Published in final edited form as:

Soc Justice Res. 2005 March ; 18(1): 63–81.

Justice in Health Care Decision-Making: Patients' Appraisals of Health Care Providers and Health Plan Representatives

Mark Fondacaro^{1,4}, Bianca Frogner², and Rudolf Moos³

¹Department of Psychology, University of Florida, Gainesville, Florida ²Department of Health Policy and Management, Johns Hopkins School of Public Health, Baltimore, Maryland ³Department of Veterans Affairs and Stanford University, Palo Alto, California

Abstract

This study describes the development of two versions of a Health Care Justice Inventory (HCJI). One version focuses on patients' interactions with their providers (HCJI-P) and the other focuses on patients' interactions with the representatives of their health plans (HCJI-HP). Each version of the HCJI assesses patients' appraisals of their interactions (with either their Provider or representatives of their Health Plan) along three common dimensions of procedural justice: Trust, Impartiality, and Participation. Both the Provider and Health Plan scales assess indices that are relatively independent of patients' demographic characteristics. In addition, patients' appraisals of their interactions with their provider were only moderately related to their appraisals of their interactions with representatives of their health plan, indicating that the Provider and Health Plan scales tap distinct aspects of patients' overall experience with the health care system. Overall, procedural justice dimensions were significantly related to patient satisfaction in both the Provider and the Health Plan contexts. As predicted, procedural justice factors were more strongly tied to patient satisfaction in the Provider than in the Health Plan context, and health care decisions based on distributive justice principles of Need (rather than Equity or Equality) were most closely tied to patient satisfaction in both contexts.

Keywords

procedural justice; distributive justice; patient satisfaction; provider; health plan

There has been exponential growth in research on patients' reactions to health care providers and patients' satisfaction with health care (Guyatt *et al.*, 1995; Harris *et al.*, 1999; Holmes-Rovner *et al.*, 1996; LaVeist *et al.*, 2000; Morales *et al.*, 2001; Marshall *et al.*, 2001; Pellegrin *et al.*, 2001; Thom *et al.*, 1999). Patient satisfaction has been conceptualized and studied both as an outcome of various aspects of the provider-patient relationship and as an important predictor of health-related outcomes and health care utilization (Pascoe, 1983).

For example, patient satisfaction has been associated with physician/patient relationships characterized by trust (LaVeist *et al.*, 2000; Thom *et al.*, 1999), personal respect (Pellegrin *et al.*, 2001), open communication about health status and treatment (Ende *et al.*, 1989; Nease and Brooks, 1995), and increased opportunities for patient input into treatment decisions

(Guyatt *et al.*, 1995; Harvey *et al.*, 1999; Martin *et al.*, 2001). Overall, this line of research is important because the provider/patient relationship is a primary means by which patients obtain treatment relevant information (Ong *et al.*, 1995). Accordingly, patient satisfaction is an important indicator of the effectiveness of this line of communication (Ong *et al.*, 1995).

Patient satisfaction also predicts important health-related outcomes including treatment adherence and health status (Safran, 2003). Moreover, provider/patient relationship qualities that have been linked empirically to patient satisfaction (e.g., trust, participation) are also associated with health-related outcomes (Martin *et al.*, 2001; Thom *et al.*, 1999). Although much of the research on the processes and outcomes of patient satisfaction has focused on the provider/patient relationship, recent work has highlighted the importance of expanding this focus to include patients' interactions with representatives of their health plans (Mechanic, 1996, 1997; Zheng *et al.*, 2002).

Rosenthal and Schlesenger (2002, p. 53) have suggested that health plans are given a "public face" and are evaluated in terms of the characteristics of the individuals who represent them in interactions with patients over decisions concerning health care. Mechanic (1996, 1997) has suggested that understanding patients' appraisals of their interactions with health plan representatives is important not only in its own right, as we deal increasingly with the realities of managed care, but also because such appraisals may affect patients' appraisals of their providers. Trust in and satisfaction with providers may generalize to health plans; trust in health plans can help providers who must increasingly make treatment decisions in the context of limited resources (Mechanic, 1996, 1997).

Although this body of work is important, there is a need to examine a broader array of dimensions along which to evaluate patients' relationships with health care decision makers, including appraisals of fairness in decision-making (Murphy-Berman *et al.*, 1999). Moreover, there is a need for a more integrative theoretical framework. To address these issues, we examine health care decision-making in the context of patient interactions with both health care providers and health plan representatives. Moreover, we focus on aspects of health care decision-making that have been relatively neglected in the patient satisfaction literature: procedural and distributive justice (Fondacaro, 1995; Murphy-Berman *et al.*, 1999).

Procedural justice refers to appraisal of the fairness of how decisions are made; distributive justice refers to appraisal of the fairness of decision-making outcomes (Lind and Tyler, 1988; Tyler *et al.*, 1997). Initial research on procedural justice focused on the legal context (Thibaut and Walker, 1975), while research on distributive justice focused on the employment context (Adams, 1963). Recently, investigations of these constructs have expanded to a variety of decision-making contexts, including the health care system (Hughes and Larson, 1991; Murphy-Berman *et al.*, 1999) and families (Fondacaro *et al.*, 2002).

One of the most intriguing findings in the social justice literature is that people seem to care as much or more about how they are treated in the course of decision-making (procedural justice) as they do about the decision outcome (distributive justice) (Tyler *et al.*, 1997). This finding is particularly robust when resources are limited and outcomes are uncertain, as is often the case in health care decision-making (Lind and Tyler, 1988; Van den Bos *et al.*, 2001). Moreover, procedural justice is likely to be especially salient in health care contexts, where patients often develop emotional connections to physicians and other providers with decision-making authority (Mechanic, 1996).

