



Interpersonal Aspects Of Justice In Relationships Between Consumers And Service Providers: A Confirmatory Factor Analysis

By: Joseph P. Daly, David R. Williams, Stephen J. O'Connor, and **Richard W. Pouders**

Abstract

There is a controversy in the justice literature as to whether interpersonal aspects of justice are best represented as one construct (interactional justice) or two (interpersonal justice and informational justice). Using confirmatory factor analysis, we tested competing models of these constructs on a sample of healthcare consumers (n = 1919) with respect to their justice judgments of primary care physicians. We found that the single factor model (interactional justice) represented a better fit to the data. Our results do not necessarily contradict those of prior studies that have found a better fit for a bi-dimensional model in organizational settings, however. Instead, we are suggesting a contingency approach: the results may be due in part to the halo effect, which may manifest itself where consumers are unfamiliar with the service provider and with the complexities of that person's role.

Daly, J.P., Williams, D.R., O'Connor, S.J. et al. Soc Just Res (2009) 22: 335. <https://doi.org/10.1007/s11211-009-0093-4>. Publisher version of record available at: <https://link.springer.com/article/10.1007/s11211-009-0093-4>

Interpersonal Aspects of Justice in Relationships Between Consumers and Service Providers: A Confirmatory Factor Analysis

Joseph P. Daly · David R. Williams ·
Stephen J. O'Connor · Richard W. Pouder

Abstract There is a controversy in the justice literature as to whether interpersonal aspects of justice are best represented as one construct (interactional justice) or two (interpersonal justice and informational justice). Using confirmatory factor analysis, we tested competing models of these constructs on a sample of healthcare consumers ($n = 1919$) with respect to their justice judgments of primary care physicians. We found that the single factor model (interactional justice) represented a better fit to the data. Our results do not necessarily contradict those of prior studies that have found a better fit for a bi-dimensional model in organizational settings, however. Instead, we are suggesting a contingency approach: the results may be due in part to the halo effect, which may manifest itself where consumers are unfamiliar with the service provider and with the complexities of that person's role.

Keywords Interactional justice · Interpersonal justice · Informational justice · Social perception

J. P. Daly (✉)
Department of Management, Appalachian State University, P.O. Box 32089, Boone,
NC 28608-2089, USA
e-mail: dalyjp@appstate.edu

D. R. Williams
Health Care Management Program, Appalachian State University, Boone, NC, USA

S. J. O'Connor
Department of Health Services Administration, School of Health Related Professions,
University of Alabama at Birmingham, Birmingham, UK

R. W. Pouder
Department of Management, Appalachian State University, Boone, NC, USA

There is a controversy in the justice literature as to how many forms of justice judgments there are. Distributive justice (the fairness of outcomes received as a result of a decision) was first described by Homans (1961), and was followed nearly 15 years later by research on procedural justice (the fairness of the process used in making a decision) (Thibaut & Walker, 1975). Distributive justice has been shown most strongly to relate to an outcome recipient's satisfaction with those outcomes while procedural justice has been associated primarily with that individual's evaluations of the system and of the decision-maker (see Lind & Tyler, 1988, for a review). Bies and Moag (1986) introduced "interactional justice," defined as the interpersonal treatment people receive as procedures are enacted. Interactional justice includes: (1) the extent to which decision makers treat outcome recipients with politeness, dignity, and respect; and (2) the extent to which the adequacy of information provided to the recipient—including explanations—is seen as fair. The component of interactional justice that deals with interpersonal sensitivity has been shown to relate to a variety of variables, including job performance (Cropanzano, Prehar, & Chen, 2002), trust in supervisor (Aryee, Budhwar, & Chen, 2002), supervisor legitimacy (Masterson, Lewis-McClea, Goldman, & Taylor, 2001), and workplace incivility (Cortina, Magley, Williams, & Langhout, 2001). Many studies of the effects of explanations in the justice context have shown that they are related to a wide variety of responses to justice (see Bies, 2005, for a review).

Greenberg (1993) claimed that a component of interactional justice focusing on interpersonal sensitivity could be isolated as a separate construct called "interpersonal justice." Interpersonal justice can be defined as the extent to which authorities treat outcome recipients with dignity and respect (see Colquitt, 2001). Greenberg (1993) also asserted that the component of interactional justice relating to communication issues formed a separate construct which he labeled "informational justice."

In this study, we use confirmatory factor analyses to compare the two competing models of the relationship between issues of respect and communications with regard to justice. Out of our competing models, one model contains interpersonal and informational justice as correlated but independent factors (consistent with Greenberg, 1993). The second model contains a single construct (consistent with research on interactional justice).

Informational justice is broader in our analysis as compared with other studies. Previous authors have operationalized informational justice in terms of explanations (Colquitt, 2001; Greenberg, 1994). We view it as the perceived adequacy of the information that the authorities provide to outcome recipients about developments that affect them (see Colquitt, 2001). Thus, the preoccupation of earlier research with the importance of explanations does not constrain us from giving the label "informational justice" to the phenomenon we are trying to capture. Bies (2005, p. 97) has called for more research on providing information—beyond explanations—with respect to justice judgments.

