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A Diagnostic Method for Procedural Justice

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Procedural justice has shown significant linkages to organizational outcomes such as organizational commitment and turnover. For this reason, we propose that measures of procedural justice can serve a diagnostic function to signal potential problems with important organizational-level outcomes. However, if used alone, it does not tell us which specific procedures require change in order to resolve potential problems. This study proposes, and tests, a methodology which combines general measures of procedural justice with measures of perceptions of specific procedures in order to diagnose problems with organizational outcomes. This is tested in two call centers. The research design employs a survey of randomly selected employees from the call centers. The effects of a general measure of procedural justice on the organizational outcomes of turnover intentions and organizational commitment are examined. Further, we examine the effects of attitudes towards specific monitoring procedures on a general measure of procedural justice. Baron and Kenny's statistical methodology is employed to test these relationships; to show that procedural justice mediates the effect of employee perceptions of monitoring on turnover intentions and organizational commitment. Our findings support complete mediation effects. The implications of these findings are that general perceptions of procedural justice can be used to screen for potential problems with organizational outcomes. If general effects are found, organizations can employ more specific measures of organizational procedures to target procedural problems. The methodology proposed here has the potential to identify specific procedures that organizations can focus on in order to improve organizational outcomes.

Keywords: Procedural justice, turnover intentions, organizational commitment, monitoring, call centers

Introduction

Procedural justice concerns employees' perceptions of the fairness of their organizations' procedures. Procedures are considered fair to the extent that they allow employees to give voice to their positions before a decision is made (Thibault & Walker, 1975); prevent bias; result in consistent outcomes; use accurate information; are correctable after decisions are made; take into consideration the concerns of everyone affected by a decision; and reflect prevailing moral and ethical standards (Leventhal, 1980; Leventhal, et al., 1980).

Procedural justice has shown significant linkages to organizational outcomes such as satisfaction, organizational commitment, and turnover (for a more complete discussion of the effects of procedural justice see the meta analyses by Cohen-Charash & Spector, 2001 and Colquitt, Conlon, Wesson Porter & Ng, 2001). In this paper, we argue that measures of procedural justice can serve a diagnostic function to signal potential problems with important organizational-level outcomes. For example, the call centers in this study were experiencing high levels of turnover, which was expensive due to the costs associated with training new employees. A significant relationship between procedural justice and turnover intentions would imply that changes to an organization's procedures should affect turnover. In this sense procedural justice can be used to diagnose potential problems with turnover. However, it does not tell us which specific procedures require change in order to resolve potential problems.

For diagnostic purposes we recommend the use of both general and specific measures of perceptions of organizational procedures. A general measure of procedural justice can be used to detect whether or not there are perceived relations between an employees' perceptions of the justice of organizational procedures and organizational outcomes. If a general effect of perceptions of procedural justice on organizational outcomes is detected then more specific measures of an organization's procedures can be used to determine which procedures are affecting the outcomes. We base this on the logic that perceptions of specific procedures, or attitudes towards those procedures, should serve as antecedents to more general

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perceptions of procedural justice. For example, in this study we show that general perceptions of procedural justice have a significant effect on employees' turnover intentions and on organizational commitment. However, in order to make changes to their procedures, organizations need to determine which specific procedures are affecting these outcomes. To achieve this, we examined specific measures of employee perceptions of their monitoring procedures.

Measurement of Procedural Justice

There has been a tension between the need for general versus specific measures throughout the evolution of the procedural justice construct. Earlier measures of procedural justice tended to measure specific organizational procedures. For example, Konovsky and Folger (1991) developed a scale to measure the procedural fairness of layoff decisions. While the number of items that would be considered measures of procedural justice has changed since this study those that would correspond most closely with current definitions are: i) Followed consistent standards in deciding which employees to lay off. ii) Collected accurate information necessary for making layoff decisions. iii) Treated employees equally regardless of race, age, sex, or nationality, iv). Showed concern for your rights (Konovsky & Folger, 1991, p. 635).

McEnrue (1989) developed a scale to measure the procedural justice of promotional decisions. Six items were developed and the paper gave the following as examples: i) Promotion decisions are made fairly here. ii) -The promotion system in this organization is actually pretty unfair. iii) -Established policies about promotion are fair. (McEnrue, 1989, p. 819).

