers within the identified geographic area was identified. Targeted households were called up to nine times to determine their eligibility and willingness to participate in the survey. When a household was reached, the interviewer asked to speak to the adult (18 years of age or older) in the household who had most recently celebrated a birthday. Each individual was then asked if "you currently have a physician whom you consider to be your regular doctor—someone whom you've seen more than a couple of times and expect to see again in the future." Of those who answered this question in the affirmative, 70.4% completed the interview protocol.

One of nine trained interviewers read each question to each participant. They responded to the questions

one at a time. The survey instrument questions were read first, followed by a few demographic questions (age, marital status, etc.). The interview protocol was controlled by a computer program, and all responses were entered directly into a database by the interviewer.

U.K. sample. Consecutive patients attending four different family physician practices, two urban and two rural, in and near Exeter, in the southwest of England, were invited by receptionists to complete the surveys on entering the practice office. An information sheet, headed by the name of the University of Exeter, was supplied explaining the research and confirming that there would be no clinical consequences for participating or not participating. Those declining were not asked again, and patients were not pressured. A large ballot-box-type container was placed in the reception area so that, once completed, the anonymous questionnaires could be returned without staff seeing the answers. All patients were seen through the UK National Health Service. Patients were given no payments or other incentives. All participants were assured that they could not be identified.

Canadian sample. Data were collected in London, Ontario, by the Telephone Survey Unit of The University of Western Ontario. An initial list of valid telephone numbers within the geographic area was randomly identified. All numbers that were not assigned to a personal household (e.g., businesses) were eliminated, as were households with call screening and other privacy devices. The remaining numbers were called up to four times to determine their eligibility and willingness to participate. When a household was reached, the interviewer asked to speak to the adult (18 or older) in the household who had most recently celebrated a birthday. These individuals were then asked if they currently have a regular family doctor. Of those who answered this question affirmatively, 57.0% completed the interview protocol.

A trained interviewer read each question to each participant. They responded to questions one at a time. The survey questions were read first, followed by a few demographic questions (age, marital status, etc.). The interview protocol was controlled by a computer program and all responses were entered directly into a database by the interviewer.

Data Analytic Strategy

We first examined psychometric properties of the 19 Patient Perceptions of Physician Responsiveness (PR) items. Next, we examined the relationship between the three sets of questionnaire variables (perceptions of responsiveness, satisfaction, and subjective health-related problems) and the demographic variables of country, sex, age, marital status, and years of being a patient of that provider. "Country" was represented by two dummy variables, the first comparing the U.K. sample with the other two countries, the second comparing the Canadian sample versus the other two countries. (Thus, the U.S. sample served as the reference group.) Sex was represented by a single dummy-coded variable, marital status by a dummy code comparing currently married with not currently married (single, widowed, and divorced). In these analyses, we regressed subjective health-related problems on the perceptions of responsiveness and satisfaction variables simultaneously to determine their relative contributions. Finally, we used psychometric criteria (described next) to create a reduced set of responsiveness items, both to provide a more accessible measure for future research and to examine its association with subjective health-related problems in more detail. Regression analyses including demographic variables were used throughout to control redundancy among predictors and to permit inclusion of continuous and categorical predictors in the same analyses.

RESULTS

Psychometric Properties of the Responsiveness Measure

Because the 19-item PR scale was new to this work, we began with a principal components analysis. Initial results suggested that a two-component solution was optimal (eigenvalues greater than one, confirmed by a scree test). The first component accounted for 51% of the total variance, whereas the second component accounted for 9.2%. An orthogonal (varimax) rotation revealed that all positively worded items loaded on the first component, whereas all negatively worded items loaded on the second component. These results, as well as the item content, are reported in Table 1.

Separate principal components analyses for the three countries produced strikingly similar results. The positively valenced component accounted for 49.7%, 48.6%, and 59.0% of the variance in the U.S., U.K., and Canadian samples, respectively, whereas the negatively valenced component accounted for 10.2%, 10.0%, and 6.9% of the variance in the U.S., U.K., and Canadian samples, respectively.