This study addresses a number of important issues. It addresses the controversy regarding the number of justice dimensions that is present. It relies on an expanded definition of information-related issues in justice judgments. It addresses also the issues that are important to service providers, particularly physicians. Physicians are

often under pressure of time constraints and need to balance the importance of attending to consumers' notions of respect and informational adequacy with the requirement of keeping costs down and treating many patients (for anecdotal accounts, see "Medical Lesson," 2006). In looking at these forms of justice in the healthcare setting, we will consider the similarities and differences that exist between that setting and hierarchical settings.

Finally, our study examines a dichotomy between task-oriented and person-oriented behaviors. This distinction between "task and person" has received an enormous amount of attention in organizational behavior (Polley, 1987). It is seen in analyses of role structure in groups (Bales, 1955), contingency models of leadership (e.g., Fiedler, 1967; Yukl, 1998, 2006), organization theory (Emery & Trist, 1969; Katz & Kahn, 1978), and in frameworks of organizational culture (Cameron & Quinn, 2000; O'Reilly, Chatman, & Caldwell, 1991). Many studies of leader behavior are predicated on the notion that the two categories of behavior are distinct; however, Yukl (2006) has asserted that some behaviors related to the provision of information are to be considered relationship-oriented rather than task-oriented.

Our setting in this case involves judgments by patients about primary care physicians. Earlier research has been conducted in the services setting (Bowen, Gilliland, & Folger, 1999; Seiders & Berry, 1998) and in medical settings in particular (Fondacaro, Frogner, & Moos, 2005; see also Kulik & Holbrook, 2002). Our focus on consumers in organizational research is not new: Bazerman (2001) and Brief and Bazerman (2003) have called for a greater focus on consumers as subjects of study.

Research Questions

Model 1: Informational and Interpersonal Justice as Two Components

A number of arguments can be advanced in support of Greenberg's (1993) assertion that there are two forms of justice at the interpersonal level, and thus a two-factor model of the data, wherein the factors are correlated, will fit best. Studies have shown that interpersonal and informational justice are distinct components of interactional justice (Colquitt, 2001; Judge & Colquitt, 2004; Kernan & Hanges, 2002), a conclusion that was confirmed by a meta-analysis performed by Colquitt, Conlon, Wesson, Porter, and Ng (2001).

In addition, Sober and Wilson (1998) distinguish instrumental from ultimate goals. Ultimate goals are sought after for their own sake, whereas instrumental goals are viewed as means to a more intrinsically valued end. Similarly, Folger and Cropanzano (2001) distinguish between socio-emotional, as opposed to economic, benefits and costs in justice judgments. Informational justice is likely to be more closely associated with goals that are instrumental and economic in nature, as opposed to interpersonal justice, because information is considered to be an economic resource in models of decision making (see Harrison, 1999; Simon,

1997). In contrast, given that interpersonal justice focuses on such desired end states as dignity and respect, it is more likely to involve the satisfaction of socio-emotional goals, which are, in Sober and Wilson's (1998) parlance, more ultimate in nature. Gillespie and Greenberg (2005) define an ultimate goal as "something we want for its own sake, an end in itself" (p. 188). This is not to say that informational justice is purely economic and instrumental, or that interpersonal justice is purely socio-emotional and focused on ultimate goals. We are merely arguing here that informational justice judgments are likely to have a focus that is relatively more economic and instrumental than will be the case with interpersonal justice judgments. By this argument, we are also asserting that interpersonal justice is likely to be in relative terms more focused on socio-emotional and ultimate goals than informational justice.

Leadership research distinguishes between task- and relationship-oriented leadership. Yukl (1998) classifies giving explanations and information as task-oriented behaviors, and includes among relationship-oriented behaviors: showing acceptance, being polite, and bolstering the other's self esteem.

Although Colquitt (2001) found informational and interpersonal justice to be distinct, he found that the two factors were correlated at $r = .64$. Thus, we expect the two factors to be correlated in our analysis as well.

Given these arguments and the empirical evidence on the subject it is reasonable to suggest that there is a clear distinction between the two proposed fairness types.

Hypothesis 1 In an analysis of measures relating to interpersonal dimensions of justice in relationships between consumers and service providers, two factors will emerge, one describing the provision of information and the other describing interpersonal sensitivity.

Model 2: Arguments for Interactional Justice (One Factor)

Bies and Moag (1986) were not concerned with providing information (beyond social accounts) as a component of interactional justice; however, Bies (2005) calls for more research on the broader conceptualization of information provision used here. With regard to explanations, Lind, Greenberg, Scott, and Welchans (2000) concluded that, when newly unemployed workers were given explanations for their status, they reported that they were treated with more dignity and respect—a finding that points to a closer relationship between informational and interpersonal justice than that suggested by Hypothesis 1. In addition, recall that the rationale for Hypothesis 1 referenced instrumental and non-instrumental aspects of fairness judgments. Here, we are making the case for a competing hypothesis. The first argument is that instrumental and non-instrumental aspects of fairness judgments cannot be separated from one another (Barry & Shapiro, 2000; Shapiro, 2001; Shapiro & Brett, 1993, 2005). The second is that ultimate and instrumental goals do not stand isolated from one another but are situated in a hierarchy of goals (Gillespie & Greenberg, 2005). Ultimate goals are merely broader categories for instrumental goals (e.g., that a physician providing needed information to a patient is engaging in a behavior that is instrumental in communicating respect toward that person). Thus

an ultimate goal is relatively more abstract and an instrumental goal, more concrete. An instrumental goal can, therefore, be seen as an operationalization or subgoal of an ultimate goal.