Others have developed specific measures of the procedural fairness of performance appraisals (Erdogan, Kraimer & Liden, 2001; Greenberg, 1986; Taylor, Tracy, Renard, Renard, Harrison, & Caroll, 1995), salary determinations (Cloutier & Vilhuber, 2008), benefits (Lee, Singhapakdi, & Too, L., 2008; Cole, & Flint, 2004), employee discipline (Cole & Latham, 1997), drug testing (Cropanzano & Konovsky, 1995; Wagner & Moriarty, 2002), layoffs (Kernan & Hanges, 2002; Konovsky & Folger, 1991), and mergers (Lipponen, Olkkonen, & Moilanen, 2004). There are two problems with the development of specific measures of procedural justice. First, specific measures in each study make it difficult to compare the effects of procedural justice across studies. Second, testing the procedural justice of only one type of procedure may ignore problems with other procedures in an organization that may need to be addressed.

Another measurement problem in the procedural justice field was the overlap of procedural justice scales with other types of justice (see Greenberg, 1990 and 1993 for a detailed discussion of this issue), most notably interpersonal justice, which measures perceptions of the fairness of employees' interactions with their supervisors. This led Greenberg (1990, p. 423) to call for the development of "a conceptually meaningful scale." Colquitt (2001) has perhaps provided the best solution to the problem of the overlap in the measurement of justice constructs with the development of distinctive scales to measure procedural, distributive, interpersonal and informational justice. This scale to measure procedural justice developed by Colquitt (2001) is shown inTable 1.

Table 1. Colquitt's procedural justice scale.

	Colquitt's procedural justice scale
	The following items refer to the procedures used to arrive at your (outcome). To what extent:
1.	Have you been able to express your views and feelings during those procedures?
2.	Have you had influence over the (outcome) arrived at by those procedures?
3.	Have the procedures been applied consistently?
4.	Have those procedures been free of bias?
5.	Have those procedures been based on accurate information?
6.	Have you been able to appeal the (outcome) arrived at by those procedures?
7.	Have those procedures upheld ethical and moral standards?

Source: Colquitt (2001, p. 389)

While this type of scale addresses the overlap of the justice constructs, it still leaves open the problem of procedural justice scale specificity; in Colquitt's (2001, p. 388) words the items in the scale "can be tailored to specific contexts by altering the parenthetical parts of the items." This adjustment of the scale across the studies makes comparison of procedural justice and its effects problematic and may focus on the procedural justice of certain procedures to the exclusion of other relevant procedures. To address this we have developed a more general measure of procedural justice by modifying Colquitt's (2001) scale as shown in Table 2.

Table 2. A general measure of procedural justice.

	In my work setting…
1.	I am able to express my views and feelings about my organization's procedures.
2.	I have influence over the assessments made as a result of my organization's procedures.
3.	The procedures used in my organization have been applied consistently.
4.	The procedures used in my organization are free of bias.
5.	The procedures used in my organization are based on accurate information.
6.	I am able to appeal the assessments made by procedures used in my organization.
7.	The procedures used in my organization uphold ethical and moral standards.

A Diagnostic Method of Procedural Justice

If the more general measure of procedural justice shown in Table 2 shows a significant effect on relevant organizational outcomes the next question becomes: Which specific procedures are affecting employees' perceptions of procedural justice? This requires consultation with organizational members to determine which procedures might be relevant. For example, in this study we asked employees and managers of participating call centers which types of procedures were of the most concern to them. Both managers and employees told us that these were the monitoring procedures employed by their organizations. A determination of the specific problems of monitoring procedures required the application of a specific scale to measure employee perceptions of monitoring procedures.

To choose a specific procedural measure to which this diagnostic method could be applied, we suggest that the following four criteria must be met:

-The scale should measure perceptions or attitudes pertaining to specific procedures.

-The scale should be distinct from global measures of procedural justice.

-The scale, as a specific procedural measure, should contribute to general perceptions of procedural justice.

-The effects of the perceptions of specific procedures on organizational outcomes should be mediated by perceptions of general procedural justice.

We refer to this as the diagnostic method of procedural justice. To illustrate this method we apply a measure of employee perceptions of monitoring procedures in call centers.

Monitoring Procedures

It has been suggested that monitoring can have both positive and negative organizational consequences. Positive outcomes include improved supervision (Komaki, 1986), increased work productivity (Adler, 2001), better security (Oz, Glass & Behling, 1999), improved health and safety (Kierkegaard, 2005) and cost reduction (Adler, 2001). Negative outcomes associated with monitoring include: decreased employee satisfaction (Greengard, 1996; Piturro, 1989; Schleifer, Galinsky & Pan, 1995), higher stress levels (Aiello & Kolb, 1995; Carayon, 1993, 1994), increased fatigue (Henderson, Mahar, Saliba, Deane & Napier, 1998), emotional exhaustion (Wilk & Moynihan, 2005) and increased chronic health problems (Smith, Carayon, Sanders, Lim, & LeGrande, 1992). Therefore, organizations need to identify monitoring procedures that will increase positive effects while mitigating the negative outcomes.