Procedural and distributive justice are multidimensional constructs (Fondacaro *et al.*, 2002; Leventhal, 1980; Tornblom, 1992). Initial research on procedural justice focused on voice, which reflects participation in decision-making and may encompass both process control (i.e., a person's control over input into the decision-making process), and decision control (i.e., a

person's control over the actual decision made). Thibaut and Walker (1975) proposed an instrumental, control theory of procedural justice. They postulated that people want voice/participation in decision-making because such input can influence the outcome, both directly, through decision control, and indirectly, through process control.

Other theorists have argued for a broader view of procedural justice, suggesting that, in addition to voice or participation in decision-making, people also want to be treated in a manner that reflects personal dignity/respect, trust, consistency (across persons and time), impartiality and lack of bias, status recognition, and the opportunity to reconsider a decision and appeal to a higher authority (Leventhal, 1980; Tyler, 1989). Fondacaro (1995) has suggested that some of these criteria for evaluating procedural justice, especially those that have deep roots in fundamental legal principles of due process (e.g., impartiality, voice/participation, personal dignity/respect and trust) also may be relevant for evaluating patients' appraisals of health care decision-making.

Social justice theorists have also addressed the role of distributive justice and have focused on equity, equality, and need as potential criteria people use to evaluate the fairness of decision-making outcomes (Schwinger, 1980; Steil and Makowski, 1989). Equity refers to whether the decision-making outcome is "deserved" based on the person's prior contributions, input, or behaviors (e.g., whether the person paid for insurance coverage; whether the person has taken good care of their health). Equality is based on the perception that resources have been divided equally irrespective of prior contributions, input, or behavior. Need reflects whether the decision-making outcomes are based on providing resources to those with the greatest needs (Deutsch, 1975, 1985; Steil and Makowski, 1989).

Deutsch (1975) has suggested that these criteria have different consequences for interpersonal relations: equity is thought to promote competition, equality is thought to promote group harmony, and need is thought to promote personal well-being and development. Following this line of reasoning, one would expect that indices of personal well-being, including measures of patient satisfaction, should be positively related to health care decision-making that reflects need-based principles of distributive justice. This framework suggests that caring-oriented individuals and groups such as providers' and health plan representatives may be more likely to promote patient satisfaction and well-being when they make health care decisions based on patient need rather than principles of equity, which would promote competition and productivity, or equality, which would be more aimed at fostering group cohesion.

This study presents the initial development of two related versions of a conceptually integrated measure of procedural and distributive justice in the context of health care decision-making: (1) the Health Care Justice Inventory - Provider (HCJI - P), to assess patients' perceptions of how they are treated by health care providers, and (2) the Health Care Justice Inventory - Health Plan (HCJI - HP), to assess patients' perceptions of how they are treated by representatives of their health plan or the organization that provides their health benefits. This phase in the development of the inventories focused primarily on identifying dimensions of procedural justice because these dimensions appear to be more central to patient satisfaction (Cross, 1997). Preliminary versions of indices developed from these inventories were used to predict patients' satisfaction with their provider and their health plan. Based on previous research, we made the following predictions:

1. Because the procedural justice construct is multidimensional, patients will use multiple, distinctive criteria to make judgments about procedural justice in the context of health care decision-making (Fondacaro, 1995; Fondacaro *et al.*, 2002).
2. Consistent with the perspective advanced by Fondacaro (1995) as well as empirical research on patient satisfaction (Guyatt *et al.*, 1995; Harvey *et al.*, 1999; LaVeist *et*

al., 2000; Martin *et al.*, 2001; Pellegrin *et al.*, 2001; Thom *et al.*, 1999) and procedural justice (Leventhal, 1980; Tyler, 1989), patients will use criteria to evaluate procedural justice in the healthcare context (with both providers and health plans) that have roots in fundamental legal principles of due process: whether they are treated with personal dignity and respect in a manner that affirms trust (trust), whether they are treated in a neutral and nondiscriminatory manner (impartiality), and whether they are provided an opportunity to participate in decision-making (voice/participation).

3. Given that patients are likely to have more interactions and closer connections to their health care providers than representatives of their health plans (Mechanic, 1996), procedural justice factors will be more strongly tied to patient satisfaction in the context of interactions between patients and providers than in the context of interactions between patients and health plan representatives (Tyler and Degoe, 1995).
4. Consistent with theory and research on distributive justice, health care decisions made by providers and health plan representatives based on patient need (rather than equity or equality) will be most strongly tied to patient satisfaction (Deutsch, 1975; Fondacaro *et al.*, 2002; Steil and Makowski, 1989).

METHOD

Item Development

Initial item development was conducted in several stages. A comprehensive review of the literature on procedural and distributive justice resulted in the construction of between 60 and 70 potential items for the Provider and for the Health Plan versions of the HCJI. With respect to procedural justice, we formulated and adapted multiple items to cover the concepts of trust, personal respect, status recognition, neutrality and impartiality, consent, consistency, voice/participation, process control and decision control. Because our primary focus was on the development of measures of procedural justice, we included only three items to assess the distributive justice concepts of need, equity, and equality. Insofar as it was appropriate, we tried to formulate parallel items to assess patients' interactions with health care providers and with health plan representatives.

These initial sets of items were vetted by several experts in the health care field, including individuals who had studied provider-patient interactions. On the basis of their comments, an iterative process was followed whereby items were revised and re-revised and additional items were formulated. Taken together, these steps, along with an effort to eliminate redundancy in the item pool, resulted in an initial set of 29 parallel 4-point items, varying from strongly disagree (0) to strongly agree (3), for both the Provider and the Health Plan versions of the HCJI. Of these 29 items, 26 assessed aspects of procedural justice and 3 assessed aspects of distributive justice.