Colquitt's (2001) and Colquitt et al.'s (2001) view that interactional justice should be regarded as encompassing two factors is by no means universal in the current justice literature. Among the studies that have continued to reference interactional justice as a single construct those by Erdogan, Liden, and Kraimer (2006), George and Zhou (2007), and Luo (2006, 2007).

There is a contextual factor that may be operating. Whereas a two-factor model is likely to hold in the employment context, a one-factor model may be more likely to hold in the context of many relationships among consumers and service providers, particularly those among the latter who are experts (e.g., physicians, accountants, auto mechanics, attorneys). A single-factor solution is often taken as an indication that a halo effect is operating such that raters do not distinguish among different rating categories (Kafry, Jacobs, & Zedeck, 1979; Kraut, 1975). The halo effect occurs where raters' overall judgments about ratees (here, fairness judgments about physicians) influence their ratings on specific attributes (see Murphy, Jako, & Anhalt, 1993). An indication of halo in opinion surveys of patient satisfaction shows that 69% of Americans rate the U.S. healthcare system as fair or poor but, of those who had received physician care in the previous year, 85% rated that care as excellent or good—a pattern that has been found in repeated surveys (Blendon, Brodie, Benson, Altman, & Buhr, 2006).

Halo error is a factor in social perception, the process by which people form impressions of others (Fiske, 1994). We use the term "halo effect" rather than "halo error." It is often treated in human resource management research as a form of error to be reduced as much as possible. Cleveland and Murphy (1992) maintain that halo "error" is often beneficial in that it indicates that the rater is focusing on the most important features of the ratee's behavior and paying less attention to features that are less critical.

Halo and the conditions that give rise to it are evidence of a pattern of cognitive activity, based on the principle of cognitive economy in impression formation. That is, it involves the preservation of cognitive resources when processing information about others (Fiske & Neuberg, 1990). Koslowski and Kirsch (1987) found that when raters were familiar with both the rater and his or her job, the incidence of halo tended to go down while the accuracy of the ratings tended to go up. We are maintaining here that a single factor will best fit the data (a pattern indicative of the halo effect) whereas studies of interpersonal and informational justice in the workplace setting have tended to find a two-factor solution. Interestingly, the employment setting differs from the physician–patient relationship in terms of the same factors identified by Koslowski and Kirsch (1987). Employees typically interact with their managers more often than they interact with their primary care physicians (even in cases of serious illness, where the patient is generally referred to a specialist). In addition, an employee is likely to be more familiar with his/her supervisor's job than would be a healthcare consumer with the physician's job. The latter's role is complex, and a high level of expertise is required to enact it.

To our knowledge, this study is the first to consider justice through the lens of social perception and more specifically the halo effect. The above arguments support an alternative to Hypothesis 1:

Hypothesis 2 In an analysis of measures relating to interpersonal dimensions of justice in relationships between consumers and service providers, one factor will emerge describing both the provision of information and interpersonal sensitivity.

Method

Sample

Opinion Dynamics Corporation gathered the data used in this analysis under a contract with a Midwestern state. The sample includes 1,919 households covered by a health insurance plan through their employer (the state government). Fifty-seven percent of the respondents were female, with a mean age of 48.7. The age range for the patient was from less than 1 up to 93 (where the patient was a minor, the respondent was his/her parent or guardian). The physicians in the sample worked for a variety of organizations and had multiple managed care contracts. The data were gathered in 1997. The controversies surrounding the delivery and financing of healthcare via managed care at that time are still being debated quite vigorously as of this writing (for an example of that discussion, see Morrisey & Ohsfeldt, 2003/2004).

The survey was conducted by telephone, and the survey questions were directed to the household member most familiar with the health care received by all of the household members covered under the insurance plan. There were 34 distinct health care plans—all health maintenance organizations (HMOs). Telephone calls were made randomly as respondents were available and represent 27 of the 34 health plans, with a range of frequency of calls between 63 and 166 calls per health plan. There was no tangible direct reward for participating in the survey. The survey consisted of questions assessing subscribers' judgments regarding primary care physicians, specialists, emergency or urgent care, hospitals, and the health plan itself. The usable response rate was 78.3%.

Measures

The measures used in the study were all original. The physician–consumer context is different from most employment relationships, thus requiring context-specific items, and our operationalization of informational justice is broader than that used by other studies. The following questions were asked within a section of the survey in which the respondent was told that the questions were concerned with their primary care physician.

Informational Issues

The informational items were designed to tap the degree to which primary care physicians provided information to consumers related to issues of treatment and health.

Phone Consult

The question read: “How easy or difficult is it to consult your physician by telephone?” The levels of response for this variable were: 1 = “very difficult;” 2 = “somewhat difficult;” 3 = “somewhat easy;” and 4 = very easy.”

Physician Response

The question read: “How would you rate the responses given to your questions and concerns?” The levels of response for this variable were: 1 = “poor;” 2 = “only fair;” 3 = “good;” and 4 = “excellent.”