To confirm that this two-component solution was optimal, we used exploratory factor analysis, which uses a maximum-likelihood solution both to evaluate both the overall fit of the data to the model and to compare goodness of fit of the single-factor and two-factor solutions. The single-factor model did not account for the data well. Adjusted goodness of fit index (AGFI),

TABLE 1
Component Loadings of Patient Perceptions of Physician
Responsiveness Items

Item	Components	
	1	2
My doctor wants to know how I feel.	.681	−.234
Sometimes my doctor seems indifferent to my needs.[a]	−.214	.693
My doctor really listens.	.589	−.369
It's hard to open up to my doctor.	−.314	.531
My thoughts and feelings are important to my doctor.[a]	.767	−.272
My doctor often really doesn't "hear" what I am saying.[a]	−.179	.730
My doctor is sensitive to my needs.	.702	−.281
Because my doctor knows me, he/she can respond to my worries	.787	−.209
Often, my doctor does not accept my feelings and concerns.[a]	−.170	.697
My doctor dismisses my concerns too easily.[a]	−.273	.774
My doctor knows what is important to me.	.804	−.233
My doctor takes my concerns seriously.	.710	−.431
My doctor shows compassion to me.	.749	−.318
My doctor is responsive to my needs and concerns.[a]	.778	−.318
My doctor is concerned about me as a person.[a]	.802	−.222
My doctor knows me as a person.[a]	.783	−.122
My doctor really cares about my welfare.	.796	−.206
My doctor feels that my worries about my health and concerns are trivial.	−.225	.673
My doctor understands me.	.772	−.304

Note. Extraction: Principal components with varimax rotation.
[a] Items included in the reduced set of Patient Perceptions of Physician Responsiveness scale items.

a measure of fit between the hypothesized model and obtained results, was only .77, whereas root mean square error of approximation (RMSEA), a measure of error, was .096. (Generally accepted criteria for good fit are AGFI >.90 and RMSEA >.08; Hu & Bentler, 1995). The two-factor model, which separated positively and negatively worded items, fared better: AGFI = .89 and RMSEA = .065. Furthermore, the degree of improvement from the single-factor to two-factor models was highly significant, x^2 (1) = 550.13, p >.001.

In the full sample, reliability of composites formed on the basis of these two factors was high: PR-positive (13 items, α = .95) and PR-negative (6 items, α = .82). Separate analyses for the three countries yielded similar results: PR-positive (α = .95, .94, and .96, respectively, in the U.S., U.K., and Canadian samples) and PR-negative (α = .82, .79, and .84, respectively, in the U.S., U.K., and Canadian samples).

Demographic Variables

We first predicted scores on each of the two perceptions of responsiveness subscales in simultaneous regression equations from the demographic variables (country, age, sex, marital status, and years patient). For the PR-Positive subscale, this equation was significant (R^2 = .06), F (6, 767) = 8.25, p >.01. Two individual predictors contributed to this effect: Older patients tended to feel that their health care providers were more responsive (B = .12), t (767) = 3.35, p >.001; the longer participants had been a patient of a particular provider, the more responsive they felt him or her to be (B = .18), t (767) = 4.80, p >.001. For the PR-Negative subscale, this equation was also significant (R^2 = .02), F (6, 764) = 2.16, p >.05. Only one individual predictor was significant in this equation: Perceived responsiveness was again positively associated with relationship length (B = −.09), t (764) = − 2.46, p >.05. There were no country effects in either analysis.

We then repeated the aforementioned regressions using satisfaction as the outcome variable. Several significant effects were obtained. U.K. respondents reported greater satisfaction (M = 4.31) than did U.S. (M = 3.95) respondents (B = .32), t (767) = 4.48, p >.001, whereas Canadian (M = 3.81) respondents reported somewhat lesser satisfaction than U.S. respondents (B = −.17), t (767) = −2.15, p >.05. Also, older patients were more satisfied with their medical care (B = .16), t (767) = 4.51, p >.001. Third, the longer participants had been patients of a particular provider, the greater their satisfaction with the care received (B = .13), t (767) = 3.68, p >.001.