Participants

We recruited participants through newspaper and internet notices requesting individuals to volunteer for a study about "how you participate in and react to health care decisions made with your health care provider and representatives of your health care insurance plan." Individuals who responded to the notices and who agreed to participate were mailed the study materials, which included the 29-item initial versions of the HCJI - P and the HCJI - HP, and a stamped, return envelope. On the survey instruments, we asked individuals to describe an experience they had had in the last 12 months in which a decision was made about their health care (Provider version) or their health care coverage (Health Plan version). Each participant received both the Provider version and the Health Plan version of the inventory.

In the Provider version, participants were asked to describe a situation in response to the following instructions:

We would like to learn about your reactions to how your current doctor or other health care provider makes decisions about your health care. Please describe an experience you had with your doctor or another health care provider in the last 12 months in which a decision was made about your health care (for example, switching from one medication to another, running a diagnostic test, having an operation vs. no operation, etc.)

For the Health Plan version, participants were asked to describe a situation in response to the following instructions:

We would like to learn about your reactions to how your current health plan makes decisions about your health care. Please describe an experience you had with your health plan representative in the last 12 months in which a decision was made about your health care (for example, whether the plan would cover a particular medication or surgical procedure).

The survey instruments were completed by 156 individuals who were each paid \$10 for their participation: 153 of the participants reported having had an interaction with their provider over the past 12 months and 147 reported having had an interaction with a health plan representative over the past 12 months.

In responses to the Provider version, approximately 75% of the situations described focused on the diagnosis or treatment of a specific medical condition and approximately 10% focused on the nature of the patient-provider relationship or the experience with the visit. The remaining situations focused on issues related to access to care and referrals to specialists. In responses to the Health Plan version, 73% of the situations described focused on coverage for the diagnosis or treatment of a medical condition and approximately 8% focused on the nature of the relationship and interaction with the health plan representative or problems with billing. The remaining situations focused on access and coverage for general medical services and medications.

In addition to obtaining demographic information, we asked participants to rate their overall health status on a 5-point scale varying from “excellent” (1) to “poor” (5) and to note whether or not they had been hospitalized and the number of times they had seen a physician in the past year. We also asked participants to rate how satisfied they were with their provider and their health plan on 4-point scales varying from “very dissatisfied” (1) to “very satisfied” (4). We also asked them to rate whether they would be willing to recommend their provider and their health plan on 4-point scales varying from “definitely no” (1) to “definitely yes” (4).

A total of 72% of the participants were women; their average age was 44 ($SD = 16.5$). Overall, 47% of the participants were single, 31% were married, and 22% were separated, divorced, or widowed. Sixty-five percent of the participants were Caucasian, 24% were Asian-American, 3% were Hispanic or Latino, 1% were African-American, and 7% were members of other racial/ethnic minority groups. Overall, 50% had completed high school and had some college education and 42% had completed college. Sixty-five percent of the participants were currently employed at least part-time; their median annual income was between \$30,000 and \$39,999. Thirty-seven percent of participants reported annual incomes less than \$20,000; 20% reported incomes between \$20,000 and \$39,999; 23% reported incomes between \$40,000 and \$59,999; and the remaining 20% reported incomes of at least \$60,000.

About 50% of the participants indicated that their health plan was a Health Maintenance Organization (HMO), 34% were in a Preferred Provider Organization (PPO), 6% had Medicare

coverage, 3% had coverage from the Department of Veteran Affairs (VA), 2% were in a Fee-for-Service Plan, 1% had Medicaid coverage and the remaining 4% either had no health plan or did not know what type of plan they had. In terms of health care utilization, approximately 75% of the participants reported visiting their doctor for something more than a routine visit over the past year and 8.6% were hospitalized during that same time period. In terms of self-reported health status, approximately 24% of participants reported that their health was excellent, 37% reported very good health, 23% reported good health, 13% reported fair health, and 3% reported poor health.

RESULTS

Development of the Health Care Justice Inventory - Provider (HCJI - P)

The 26 procedural justice items from the Provider version of the HCJI were first subjected to principal components analysis with varimax rotation. The number of components sought was unconstrained. Based on this analysis, the first three components had eigenvalues greater than 1 (15.94, 2.02, 1.16, respectively) and accounted for 74% of the total variance. After rotation, the first component accounted for approximately 32% of the total variance, the second component accounted for 24%, and the third component accounted for 18%. Using a cut-off of .6, there were 13 items with loadings of .6 or higher on the first component, six on the second component, and five on the third component.

We sought to reduce the item pool further and to construct shorter scales to assess each of the three components with an equal number of items. Since there were only five items with a loading of .6 or higher for the third component, we decided to reduce our item pool to 15 items, with five potential items for each of the three scales. All five items with loadings of .6 or higher on the third component were retained, as were five of the six items with the highest loadings on the first component (one item assessing aspects of personal respect was dropped) and five of the six items with loadings of .6 or higher on the second component (one item that assessed perceived carelessness in decision-making was dropped).

The 15 items retained for the reduced item pool were then subjected to principal component analysis with varimax rotation. The number of components sought was unconstrained. As expected, three components with eigenvalues greater than 1 emerged. Five items had loadings of .6 or higher on the first component, which we labeled Trust; five items had loadings of .6 or higher on the second component, labeled Impartiality; and five items had loadings of .6 or higher on the third component, labeled Participation (for the items and their component loadings, see Table I).

The Trust factor was composed of five items indicating that patients felt comfortable with the way their provider handled the situation, and that their provider was honest with them and gave them as much information as possible about their medical condition and treatment alternatives. The Impartiality factor was composed of five items indicating that the provider had treated the patient in an even-handed, nondiscriminatory manner. Finally, the Participation factor was composed of five items that reflected the patient's participation and voice in decision-making, including aspects of process control and decision control.