There are a number of different types of monitoring procedures and these can be roughly categorized as either quantitative or qualitative in nature. Quantitative monitoring procedures include: measuring the time between calls (King, 2003); the number of calls put on hold (King, 2003); and the length of calls (Micaik & Desmarais, 2001). Qualitatively, attempts have been made to monitor employee-customer interactions by listening in directly to, or recording, employee-customer conversations in order to evaluate quality of those exchanges (Bain,Watson, Mulvey, Taylor, & Hall, 2002). We contend that employee perceptions of these monitoring procedures should affect their more global perceptions of procedural justice.

Our study includes both qualitative and quantitative measures of monitoring. Two qualitative measures are: the evaluation of employees' calls by supervisors within the organization; and the evaluation of calls by an external rating agency. The quantitative measure is time employees take between calls. These particular measures were chosen because they fell within the current monitoring practices employed by the organizations in our study.

In order to determine if the measure of monitoring procedures that we employ here reflects a distinct procedural measure we apply the diagnostic method of procedural justice with the following hypotheses:

Hypothesis 1: The scale measures perceptions or attitudes pertaining to monitoring procedures.

Hypothesis 2: The monitoring procedure scale is distinct from the global measure of procedural justice.

Hypothesis 3: The monitoring procedure scale contributes to the general perceptions of procedural justice.
Hypothesis 4: The effects of the perceptions of monitoring procedures are mediated by the general perceptions of procedural justice on turnover intentions (Hypothesis 4a) and on organizational commitment (Hypothesis 4b).

Hypothesis 4 has two parts as we test the mediation effects on two separate outcome variables: turnover intentions, and organizational commitment.
Two studies are conducted to examine the diagnostic method of procedural justice. In these studies the effects of monitoring procedures and procedural justice on the organizational outcomes of turnover intentions and organizational commitment are examined. In the first study data was collected from an in-bound call centre; in the second study data was collected from an outbound call center.

STUDY 1

Methods

Participants

A survey was directed to agents at an in-bound call center where employees handle calls from customers. They book services and deal with customer problems with service delivery. The organization had 428 agents at the time of this survey. Participants in the study were chosen at random. The call center had an existing program for conducting surveys that was used to randomly select employees. Of the 80 employees chosen to participate two were unavailable at the time of the study.

Measures

Independent Variables: The procedural justice variable was measured with items adapted from Colquitt (2001) and contains seven items (see Table 2). While these items measure employee perceptions of procedural justice they are not specific enough to identify which of the organization's procedures are contributing to those perceptions. Therefore, we employed this scale as a global measure of procedural justice because of its well-established linkages to organizational outcomes such as turnover and organizational commitment.

In order to determine which procedures were the most salient to the organization, we conducted interviews with service representatives and their managers. Both groups overwhelmingly identified monitoring procedures as most relevant to them. In this organization two types of monitoring procedures were routinely conducted: monitoring of conversations between service representatives and customers done in house by supervisors; and monitoring of conversations by an external rating agency. We adapted the scales developed by Flint, Haley and McNally (2008) to measure specific perceptions of different monitoring procedures. One scale measures the effects of monitoring conversations done in-house by supervisors (see Table 3), and the other scale measures monitoring conducted by an external rating agency (see Table 4).

Table 3. Items to measure monitoring of conversations by supervisors.

IM1	My organization's monitoring my conversations with customers is effective.
IM2	My organization's monitoring my conversations with customers provides good feedback.
IM3	My organization's monitoring my conversations with customers makes me feel good about my job.
IM4	My organization's monitoring my conversations with customers makes me feel secure about my job.

Adapted from: Flint, Haley and McNally (2008)

Table 4. Items to measure monitoring of conversations by an external rating agency.

	External Monitoring of Conversations
EM1	The outside organization's monitoring my conversations with customers is effective.
EM2	The outside organization's monitoring my conversations with customers provides good feedback.
EM3	The outside organization's monitoring my conversations with customers makes me feel good about my job.
EM4	The outside organization's monitoring my conversations with customers makes me feel secure about my job.

Adapted from: Flint, Haley and McNally (2008).