Finally, we repeated these regression analyses using a unit-weighted sum of the four subjective health-related questions as the outcome variable. Several significant results were obtained. First, U.K. respondents reported more problems (M = 2.19) than did U.S. (M = 1.80) respondents (B = .45), t (767) = 5.94, p >.001, whereas there was no difference between U.S. and Canadian (M = 1.83) respondents (B = .07, ns). Second, patients who were currently married reported fewer problems than did unmarried patients (B = − .17), t (767) = − 4.94, p >.001. Third, older patients reported fewer subjective health-related problems (B = − .07), t (767) = − 2.02, p >.05. Fourth, the longer participants had been patients of a particular provider, the greater their subjective health-related problems (B = −.08), t (767) = −2.15, p >.05.

Hypothesis Tests: Predicting Subjective Health-Related Problems From Perceived Responsiveness

We examined the first hypothesis with simple correlations. As expected, both perception of responsiveness subscales correlated significantly with satisfaction: PR-positive, r (811) = .61, p >.001, and PR-negative, r (811) = −.49, p >.001. These correlations were significant and similar in magnitude in all three countries: r

$(300) = .68$ and $-.47$, respectively, in the U.S. sample; r $(311) = .65$ and $-.53$, respectively, in the U.K. sample; and $r(200) = .59$ and $-.51$, respectively, in the Canadian sample.

The second hypothesis was tested in two ways. First, we computed univariate associations between the two PR scales and subjective health. As predicted, both were significant: PR-positive, $r(771) = -.18$, and PR-negative, $r(771) = .18$, both $ps > .001$. Because we wanted to be certain that these effects could not be attributed to demographic differences, we conducted regression analyses in which the key demographic predictors (country, sex, age, marital status, and years patient) were entered in the first step followed by the two PR scales (thereby controlling the effect of each for the other). Together the set of two PR scores produced a significant increment to the prediction of subjective health-related problems, $\Delta R^2 = .03$, $F(2, 762) = 13.75$, $p > .001$. Subsequent examination of the individual regression coefficients, using the Fisher protected t-test procedure, indicated that the PR-negative effect was significant $(B = .19)$, $t(762) = 4.44$, $p > .001$, but the PR-positive effect was not $(p > .10)$.

The third hypothesis was evaluated in the same way as the second, except that satisfaction was entered along with the two perceptions of responsiveness scales to determine whether the effects of responsiveness were significant after controlling for satisfaction. Results of this analysis are displayed in Table 2. Together the set of PR and satisfaction predictors produced a significant increment to the prediction of subjective health-related problems $(\Delta R^2 = .038)$, $F(3, 761) = 11.02$, $p > .001$. Examination of the individual regression coefficients, again using the Fisher protected t-test procedure, indicated that both satisfaction $(B = -.11)$, $t(761) = -2.33$, $p > .05)$ and PR-negative were significant $(B = .18)$, $t(761) = 3.96$, $p > .001$, whereas PR-positive was not significant $(p > .10)$. Thus, all three hypotheses were supported: Patient

perceptions of physician responsiveness predicted subjective health-related problems over and above effects of satisfaction and the various demographic variables, although these results were obtained only for the negative subscale.

Reduced Set of PR Items

Because the full 19-item PR measure is somewhat unwieldy, we next sought to develop briefer subscales that would adequately represent the larger set of items. To do so, we selected four items from each subscale using standard psychometric criteria (John & Benet-Martinez, 2000): high loadings on the exploratory factor analyses, moderate intercorrelations (to avoid item redundancy), and theoretical relevance. These criteria resulted in selection of the items indicated by superscript in Table 1.

Internal consistency for these briefer scales was still high, albeit slightly reduced because of the smaller number of items: PR-positive ($\alpha = .86$) and PR-negative ($\alpha = .77$). Separate analyses for the three countries yielded similar results (PR-positive, $\alpha = .83$, .85, and .89; PR-negative, $\alpha = .76$, .75, and .82, respectively), in the U.S., U.K., and Canadian samples.