Based on these results, we constructed 5-item scales to assess each of the three Provider procedural justice dimensions. Scores on each scale were based on the sum of the ratings for the five items (some items were reverse-scored), and thus could vary from 0 to 15. Descriptive statistics for each of the scales are reported in Table II. Overall, the scales had high internal consistencies; in addition, the actual scores on each scale ranged from 0 to 15, indicating that the items and scales elicited substantial individual differences in patients' reactions to their providers.

Provider Scales and Patients' Demographic and Health Characteristics

Patients' ratings of their providers were relatively independent of their demographic characteristics. In fact, there were only two significant correlations between the provider subscales and the array of patient demographic characteristics, including gender, age, marital status, education, ethnicity, employment, and income. Older patients tended to rate their providers as higher on Trust and Participation ($r_s = .17$ and $.19$ respectively; both $p_s < .05$).

The provider subscales were not significantly correlated with the number of times patients had seen a doctor in the last year, whether the patient had been hospitalized, or the length of a hospital stay. However, patients who reported that they were in better health tended to rate their providers as somewhat lower on Trust and Impartiality ($r_s = -.22$ and $-.19$ respectively; both $p_s < .05$).

Provider Scales and Patients' Satisfaction

Patients' level of satisfaction with the provider was assessed based on the mean ratings patients provided in response to the two items that assessed satisfaction with the provider and willingness to recommend the provider to friends or family members. All three of the provider procedural justice scales (Trust-P, Impartiality-P, and Participation-P) were significantly related to this global index of patients' satisfaction with the provider ($r_s = .84, .76, .69$, respectively, all $p_s < .01$). We conducted multiple regression analyses in which the predictors were the three provider procedural justice scales and the criterion was patient satisfaction with the provider. Each of the three procedural justice predictors (Trust-P, Impartiality-P, and Participation-P) accounted for unique variance in patient satisfaction (betas = $.50, .27, .19$, respectively, all $p_s < .01$). Moreover, these relations remained significant and essentially unchanged after controlling for age and self-reported health status. Thus, patients who indicated that their provider was trustworthy and impartial, and allowed them to participate in health care decisions, reported higher satisfaction with the provider. Overall, the three scales accounted for 76% of the variance in patient satisfaction.

Next, we examined the associations between each of the three items that assessed patients' appraisals of distributive justice and patients' satisfaction with their provider. These three items assessed Need-P ("The decision was based on meeting your health needs"), Equity-P ("The decision was influenced by what was covered in your health plan"), and Equality-P ("The decision was based on treating all patients equally"). Need-P and Equality-P were significantly related to patient satisfaction ($r_s = .82$ and $.53$, respectively, $p_s < .01$), but Equity-P was not ($r = .14, p > .05$). A follow-up multiple regression analysis showed that Need-P and Equality-P each accounted for unique variance in patients' satisfaction with their provider (betas = $.74$ and $.15$, respectively, $p_s < .01$). Moreover, these relations remained significant and essentially unchanged after controlling for age, hospitalization, and self-reported health status.

The procedural and distributive justice predictors were also entered together as predictors in a multiple regression analysis. As shown in Table III, all three of the procedural justice dimensions accounted for unique variance in patients' satisfaction with their provider (betas for Trust-P, Impartiality-P, and Participation-P were $.29, .24$, and $.14$, respectively, all $p_s < .05$); however, Need-P was the only index of distributive justice that accounted for unique variance in the criterion (beta = $.27, p < .01$). Again, the relations remained significant and essentially unchanged after controlling for age, hospitalization, and self-reported health status. Altogether, the procedural and distributive justice predictors accounted for 78% of the variance in patients' satisfaction with their provider.

The Health Care Justice Inventory - Health Plan (HCJI - HP)

Following the procedure outlined for the HCJI - P, we subjected the 26 procedural justice items from the Health Plan version of the HCJI to principal component analysis with varimax rotation. The number of components sought was unconstrained. Based on this analysis, the first four components had eigen-values greater than 1 (13.41, 2.38, 1.18, 1.06, respectively). However, the fourth component was unstable, with only one item with a loading of .6 or above and only two items with a loading of .5 or above, and therefore was not included in subsequent analyses. This decision was consistent with the results of the scree plot, which suggested the retention of three rather than four components.

The first three components that were retained accounted for approximately 61% of the total variance after rotation. In brief, there were 11 items with a loading of .6 or above on the first component, seven items with a loading of .6 or above on the second component, and five items with a loading of .5 or above on the third. Following our approach in constructing the health provider scales, we attempted to reduce the health plan item pool further in an effort to construct shorter scales to assess each of the three components with an equal number of items. Overall, we retained a reduced pool of 15 items that paralleled the 15 items used to construct the health provider scales.

The reduced pool of 15 items was then subjected to principal component analysis with varimax rotation. The number of components sought was unconstrained. As expected, three components emerged. As can be seen in Table IV, the first five items each had a loading of .5 or above on the first component, which we labeled Trust; the second five items each had a loading of .5 or above on the second component, labeled Impartiality; and the last five items each had a loading of .5 or above on the third component, labeled Participation.

The 15 items on the three Health Plan scales are conceptually comparable to the 15 items on the Provider scales. The Trust component was composed of five items indicating that patients felt comfortable with the way that the health plan representative handled the situation, and that the representative was honest with them and gave them as much information as possible about their coverage and insurance alternatives. The Impartiality component was composed of five items indicating that the health plan representative had treated the patient in an even-handed and nondiscriminatory manner. The Participation component was composed of five items that reflected the patient's participation and voice in decision-making.