Physician Advice

The question read: “How would you rate the advice given on how to avoid illness?” The levels of response for this variable were: 1 = “poor;” 2 = “only fair;” 3 = “good;” and 4 = “excellent.”

Wellness

The question read: “How often has your physician counseled you on wellness issues?” The levels of response for this variable were: 1 = “never;” 2 = “sometimes;” 3 = “frequently;” and 4 = “always.”

Explanations

The question read: “Rate efforts to explain medical treatment.” The levels of response were: 1 = “poor;” 2 = “only fair;” 3 = “good;” and 4 = “excellent.”

Issues Relating to Respect and Dignity

Physician Time

The question read: “How would you rate the quality of time your physician spends with you?” The levels of response for this variable were: 1 = “poor;” 2 = “only fair;” 3 = “good;” and 4 = “excellent.”

Physician Interest

The question read: “Thinking about routine and general medical care received, how would you rate the interest and concern the physician has for your medical problems?” The levels of response for this variable were: 1 = “poor;” 2 = “only fair;” 3 = “good;” and 4 = “excellent.”

Privacy

The question read: “How would you rate the respect and attention to your privacy?” The levels of response for this variable were: 1 = “poor;” 2 = “only fair;” 3 = “good;” and 4 = “excellent.”

Our measures of these judgments are indirect, that is, they reference specific physician behaviors as opposed to attempting to access a global, justice judgment. Colquitt and Shaw (2005) assert that indirect measures are particularly useful when, as in this study, one of the researchers’ objectives is to derive implications for practice. We are introducing new measures for these constructs primarily because we are examining interpersonal aspects of justice in an understudied context, namely the relationships between physicians and healthcare consumers. Colquitt and Shaw (2005) observe that justice is rather context specific. Studies of patient satisfaction focus on specific types of physician behavior, such as the physician’s ability to communicate and listen (Mechanic, 1989) and to reduce patient worries (DiMateo & Hays, 1980).

For illustrations of the hypothesized models, see Fig. 1 (two-factor) and Fig. 2 (one-factor).

We used structural equation modeling to perform our confirmatory factor analyses of the data. Confirmatory factor analysis is useful for testing theories about the existence of factors, as opposed to exploratory factor analysis, which attempts to discover factor structures that are not specified a priori (Nunnally, 1978).

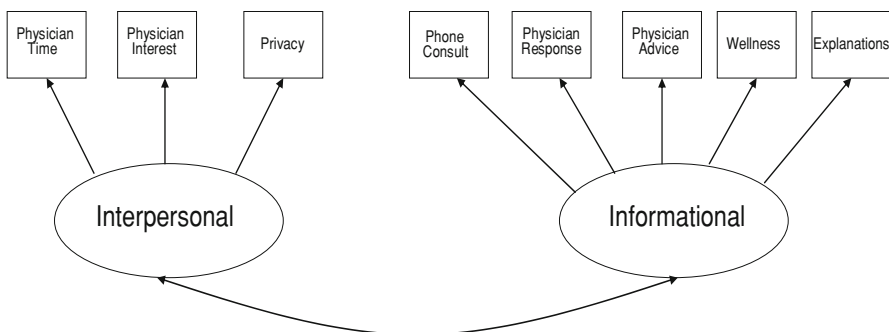


Fig. 1 The two-factor model

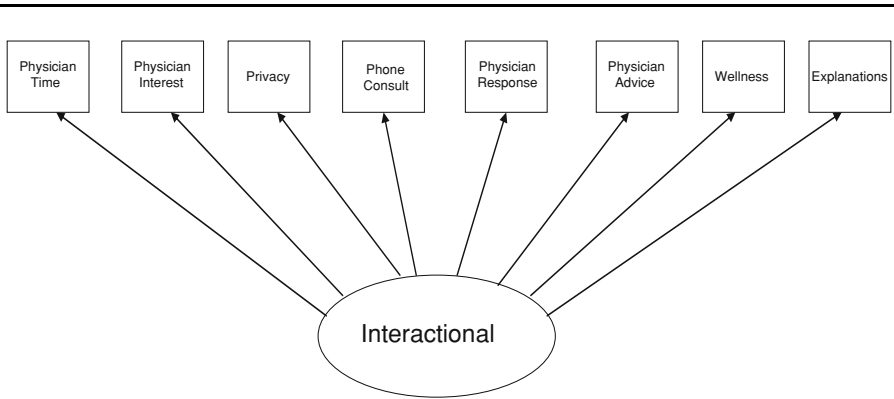


Fig. 2 The one-factor model

Table 1 Descriptive statistics and correlation matrix ($n = 1,901$)

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Physician time	1.17	.243	–							
Physician interest	1.19	.247	.645**	–						
Privacy	1.25	.196	.499**	.609**	–					
Phone consult	1.16	.291	.368**	.352**	.293**	–				
Explanations	1.20	.227	.663**	.667**	.542**	.323**	–			
Physician response	1.20	.222	.648**	.697**	.590**	.357**	.740**	–		
Physician advice	1.11	.326	.464**	.515**	.408**	.285**	.491**	.514**	–	
Wellness	0.93	.409	.287**	.331**	.241**	.175**	.276**	.278**	.420**	–

** Significant at the 0.01 level (2-tailed)

Results

Table 1 lists the correlations, means, and standard deviations among the variables. We found significant positive correlations among all the variables. The respondents' ratings of their physicians were highly positive. Recall that in each case the measures used a four-point scale, ranging from 1 (“poor”) to 4 (“excellent”), with 3 indicating “good.” Across the measures used in the study, the percentage of ratings that were either “good” or “excellent” ranged from 75.2% (for advice on wellness) to 86.4% (for attention to privacy). Thus, the data were log transformed to reduce distribution skew (Newton & Rudestam, 1999).