We then repeated the regression analyses just reported predicting subjective health-related problems from the demographic variables, satisfaction, and two brief PR scales. Results were nearly identical. Together the set of PR scales and satisfaction produced a significant increment to prediction of subjective health-related problems ($\Delta R^2 = .04$), $F(3, 761) = 11.47$, $p > .001$. The Fisher protected t-test procedure showed that both satisfaction $(B = -.11)$, $t(761) = -2.30$, $p > .05)$ and PR-negative were significant individual predictors $(B = .17)$, $t(761) = 4.12$, $p > .001$, whereas PR-positive was again not significant $(p > .10)$. These results indicate that the brief subscale appears to adequately reproduce results obtained with the full set of items.

DISCUSSION

This article reports findings from a new scale designed to assess patients' perception of physician responsiveness. The measure was evaluated with three samples from Canada, England, and the United States. Psychometric analyses supported a two-factor structure, one each concerned with positive and negative qualities. This structure was remarkably consistent across the three countries. Both subscales demonstrated excellent reliability (internal consistency) in all three countries. There were neither significant differences nor sex differences across the three cultures. Patients tended to perceive their physician as more responsive to the extent that they had been with this physician for longer periods

TABLE 2
Regression Coefficients Predicting Subjective Health-Related Problems

Step	Items	B	Incremental R^2
1	Dummy code (U.K.)	.237**	
	Dummy code (Canada)	.031	
	Gender	−.171**	
	Age	.028	
	Marital	−.068	
	Years as patient	−.078*	.086**
2	PR-positive	.079	
	PR-negative	.175**	
	Satisfaction	−.109*	.038**

Note. PR = Patient Perceptions of Physician Responsiveness. *$p < .05$. **$p < .01$.

and to the extent that they were older. These latter findings are consistent with the rationale that guided this research, as well as previous research showing that continuity of care is associated with greater trust and that older patients tend to be more satisfied with their physicians (e.g., Jackson et al., 2001; Krupat, Bell, Kravitz, Thom, & Azari, 2001; Mainous et al., 2001).

Results supported all three hypotheses. Patient perceptions of physician responsiveness significantly predicted both patient satisfaction and subjective health status. More important is the finding that even when general satisfaction was controlled, responsiveness still accounted for significant variance in ratings of subjective health-related problems, although this effect was limited to the Negative subscale (discussed next). This finding builds on previous significant associations between patient perceptions of the patient-centeredness of one visit and recovery after that visit (Stewart et al., 2000). Thus, we conclude that patient perception of responsiveness in the therapeutic relationship (and not just in a single visit) contributes to subjective health over and above global satisfaction.

We theorized earlier that a long-term relationship with a primary care physician has certain conceptual parallels with close relationships in general (although to be sure there are important differences). These parallels prominently include the importance of understanding, acceptance and support of the patient's health care needs as a key element of responsive relationships between patient and physician. The process-oriented approach that guided our research emphasizes that an optimal relationship between a patient and a family-care physician engenders in the patient confidence that his or her health care needs will be acknowledged and met. Such a relationship goes beyond global satisfaction in fostering a sense of trust by the patient and a willingness to be open and cooperative in prevention, diagnosis, and treatment. In this respect these concepts are consistent with the patient-centered clinical method developed by clinicians, which includes three key components: exploring the patient's illness-experience (i.e., feelings, ideas, function, and expectations), understanding the whole person, and finding common ground between patient and physician (e.g., Stewart et al., 1995). Our results are also consistent with those of Federman et al. (2001), who showed that patient reports of their physician not listening to what they have to say, not acknowledging their concerns, and not spending time with them all predict reluctance to return to that physician.

It is important to emphasize that our findings go beyond previous research demonstrating that satisfaction with health care providers is associated with well-being. Satisfaction, as a general cognitive-affective assessment, is influenced by many intrapersonal and interpersonal processes, and as such it is difficult to determine what factors are responsible for the observed association. Our measure of patient perception of physician responsiveness targeted understanding, acceptance, and support, interpersonal processes that point directly at particular features of the patient-physician interaction. Certainly, we would expect that responsiveness contributes to satisfaction. We also expect that responsiveness contributes to other important constructs that have been used to describe effective patient-centered communication, such as trust (Fiscella et al., 2004; Makoul, 2001). At present, our initial research does not allow us to specify how these different constructs relate to one another. However, our model is derived from the close relationships literature, and in that literature, responsiveness, a characteristic that describes the interaction between partners, has been conceptualized as underlying the development of certain more general assessments of relationships, such as satisfaction, trust, and commitment (Reis et al., 2004). Further research is needed to examine such a process model in health care relationships.