Based on these results, we constructed 5-item scales to assess each of the three Health Plan procedural justice dimensions. Scores on each scale were based on the sum of the ratings for the five items (some items were reverse-scored), and, as before, could vary from 0 to 15. Descriptive statistics for each of the scales are shown in Table V. Overall, the scales had high internal consistencies; in addition, the actual scores on each scale ranged from 0 to 15, indicating that the items and scales elicited substantial individual differences in patients' reactions to healthplan representatives. Importantly, patients' appraisals of their provider were only moderately related to their appraisals of their health plans ($r_s = .33, .43, \text{ and } .25$ for the Trust, Impartiality, and Participation dimensions, respectively).

Health Plan Scales and Patients' Demographic and Health Characteristics

Comparable to the results for the Provider scales, patients' ratings of their health plans were relatively independent of their demographic characteristics. There were no significant associations between patients' demographic or health characteristics and the Health Plan scales, with only three exceptions: Women tended to rate their health plan representative as lower on Trust ($r = -.17, p < .05$); older patients tended to rate their health plan representative

as=higher on Participation ($r = .23, p < .01$); and patients who reported that they were in better health tended to rate the representative as lower on Impartiality ($r = -.18, p < .05$).

Health Plan Scales and Patient Satisfaction

Patients' satisfaction with their health plan was assessed based on the mean ratings patients provided in response to the two items focused on satisfaction with the health plan and whether they would be willing to recommend the health plan to friends or family members. All three of the health plan procedural justice scales (Trust-HP, Impartiality-HP, and Participation-HP) were significantly related to this global index of patients' satisfaction with their health plan ($r_s = .61, .48, .49$, respectively, all $p_s < .01$). We conducted multiple regression analyses in which the predictors were the three health plan procedural justice scales and the criterion was patient satisfaction with the health plan. Only Trust-HP accounted for unique variance in patient satisfaction ($\beta = .45, p < .01$). These results remained significant and essentially unchanged even after controlling for demographic and health characteristics.

Two of the three indices assessing patients' appraisals of distributive justice, Need-HP and Equality-HP, were significantly related to their satisfaction with their health plan ($r_s = .55, .38$, respectively, $p_s < .01$); Equity-HP was not related to health plan satisfaction ($r = .14, p > .05$). In a multiple regression analysis using the three distributive justice indices as predictors, Need-HP and Equality-HP each accounted for unique variance in patients' satisfaction with their health plan ($\beta_s = .47$ and $.17$, respectively, $p_s < .05$). Overall, these two indices accounted for 31% of the variance in patients' satisfaction with their health plan. Again, the results remained significant and essentially unchanged after controlling for demographic and health characteristics.

Next, all of the procedural and distributive justice predictors were entered together in a multiple regression analysis. As shown in Table VI, Trust-HP was the only scale to significantly account for unique variance in patients' satisfaction with their health plan ($\beta = .37, p < .01$). Again, the results remained significant and essentially unchanged after controlling for demographic and health characteristics.

DISCUSSION

We have presented the development of two preliminary versions of a Health Care Justice Inventory. One version focuses on patients' interactions with their providers (HCJI-P) and the other focuses on patients' interactions with the representatives of their health plans (HCJI-HP). Each version of the HCJI assesses patients' appraisals of their interactions (with either their Provider or representatives of their Health Plan) along three common dimensions of procedural justice.

Principal component analyses revealed that patients evaluated procedural justice in both Provider and Health Plan contexts as multidimensional constructs. Three common procedural justice dimensions emerged in both the Provider and the Health Plan contexts: Trust, Impartiality, and Participation. These common dimensions make it possible to directly compare patients' appraisals of procedural justice in the provider and health plan contexts. One of the advantages of developing parallel versions of the inventories is that it provides a useful tool for examining the extent to which changes in decision-making at the health plan level are tied to changes in patients' appraisals of their health providers along similar dimensions. Nevertheless, in addition to assessing the common dimensions of trust, impartiality and participation, future research should consider the development of more distinct dimensions for the Provider and the Health Plan versions of the HCJI. For example, being treated with personal dignity and respect may be more salient in the context of the provider/patient relationship, which is relatively personal and emotionally involving, whereas the opportunity for appeal or

to have a decision reconsidered may be more salient in the context of health plan decision-making.

Importantly, there were only minimal associations between patients' demographic and health characteristics and their appraisals of their interactions with their providers and health plan representatives. Older patients tended to rate these interactions somewhat more positively, whereas patients who reported that they were in better health tended to rate them somewhat more negatively. Specifically, patients who reported better health rated their interactions with health plans as lower on Impartiality and their interactions with providers as lower on both Impartiality and Trust. There is some evidence that healthy patients have a stronger preference for autonomy and control over health care decision-making than do patients in poor health (Harvey *et al.*, 1999). In the present sample, it is possible that healthy patients' preferences for autonomy and decision control were not met, leading them to appraise their interactions more negatively than patients who were more severely ill, who may have had lower expectations for autonomy and decision control.

Women rated their interactions with health plan representatives somewhat lower on Trust than did men. However, all of our regression analyses remained significant and essentially unchanged after controlling for demographic variables, including gender, as well as health characteristics. On the whole, both the Provider and the Health Plan scales appear to be assessing indices that are relatively independent of patients' demographic characteristics.