Of primary concern to confirmatory factor analysis is the extent to which the hypothesized model “fits” or adequately describes the data (Byrne, 1998). The goodness-of-fit measures (Table 2) for the two competing models show Chi-square values (χ^2 (19 df) = 247.498 for the two latent variable model and χ^2 (20 df) = 256.819 for the one latent variable model). Chi-square values are not useful indices of fit in this instance because they are not reliable in very large samples such as the one employed here (Schumacker & Lomax, 1996). The following goodness-of-fit

Table 2 Goodness-of-fit indices ($n = 1,901$)

Goodness-of-fit measures	2 latent variables model	1 latent variable model
Likelihood-ratio χ^2	247.498	256.819
Degrees of freedom	19	20
Goodness-of-fit index (GFI)	.968	.967
Adjusted goodness-of-fit index (AGFI)	.939	.941
Parsimonious normed fit index (PNFI)	.655	.688
Root mean square residual (RMSR)	.004	.004
Root mean square of approximation (RMSEA)	.080	.079
RMSE confidence intervals	.071–.089	.070–.088

indices were obtained for the two models: (1) a goodness-of-fit index (GFI) of .968 for the two latent variables model and a GFI of .967 for the one latent variable model, (2) an adjusted goodness-of-fit index (AGFI) of .939 for the two latent variables model and .941 for the one latent variable model, (3) root mean square residual (RMSR) equal to .004 for both the two and one variable models, and (4) a root mean square of approximation (RMSEA) equal to .080 for the two latent variables model and .079 for the one latent variable model. Together these values indicate acceptable fits of the models to the data.

For the two latent variables model, we found composite reliability for the interpersonal latent variable = .812 and composite reliability for the informational latent variable = .733. The one latent variable model had a composite reliability of .875. In our analysis, the correlation between the two latent variables (see Fig. 1) was .977. This indicates that the two latent variables were representing the same construct (in support of Hypothesis 2). The threshold for aggregation of measures according to Tabachnick and Fidell (2001) is .90 or higher.

The high inter-correlation between the two latent variables, along with the fact that all the variables were measured at the same time and on the same instrument, suggested that a test for common method variance (CMV) should be conducted (Williams, Cote, & Buckley, 1989). We tested for CMV by allowing the items to load on their theoretical constructs, as well as on a latent common measurement factor (see Podsakoff, MacKenzie, Jeong-Yeon, & Podsakoff, 2003). We examined the structural patterns both with and without the latent measurement factor. Our results (not shown) suggest that common methods variance was not a serious problem (and thus, not biasing the results).

The parsimonious normed fit index (PNFI), which measures the closeness of fit given the parsimony of the focal model, improved from .655 for the two-factor model to .688 for the one latent variable model. A χ^2 difference test ($df = 1$) yielded a value of 9.321 ($p < .005$), indicating that the one-factor model represented an improvement in fit over the two-factor one. Given the above, we reject the two latent variables model.

The AMOS output provides a measure of the percent of variance in each observed variable accounted for by the model (see Table 3). Consistent with the

Table 3 Squared multiple correlations ($n = 1,901$)

Variable	2 latent variables model estimate	1 latent variable model estimate
Physician time	.603	.597
Physician interest	.700	.683
Privacy	.474	.465
Phone consult	.180	.181
Explanations	.698	.690
Physician response	.743	.733
Physician advice	.378	.376
Wellness	.140	.140

emphasis given to explanations by prior research on informational issues, the standardized regression weight for the explanations variable was .830, indicating that respondents tended to view giving explanations, along with other information-focused items, as aspects of interactional fairness. In addition results from the squared multiple correlations indicate that two indicators (physician consult and wellness) may not be valid for our construct. According to Long (1984), in confirmatory factor analysis a model can be selected for analysis based on a prior examination of the data. We eliminated these two variables and re-ran the model. Results of the one latent variable model without these two variables indicate that the model fits the data well (RMSEA = .064; GFI = .986; AGFI = .968). The composite reliability for the six indicator model was .855. The RMSEAs went from .079 in the eight indicator model to .064 in the six indicator one. However, the six indicator model does not provide a more parsimonious fit (PNFI = .593).

Discussion

Implications for Theory and Research

On the face of it, our central finding that giving information and interpersonal sensitivity items relate to the same construct contradicts earlier research showing that the two factors are separate (Colquitt, 2001; Judge & Colquitt, 2004; Kernan & Hanges, 2002). However, many researchers have focused on interactional justice as a single construct even after findings indicated that a two-factor solution should be adopted (e.g., George & Zhou, 2007; Luo, 2006, 2007).