Although both subscales of the perceived responsiveness measure correlated with subjective health-related problems, when we controlled for demographic factors, only the negatively worded subscale was significant. Although it is possible that the separability of positive and negative content is due to wording differences, we believe it more likely reflects the functional independence of appetitive (positive) and aversive (negative) processes. As Cacioppo, Gardner, and Bernston (1997), among others, have argued, appetitive and aversive processes are not bipolar opposites; rather they represent separable dimensions with different functions and mechanisms. Gable and Reis (2001) applied this argument to the specific case of interpersonal relations, proposing that researchers differentiate outcomes associated with desired and unwelcome processes. One particular difference is that negative qualities are typically more diagnostic in interpersonal judgment than positive qualities are (e.g., Reis & Gable, 2003; Skowronski & Carlston, 1989), and this is consistent with what we found in our research. Because positive interactions tend to be far more common in everyday life, and are more consistent with social norms, negative interactions are more revealing of the nature of a relationship and tend to produce stronger affective reactions. It is suggested, in other words, that patient perceptions of physician responsiveness may not have salubrious effects so much as perceived unresponsiveness is harmful.

We also stress the high degree of similarity of our findings across the three countries studied. We set out to develop a measure that would be suitable in different

countries, in both community and primary care settings, and with diverse health care delivery systems. We obtained striking similarities in the psychometric structure of the measures and in the obtained associations among demographic, patient–provider relationship, and subjective health variables. These findings point to the broad applicability of our theorizing about the patient–physician relationship.

Limitations

Several limitations apply to these findings. First, we assessed perceptions of physician responsiveness only from the perspective of the patient. This was mandated by our theoretical position, which argued that because it is the patient's needs that are or are not being met, his or her perspective is what matters. Nonetheless, the physician's perspective also matters, particularly insofar as the perspectives of the patient and physician match or mismatch. Krupat et al. (2001) suggested that the match between patient and physician beliefs may be more important than particular behaviors, and this idea seems worthy of investigation with regard to needs and perceptions of the physician's responsiveness to those needs.

Second, we did not provide an objective analysis of interactions between patients and their caregivers. Again, this was mandated by our theoretical rationale: Whether needs are being met is appropriately evaluated from the perspective of the individual whose needs are of concern. Nonetheless, such perceptions inevitably involve some degree of motivated construction (Reis et al., 2004), and it would be useful to examine interactions from an independent observer's perspective, to determine the relative influence of objective behaviors and motivated construction. An outsider's perspective would also help address issues of causal direction. Because our design was correlational, we cannot rule out the possibility that health-related problems (and perhaps in the affective portion of that measure) caused participants to more poorly evaluate their physicians' responsiveness, or that "third variables" were causally responsible for both.

Third, although we studied individuals in three cultures with substantially different systems for the delivery of primary health care, all were English speaking and Westernized. The fact that the internal structure and construct validity of the perceived responsiveness measure was consistent across these countries is evidence of the pervasiveness of this construct in patient–physician relationships. Nevertheless, it will be important to validate the scale in non-English-speaking, non-Western cultures.

Finally, we relied on measures of subjective health rather than physiological indicators. Although subjective health is important to study in its own right, future research should include indicators less susceptible to interpretation.

CONCLUSION

This article reports preliminary findings from a new scale designed to assess from the patient's perspective responsiveness in the therapeutic relationship. Preliminary evidence suggests that the scale is reliable and explains variance in subjective health over and above reported satisfaction. A short-form of the measure is provided that captures much of the variance in the full scale. The concept of perceived responsiveness has important theoretical grounding in the literature on close relationships and provides a useful conceptual link toward enhancing understanding of the patient-provider relationship. Our findings indicate that patient perceptions of physician responsiveness is a construct worthy of further investigation.

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