In addition, patients' appraisals of their interactions with their provider were only moderately related to their appraisals of their interactions with representatives of their health plan, indicating that the Provider and the Health Plan scales are tapping somewhat different aspects of patients' overall experience with the health care system. This suggests that, while patients' appraisals of their Provider and Health Plan are related, patients can and do make relevant distinctions—distinctions that may have a direct influence on health-related outcomes. For example, patients who may view interactions with representatives of a managed care health plan negatively may nonetheless have positive appraisals of their own provider, which may help to enhance treatment adherence and health outcomes. Understanding patients' appraisals of their health plans is important not only in its own right, as we deal increasingly with the realities of managed care, but because such appraisals may be linked to patients' appraisals of their providers as well (Mechanic, 1996, 1997).

In general, our findings supported each of our four predictions. Principal component analyses of procedural justice items were consistent with our first hypothesis that procedural justice is a multidimensional construct. Patients used three distinct and comparable criteria to make judgments about procedural justice in the context of decision-making with both their Provider and Health Plan. These findings are consistent with research demonstrating that procedural justice is a multidimensional construct (Fondacaro *et al.*, 2002).

Consistent with our second hypothesis, we found that the criteria patients use to evaluate procedural justice in the health care context (with both providers and health plans) are similar to those they use to judge procedural fairness in the legal context: whether they are treated in a way that affirms their dignity and trust, that is neutral and nondiscriminatory, and that provides an opportunity to be heard (Fondacaro, 1995). These findings are consistent with Bronfenbrenner's (1979) social ecological model which suggests that consistencies in behavior observed across microsocial context such as provider/patient and health plan/patient interactions often have their roots in relevant macrosocial institutions. The legal system is a prime candidate for a macro-system that may influence the criteria people adopt to judge the procedural fairness of decision-making in the context of specific interactions with Providers and Health Plan representatives.

Consistent with our third prediction, procedural justice factors were more strongly tied to patient satisfaction in the Provider than in the Health Plan context, both in terms of the overall amount of variance accounted for in patient satisfaction and in terms of the number of predictors that accounted for unique variance in patient satisfaction. In the Provider context, all three of the procedural justice scales (Trust, Impartiality, Participation) as well as Need accounted for unique variance in patient satisfaction, even after adjusting for demographic and health characteristics. However, in the Health Plan context, only Trust accounted for unique variance in patient satisfaction. This finding is consistent with the view that patients generally have closer relationships with their providers than with their health plan representatives (Mechanic, 1997; Safran, 2003) and that procedural justice appraisals are less salient in more impersonal contexts (Tyler and Degoey, 1995).

Overall, Trust was the single most relevant and robust dimension along which patients evaluated interactions with their Providers and Health Plans. Trust may be both a global outcome of other specific predictors of procedural fairness (e.g., impartiality, participation) as well as a specific indicator or predictor of procedural justice in its own right. The gradual accumulation (or erosion) of Trust may mediate the relation between patients' appraisals of their Providers and Health Plans on the one hand, and their health-related outcomes on the other (see Mechanic, 1996). With respect to further research, trust might be conceptualized, not only as an indicator of procedural fairness but as an outcome as well—an outcome that may mediate the relationships between procedural justice dimensions (e.g., impartiality, voice) and health-related outcomes.

Need was the best distributive justice predictor of patient satisfaction in both the Provider and the Health Plan contexts. These results are consistent with our fourth prediction and with existing theoretical formulations suggesting that, in comparison to equity- or equality-based decision-making, need-based decision-making is more likely to promote personal well-being (Deutsch, 1975; Fondacaro *et al.*, 2002; Steil and Makowski, 1989). Patient satisfaction is clearly one potential index of personal well-being. The limited empirical research that is available suggests that need-based decision-making is particularly important in the context of close interpersonal relationships, especially families (Fondacaro *et al.*, 2002; Peterson, 1975). Other relationship and group characteristics that theorists have posited are associated with need-based decision-making include a caring orientation and a hierarchical structure—both clearly more characteristic of patient/provider relations than patient/health plan relations, where the interaction is more likely to focus on issues of coverage than care and involve a health plan representative with less status than a physician (Deutsch, 1975; Steil and Makowski, 1989; Schwinger, 1980).

Finally, procedural justice factors were better predictors of patient satisfaction than were distributive justice factors in both the Provider and the Health Plan contexts. These findings are consistent with previous research indicating that people often care as much or more about the fairness of how they are treated in the course of decision-making as they do about the fairness of the outcome of the decision (Lind and Tyler, 1988). The fact that procedural justice factors were better predictors of patient satisfaction than were distributive justice factors supports this view. However, future research using more comprehensive measures of distributive justice factors should examine the stability and strength of this finding in the health care context.

This preliminary phase in the development and refinement of the HCJI is characterized by considerable promise and some important limitations. First, although we used broad selection criteria for recruiting participants, our sample included more women and relatively few members of ethnic/racial minority groups. This places some limits on the generalizability of

our findings. Future efforts to validate these measures should target a more diverse and representative sample of patients.

Overall, we have taken an initial step toward the development of measures to assess procedural justice in health care contexts involving both patient/provider and patient/health plan decision-making. Our results highlight the importance of pursuing further development of the distributive justice indices, particularly along the dimension of need-based decision-making. This initial phase of the work focused on the prediction of patient satisfaction. Future research should examine the link between justice appraisals and other relevant criteria, including treatment compliance and health status. Moreover, longitudinal research designs will be needed in order to fully assess the determinants and consequences of justice appraisals in the health care context, including long-term physical and mental well-being.

Acknowledgments

Preparation of this manuscript was supported by Department of Veterans Affairs Health Services Research and Development Service Funds and by NIAAA Grant AA12718. We thank Penny Brennan, Ruth Cronkite, Susan Frayne, Keith Humphreys, Sonne Lemke, John McKellar, Jeanne Schaefer, Kathleen Schutte, Christine Timko, and Charisse Williams for their help in identifying and rewording potential items for the Provider and Health Plan versions of the Health Care Justice Inventory. Charisse Williams also assisted with formatting questionnaires and compiling references.