We believe that the apparent contradiction between our findings and those which obtained separate factors is primarily due to contextual differences which give rise to the halo effect. Indications of halo in our findings were that a one-factor model best fit the data and that respondents' perceptions of their physicians were highly positive. As noted earlier, opinion polls show that a clear majority of Americans disapprove of the U.S. healthcare system, while a large majority of them view the care they have received from physicians favorably. The halo effect is most likely to

emerge when the rater—here, making a justice judgment—is unfamiliar with both the ratee and his or her job (Koslowski & Kirsch, 1987). Both conditions are likely to hold in the physician–patient relationship. It is less likely that unfamiliarity with the ratee and his or her job will characterize the superior–subordinate relationship, a key difference between the two settings.

In our view, judgments about interpersonal justice and task-versus-relationship behaviors are instances of social perception, that is, judgments about people. We believe that in justice research, much can be gained by viewing judgments regarding an authority’s behavior through the lens of social perception. If the halo effect interpretation of our findings is indeed correct, then the influence of halo on justice-related judgments here is quite robust, given the emergence of halo despite specific descriptions of behaviors in the rating instrument. The use of items that are descriptive of specific behaviors is one strategy for reducing the halo effect (see Dipboye & Gaugler, 1993).

Another contribution relates to the task-versus-relationship distinction that cuts across a wide variety of subdisciplines in organizational research from leadership to organizational theory (for a review, see Daly, Poudier, & Kabanoff, 2004). The question is whether informational justice is a task- or relationship-oriented set of behaviors. Our findings apply to physician behavior and, it is likely, to the behavior of other service providers in relationships with asymmetrical expertise (e.g., auto mechanics, accountants). To the extent that factors like the halo effect are operating in other contexts, scholars in those areas may need to re-think how they classify phenomena. In the leadership context, for example, Yukl (2006) reclassified the communication behavior of giving feedback as a relationship-oriented behavior (compared to Yukl, 1998).

Implications for Practice

A variety of physician behaviors are identified in this study as specific guidelines for physicians to follow if they wish to gain or maintain a reputation as a caring doctor. Medical schools in the past few decades have incorporated “soft skills” training into their curricula. However, such training is not reinforced in the residency process due to the enormous constraints on a resident’s time (“Medical Lesson,” 2006).

Among the conclusions that physicians can draw from the halo interpretation of our findings are that first impressions are very important and that a negative judgment on one type of behavior may be overlooked if other, more salient judgments are positive. An interesting question is whether halo judgments could soften the blow of adverse medical outcomes. Halo error need not be positive, of course. For example, in the case of a negative outcome from a medical decision, an initial, negative judgment about the physician could amplify the individual’s responses to the event.

Limitations and Future Directions of the Research

Our study has methodological limitations in that we did not employ reverse-scored items in our scales. With reverse-scored items, it is possible that the two factors in Model 1 would have shown a higher degree of discriminant validity.

We did not directly measure halo nor did we model its effects. That provides an opportunity for future research. The use of indirect items in our sample may have helped in drawing conclusions for practitioners. However a full-blown test for the degree of halo across both contexts—medical and work related—would likely require the use of global measures to enhance generality. Such a test would involve such global measures, a measure of halo, and measures of familiarity with ratee and with the ratee's role (the two factors discussed above that have been shown to influence halo). The items tapping interpersonal forms of justice in that test would have to be general enough to allow comparisons across both medical- and work-related samples. If items of sufficient generality could be devised, it might be possible to include tests involving other occupations that, as mentioned above, involve asymmetrical expertise.

In order to capture the dynamics of the relationships tested here, the items we used in this study were idiosyncratic and context specific. As mentioned earlier in this article, Colquitt and Shaw (2005) make the observation that justice is itself rather context specific. More use of standard items measuring interpersonal aspects of justice from the organizational justice literature—adapted where possible to service provider settings—would overcome that limitation. Examples of such measures would include those devised by Colquitt (2001).

Conclusion

Our study provides support for a one-factor solution in the debate over the dimensionality of interpersonal aspects of justice. However, we believe that the story does not necessarily end there. The indications we saw of a halo effect are, we believe, a by-product of the physician–patient context. In that respect, the results suggest that the setting likely accounts for the discrepancy between our findings and those of previous studies.

Our study is also unique in that it considered a broader definition of informational issues, encompassing explanations but incorporating more than that. Finally, we have examined the task-versus-relationship orientation in organizational behavior and found that the distinction is blurred in the medical context. That, too, may be a function of the halo effect. Perhaps, the true import of this study lies more in the questions it raises than in the answers it provides.

References

- Aryee, S., Budhwar, P. S., & Chen, Z. X. (2002). Trust as a mediator of the relationship between organizational justice and work outcomes: Test of a social exchange model. *Journal of Organizational Behavior, 23*, 267–286.
- Bales, R. F. (1955). Adaptive and integrative changes as sources of strain in social systems. In E. F. Borgatta & R. F. Bales (Eds.), *Small groups: Studies in social interaction* (pp. 127–131). New York: Knopf.
- Barry, B., & Shapiro, D. L. (2000). When will grievants choose voice? A test of situational, motivational, and attributional explanations. *International Journal of Conflict Management, 11*, 106–134.