REFERENCES

- Adams JS. Toward an understanding of inequity. *J. Abnormal Social Psychol* 1963;67:422–436.
- Bronfenbrenner, U. *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press; Cambridge, MA: 1979.
- Cross, T. Unpublished under-graduate honors thesis. University of Nebraska; Lincoln: 1997. Health care decision making: A procedural justice approach.
- Deutsch M. Equity, equality, and need: What determines which value will be used as the basis of distributive justice? *J. Social Issues* 1975;31:137–149.
- Deutsch, M. *Distributive Justice: A Social-Psychological Perspective*. Yale University Press; NewHaven,CT: 1985.
- Ende J, Kazis L, Ash A, Moskowitz MA. Measuring patients' desire for autonomy: Decision making and information-seeking preferences among medical patients. *J. General Internal Medicine* 1989;4:23–29.
- Fondacaro MR. Toward a synthesis of law and social science: Due process and procedural justice in the context of national health care reform. *Denver Univ. Law Rev* 1995;72(2):303–358.
- Fondacaro MR, Jackson SL, Luescher J. Toward the assessment of procedural and distributive justice in resolving family disputes. *Social Justice Res* 2002;15:341–371.
- Guyatt GH, Mitchell A, Molloy DW, Capretta R, Horsman J, Griffith L. Measuring patient and relative satisfaction with level or aggressiveness of care and involvement in care decisions in the context of life threatening illness. *J. Clinical Epidemiol* 1995;48(10):1215–1224. [PubMed: 7561983]
- Harris LE, Swindle RW, Mungai SM, Weinberger M, Tierney WM. Measuring patient satisfaction for quality improvement. *Medical Care* 1999;37(12):1207–1213. [PubMed: 10599602]
- Harvey RM, Kazis L, Lee AFS. Decision-making preference and opportunity in VA ambulatory care patients: Association with patient satisfaction. *Res. Nursing & Health* 1999;22:39–48.
- Holmes-Rovner M, Kroll J, Schmitt N, Rovner DR, Breer ML, Rothert ML, Padonu, Talarczyk G. Patient satisfaction with health care decisions: The satisfaction with decision scale. *Medical Decision Making* 1996;16:58–64. [PubMed: 8717600]
- Hughes TE, Larson LN. Patient involvement in health care: A procedural justice viewpoint. *Medical Care* 1991;29(3):297–303. [PubMed: 1997757]
- LaVeist TA, Nickerson KJ, Bowie JV. Attitudes about racism, medical mistrust, and satisfaction with care among African American and White cardiac patients. *Medical Care Res. Rev* 2000;57(1):146–161.

- Leventhal, GS. What should be done with equity theory? New approaches to the study of fairness in social relationships. In: Gergen, K.; Greenberg, M.; Willis, R., editors. *Social Exchange*. Plenum; New York: 1980.
- Lind, EA.; Tyler, TR. *The Social Psychology of Procedural Justice*. Plenum Press; NY: 1988.
- Marshall GN, Morales LS, Elliot M, Spritzer K, Hays RD. Confirmatory factor analysis of the Consumer Assessment of Health Plans Study (CAHPS) 1.0 core survey. *Psychol. Assess* 2001;13(2):216–229. [PubMed: 11433796]
- Martin LR, DiMatteo MR, Lepper HS. Facilitation of patient involvement in care: Development and validation of a scale. *Behav. Med* 2001;27:111–120. [PubMed: 11985184]
- Morales LS, Elliot MN, Weech-Maldonado R, Spritzer KL, Hays RD. Differences in CAHPS adult survey reports and ratings by race and ethnicity: An analysis of the National CAHPS Benchmarking Data 1.0. *Health Services Res* 2001;36(3):595–617.
- Mechanic D. Changing medical organization and the erosion of trust. *Milbank Quart* 1996;74:171–189.
- Mechanic D. Managed care as a target of distrust. *J. Am.Med.Assoc* 1997;277:1810–1811.
- Murphy-Berman V, Cross T, Fondacaro MR. Fairness and health care decision making: Testing the group value model of procedural justice. *Soc. Justice Res* 1999;12(2):117–129. [PubMed: 12564443]
- Nease RF, Brooks WB. Patient desire for information and decision making in health care decisions: The Autonomy Preference Index and the Health Opinion Survey. *J. Gen. Intern. Med* 1995;10:593–600. [PubMed: 8583261]
- Ong LML, De Haes JCJM, Hoos AM, Lammes FB. Doctor-patient communication: A review of the literature. *Soc. Sci. Med* 1995;40:903–918. [PubMed: 7792630]
- Pascoe GC. Patient satisfaction in primary health care: A literature review and analysis. *Eval. Prog. Plan* 1983;6:185–210.
- Pellegrin KL, Stuart GW, Maree B, Frueh BC, Ballenger JC. A brief scale for assessing patients' satisfaction with care in outpatient psychiatric services. *Psychiat. Serv* 2001;52:816–819.
- Peterson CC. Distributive justice within and outside the family. *J. Psychol* 1975;90:123–127.
- Rosenthal M, Schlesinger M. Not afraid to blame: The neglected role of blame attribution in medical consumerism and some implications for health policy. *Milbank Quart* 2002;80:41–95.
- Safran DG. Defining the future of primary care: What can we learn from patients? *Ann. Internal Med* 2003;138:248–255. [PubMed: 12558375]
- Schwinger, T. Just allocation of goods: Decisions among three principles. In: Mikula, G., editor. *Justice and Social Interaction*. Switzerland, Huber, Bern: 1980. p. 95-125.
- Steil JM, Makowski DG. Equity, equality, and need: A study of the patterns and outcomes associated with their use in intimate relationships. *Soc. Justice Res* 1989;3:121–137.
- Thibaut, J.; Walker, L. *Procedural Justice*. Erlbaum; Hillsdale, NJ: 1975.
- Thom DH, Ribisl KM, Stewart AL, Luke DA. Further validation and reliability testing of the Trust in Physician Scale. *Med. Care* 1999;37(5):510–517. [PubMed: 10335753]
- Tornblom, KY. The social psychology of distributive justice. In: Scherer, K., editor. *Justice: Interdisciplinary Perspectives*. Cambridge University Press; Cambridge, MA: 1992. p. 77-236.
- Tyler TR. The psychology of procedural justice: A test of the group-value model. *J. Personality Soc. Psychol* 1989;57(5):830–838.
- Tyler, TR.; Degoe, P. Community, family, and the social good: The psychological dynamics of procedural justice and social identification. In: Melton, GB., editor. *The Individual, the Family, and Social Good: Personal Fulfillment in Times of Change*. Vol. 42. University of Nebraska Press; Lincoln: 1995. p. 53-91.
- Tyler, TR.; Boeckmann, R.; Smith, H.; Huo, Y. *Social Justice in a Diverse Society*. Westview Press; Boulder, CO: 1997.
- Van den Bos, K.; Lind, EA.; Wilke, HAM. The psychology of procedural and distributive justice viewed from the perspective of fairness heuristic theory. In: Cropanzano, R., editor. *Justice in the Workplace: From Theory to Practice*. Vol. 2. Lawrence Erlbaum; Mahwah, NJ: 2001.
- Zheng B, Hall MA, Dugan E, Kidd KE, Levine D. Development of a scale to measure patients' trust in health insurers. *Health Serv. Res* 2002;37(1):188–202.