-
- Bazerman, M. H. (2001). Consumer research for consumers. *Journal of Consumer Research*, 27, 499–504.
- Bies, R. J. (2005). Are procedural justice and interactional justice conceptually distinct? In J. Greenberg & J. A. Colquitt (Eds.), *Handbook of organizational justice* (pp. 85–112). Mahwah, NJ: Erlbaum.
- Bies, R. J., & Moag, J. S. (1986). Interactional justice: Communication criteria of fairness. In R. Lewicki, B. Sheppard, & M. Bazerman (Eds.), *Research on negotiation in organizations* (pp. 43–55). Greenwich, CT: JAI Press.
- Blendon, R. J., Brodie, M., Benson, J. M., Altman, D. E., & Buhr, T. (2006). Americans' views of health care costs, access, and quality. *Milbank Quarterly*, 84, 623–657.
- Bowen, D. E., Gilliland, S. W., & Folger, R. (1999). HRM and service fairness: How being fair with employees spills over to customers. *Org. Dynamics*, 27, 7–23.
- Brief, A. P., & Bazerman, M. H. (2003). Editor's comments: Bringing in consumers. *Academy of Management Review*, 28, 187–189.
- Byrne, B. M. (1998). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Mahwah, NJ: Erlbaum.
- Cameron, K. S., & Quinn, R. E. (2000). *Diagnosing and changing organizational culture*. Reading, MA: Addison-Wesley.
- Cleveland, J. N., & Murphy, K. R. (1992). Analyzing performance appraisal as goal-directed behavior. In G. Ferris & K. Rowland (Eds.), *Research in personnel and human resource management* (10th ed., pp. 121–185). Greenwich, CT: JAI Press.
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86, 386–400.
- Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86, 425–445.
- Colquitt, J. A., & Shaw, J. C. (2005). How should organizational justice be measured? In J. Greenberg & J. A. Colquitt (Eds.), *Handbook of Organizational Justice* (pp. 113–152). Mahwah, NJ: Erlbaum.
- Cortina, L. M., Magley, V. J., Williams, J. H., & Langhout, R. D. (2001). Incivility in the workplace: Incidence and impact. *Journal of Occupational Health Psychology*, 6, 64–80.
- Cropanzano, R., Prehar, C. A., & Chen, P. Y. (2002). Using social exchange theory to distinguish procedural from interactional justice. *Group Organization Management*, 27, 324–351.
- Daly, J. P., Ponder, R. W., & Kabanoff, B. (2004). The effects of initial differences in firms' espoused values on their postmerger performance. *Journal of Applied Behavioral Science*, 40, 323–343.
- DiMateo, M. R., & Hays, R. (1980). The significance of patients' perceptions of physician conduct: A study of patient satisfaction in a family practice center. *Journal of Community Health*, 6, 18–34.
- Dipboye, R. L., & Gaugler, B. B. (1993). Cognitive and behavioral processes in the selection interview. In N. Schmitt & Walter C. Borman Associates (Eds.), *Personnel selection in organizations* (pp. 135–170). San Francisco: Jossey-Bass.
- Emery, F. E., & Trist, E. L. (1969). Sociotechnical systems. In F. Emery (Ed.), *Systems thinking* (pp. 281–296). New York: Penguin Press.
- Erdogan, B., Liden, R. C., & Kraimer, M. L. (2006). Justice and leader-member exchange: The moderating role of organizational culture. *Academy of Management Journal*, 49, 395–406.
- Fiedler, F. E. (1967). *A theory of leadership effectiveness*. New York: McGraw-Hill.
- Fiske, S. T. (1994). Social cognition and social perception. In L. W. Porter & M. R. Rosenzweig (Eds.), *Annual Review of Psychology*, 44, 115–194.
- Fiske, S. T., & Neuberg, S. L. (1990). A continuum of impression formation, from category-based to individuating processes: Influences of information and motivation on attention and interpretation. *Advances in Experimental Social Psychology*, 23, 1–74.
- Folger, R., & Cropanzano, R. (2001). Fairness theory: Justice as accountability. In J. Greenberg & R. Cropanzano (Eds.), *Advances in organizational justice* (pp. 1–55). Palo Alto, CA: Stanford University Press.
- Fondacaro, M., Frogner, B., & Moos, R. (2005). Justice in health care decision making: Patients' appraisals of health care providers and health plan representatives. *Social Justice Research*, 18, 63–81.
- George, J. M., & Zhou, J. (2007). Dual tuning in a supportive context: Joint contributions of positive mood, negative mood, and supervisory behaviors to employee creativity. *Academy of Management Journal*, 50, 605–622.