Table I**Items and Component Loadings for the Three HCJI – Provider Scales**

Scales	Component loadings
<i>Trust-P</i>	
1. You accepted your provider's decision.	.838
2. You felt comfortable with the way your provider handled the situation.	.764
3. You fully agreed with the solutions that you and your provider arrived at.	.757
4. The decision was based on as much good information and informed opinion as possible.	.745
5. Your provider was honest with you.	.676
<i>Impartiality-P</i>	
1. Your provider probably treated you worse than other patients because of your personal characteristics.	.881
2. Your provider was biased against you.	.838
3. Your provider probably gave you less respect than other patients.	.826
4. You were treated as if you didn't matter.	.644
5. Your provider showed little concern for you as an individual.	.656
<i>Participation-P</i>	
1. You had a choice to reject your provider's recommendation.	.868
2. You felt you had personal control over the decision that was made.	.775
3. You could have had the decision reconsidered.	.766
4. You felt you had personal control over how the situation was handled.	.746
5. Your provider asked about your preferences for what should be done.	.601

Table II
Descriptive Statistics for the Procedural Justice Scales of the HCJI – Provider Version

Scale	N	Range	Mean	Std. Dev.	Alpha
Trust-P	154	0–15	10.53	3.90	.93
Impartiality-P	154	0–15	12.37	3.54	.91
Participation-P	154	0–15	9.42	4.28	.91

Table III

Multiple Regression Using Distributive Justice Indices and Procedural Justice Scales (Provider Version) to Predict Satisfaction with Provider

Satisfaction with provider	
Need-P	.27**
Equity-P	-.03
Equality-P	.08
Trust-P	.25**
Impartiality-P	.25**
Participation-P	.15*
Adjusted R^2	.78**

Note. Entries are standardized beta weights.

*
 $p < .05$

**
 $p < .01$.

Table IV**Items and Component Loadings for the Three HCJI – Health Plan Scales**

Scales	Component loadings
<i>Trust-HP</i>	
1. You accepted your health plan representative's decision.	.756
2. You felt comfortable with the way your health plan representative handled the situation.	.781
3. You fully agreed with the solutions that you and your health plan representative arrived at.	.792
4. The decision was based on as much good information and informed opinion as possible.	.732
5. Your health plan representative was honest with you.	.577
<i>Impartiality-HP</i>	
1. Your health plan representative probably treated you worse than other health plan members because of your personal characteristics.	.832
2. Your health plan representative was biased against you.	.759
3. Your health plan representative probably gave you less respect than other health plan members.	.820
4. You were treated as if you didn't matter.	.704
5. Your health plan representative showed little concern for you as an individual.	.634
<i>Participation-HP</i>	
1. You had a choice to reject your health plan representative's recommendation.	.777
2. You felt you had personal control over the decision that was made	.569
3. You could have had the decision reconsidered.	.846
4. You felt you had personal control over how the situation was handled.	.509
5. Your health plan representative asked about your preferences about what should be done.	.549

Table V

Descriptive Statistics for the Procedural Justice Scales of the HCJI - HP (Health Plan Version)

Scale	N	Range	Mean	Std. Dev.	Alpha
Trust-HP	146	0–15	9.04	4.01	.89
Impartiality-HP	144	0–15	11.22	3.67	.86
Participation-HP	144	0–15	6.48	4.23	.87

Table VI

Multiple Regression Analysis using Distributive Justice Indices and Procedural Justice Scales (Health Plan Version) to Predict Satisfaction with Health Plan

Satisfaction with Health Plan	
Need-HP	.17
Equity-HP	-.02
Equality-HP	.05
Trust-HP	.37**
Impartiality-HP	.07
Participation-HP	.07
Adjusted R ²	.38**

Note. Entries are standardized beta weights.

*
 $p < .05$

**
 $p < .01$.