-
- Gillespie, J. Z., & Greenberg, J. (2005). Are the goals of organizational justice self-interested? In J. Greenberg & J. Colquitt (Eds.), *Handbook of organizational justice* (pp. 179–213). Mahwah, NJ: Erlbaum.
- Greenberg, J. (1993). The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp. 79–103). Hillsdale, NJ: Erlbaum.
- Greenberg, J. (1994). Using socially fair treatment to promote acceptance of a work site smoking ban. *Journal of Applied Psychology*, 79, 288–297.
- Harrison, E. F. (1999). *The managerial decision-making process* (5th ed.). Boston: Houghton Mifflin.
- Homans, G. C. (1961). *Social behaviour: Its elementary forms*. London: Routledge and Kegan Paul.
- Judge, T. A., & Colquitt, J. A. (2004). Organizational justice and stress: the mediating role of work-family conflict. *Journal of Applied Psychology*, 89, 395–404.
- Kafry, D., Jacobs, R., & Zedeck, S. (1979). Discriminability in multidimensional performance evaluations. *Applied Psychological Measurement*, 3, 187–192.
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizing* (2nd ed.). New York: Wiley.
- Kernan, M. C., & Hanges, P. J. (2002). Survivor reactions to reorganization: Antecedents and consequences of procedural, interpersonal, and informational justice. *Journal of Applied Psychology*, 87, 916–928.
- Koslowski, S. W., & Kirsch, M. P. (1987). The systematic distortion hypothesis, halo, and accuracy: An individual-level analysis. *Journal of Applied Psychology*, 72, 252–261.
- Kraut, A. I. (1975). Prediction of managerial success by peer and training-staff ratings. *Journal of Applied Psychology*, 60, 14–19.
- Kulik, C. T., & Holbrook, R. L., Jr. (2002). Patients and physicians as stakeholders: Justice in the medical context. In S. W. Gilliland, D. D. Steiner, & D. P. Skarlicki (Eds.), *Emerging perspectives in managing organizational justice*. Greenwich, CT: Information Age Publishing.
- Lind, E. A., Greenberg, J., Scott, K. S., & Welchans, T. D. (2000). The winding road from employee to complainant: Situational and psychological determinants of wrongful termination claims. *Administrative Science Quarterly*, 45, 557–590.
- Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York: Plenum.
- Long, J. S. (1984). *Confirmatory factor analysis*. Beverly Hills, CA: Sage Publications.
- Luo, Y. (2006). Toward the micro- and macro-level consequences of interactional justice in cross-cultural joint ventures. *Human Relations*, 59, 1019–1048.
- Luo, Y. (2007). The independent and interactive roles of procedural, distributive, and interactional justice in strategic alliances. *Academy of Management Journal*, 50, 644–664.
- Masterson, S. S., Lewis-McClea, K., Goldman, B. M., & Taylor, M. S. (2001). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, 43, 738–748.
- Mechanic, D. (1989). Consumer choice among health insurance options. *Health Affairs*, 8, 138–148.
- Medical Lesson: Learning to relate to patients. (2006). *All things considered*. Washington, DC: National Public Radio.
- Morrissey, M. A., Ohsfeldt, R. L. (2003/2004). Do “Any Willing Provider” and “Freedom of Choice” laws affect HMO market share? *Inquiry*, 40, 362–375.
- Murphy, K. R., Jako, R. A., & Anhalt, R. L. (1993). Nature and consequences of halo error: A critical analysis. *Journal of Applied Psychology*, 78, 218–225.
- Newton, R. R., & Rudestam, K. E. (1999). *Your statistical consultant: Answers to your data analysis questions*. Thousand Oaks, CA: Sage.
- Nunnally, J. C. (1978). *Psychometric Theory*. New York: McGraw-Hill.
- O’Reilly, C. A., Chatman, J., & Caldwell, D. F. (1991). People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal*, 34, 487–516.
- Podsakoff, P. M., MacKenzie, S. B., Jeong-Yeon, L., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 887–903.
- Polley, R. B. (1987). Exploring polarization in organizational groups. *Group and Organization Studies*, 12, 424–444.
- Schumacker, R. E., & Lomax, R. G. (1996). *A beginner’s guide to structural equation modeling*. Mahwah, NJ: Lawrence Erlbaum Associates.

-
- Seiders, K., & Berry, L. L. (1998). Service fairness: What it is and why it matters. *Academy of Management Executive*, *12*, 8–20.
- Shapiro, D. L. (2001). The death of justice theory is likely if theorists neglect the “wheels” already invented and the voices of the injustice victims. *Journal of Vocational Behavior*, *58*, 235–242.
- Shapiro, D. L., & Brett, J. M. (1993). Comparing three processes underlying judgments of procedural justice: A field study of mediation and arbitration. *Journal of Personality and Social Psychology*, *65*, 1167–1177.
- Shapiro, D. L., & Brett, J. M. (2005). What is the role of control in organizational justice? In J. Greenberg & J. A. Colquitt (Eds.), *Handbook of organizational justice* (pp. 155–177). Mahwah, NJ: Erlbaum.
- Simon, H. A. (1997). *Administrative behavior* (4th ed.). New York: Free Press.
- Sober, E., & Wilson, D. S. (1998). *Unto others: The evolution and psychology of unselfish behavior*. Cambridge, MA: Harvard University Press.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*. Needham Heights, MA: Allyn and Bacon.
- Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Erlbaum.
- Williams, L. J., Cote, J. A., & Buckley, M. R. (1989). Lack of method variance in self-reported affect and perceptions at work: Reality or artifact? *Journal of Applied Psychology*, *74*, 462–468.
- Yukl, G. (1998). *Leadership in organizations* (4th ed.). Upper Saddle River, NJ: Prentice Hall.
- Yukl, G. (2006). *Leadership in organizations* (6th ed.). Upper Saddle River, NJ: Prentice Hall.