Dependent Variables. The two items measuring turnover intentions, adapted from Konovsky and Cropanzano (1991), are: "It is likely that I will actively look for a new job in the next year"; and "I often think about quitting." The organizational commitment scale consists of the six affective commitment items developed by Meyer, Allen and Smith (1993).

Demographic Variables. Demographic variables measured in this study are gender, age, and time with the organization (organizational tenure).

Results

Table 5 shows means, standard deviations, and the correlations between procedural justice, internal monitoring procedures, external monitoring procedures, turnover intentions, organizational commitment, and the demographic variables. Cronbach's alphas are shown on the diagonal. There were several significant differences in the demographics between our two studies (see Table 6). In this study there were significantly more women (t = 4.36, p < .001); employees were significantly older (t = 3.79, p < .001); and had been with the organization significantly longer (t = 5.05, p < .001) than the employees in Study 2. The means and standard deviations of the demographic variables from both studies are shown in Table 6. Due to the significant differences across the organizations in gender, age, and time with the organization, these variables were controlled for in the regression analyses that follow. Control of the demographic variables was accomplished by entering them in the first step of the regressions and entering the monitoring and/or procedural justice variables in a second step.

Table 5. Means, standard deviations, correlations and reliabilities for inbound call center.

	Mean	SD	1	2	3	4	5	6	7	8
1.Procedural justice	5.03	1.15	.89							
2.Monitoring conversations internally	4.90	1.44	.39**	.90						
3.Monitoring conversations externally	4.43	1.57	.39**	.80***	.93					
4.Turnover intentions	3.84	2.17	-.43***	-.26*	-.26*	.89				
5.Organizational commitment	4.17	1.61	.66***	.51***	.47***	-.72***	.90			
6.Gender	1.77	0.43	-.01	.07	-.02	.06	-.05	--		
7.Age	30.79	10.86	.04	.15	.15	-.20	.21	.07	--	
8.Organization tenure (months)	22.37	20.18	.08	.06	.09	-.10	.07	-.10	.18	--

*p < .05, **p <.01, ***p < .001, Cronbach's alphas on the diagonal

Table 6. Mean values for the inbound (study 1) and outbound (study 2) call centers.

	Inbound Call Center		Outbound Call Center		*T*
	Mean	SD	Mean	SD	
Procedural Justice	5.03	1.15	3.53	1.43	8.11***
Turnover Intentions	3.84	2.17	5.50	1.61	5.64***
Organizational Commitment	4.17	1.61	2.78	1.09	6.61***
Gender (1 = Male, 2 = female)	1.77	0.43	1.45	0.50	4.36***
Age (years)	30.8	10.9	25.0	8.5	3.79***
Time with organization (months)	22.4	20.2	10.4	8.7	5.05***

***p < .001

We suggest, in support of hypothesis 1, that on their face, both of the monitoring scales measure perceptions of specific types of monitoring procedures. Hypothesis 2 states that the monitoring scales should be distinct from the global measure of procedural justice. To test this, a factor analysis was performed on the procedural justice and monitoring procedure scales (see Table 7). Two factors with eigenvalues greater than 1 emerged. The procedural justice items loaded on one factor and the internal and external monitoring procedure scales loaded together on a separate factor. This finding suggests that the procedural justice and monitoring procedure scales are distinct but employees did not distinguish between their perceptions of internal and external monitoring procedures. As a result the two monitoring scales were aggregated for use in the rest of the analysis.

Table 7. Factor analysis of procedural justice and monitoring items for inbound call center.

	Component	
	1	2
Procedural Justice	.321	*.750*
Procedural Justice	.197	*.756*
Procedural Justice	.186	*.697*
Procedural Justice	.108	*.857*
Procedural Justice	.105	*.698*
Procedural Justice	.200	*.743*
Procedural Justice	.040	*.769*
Internal Monitoring of Conversations	*.742*	.321
Internal Monitoring of Conversations	*.778*	.197
Internal Monitoring of Conversations	*.882*	.082
Internal Monitoring of Conversations	*.786*	.208
External Monitoring of Conversations	*.793*	.127
External Monitoring of Conversations	*.783*	.267
External Monitoring of Conversations	*.913*	.023
External Monitoring of Conversations	*.894*	.212

Rotation Method: Varimax with Kaiser Normalization.

To test hypotheses 3 and 4 two mediation effects were measured. Baron and Kenny's (1986) methodology was used to test the mediation effects (see Figure 1). Age gender and time employed by the organization were entered as control variables in the first step of the following regression equations. To test for the full mediation of procedural justice on the relationship between monitoring procedures and turnover intentions three criteria must be satisfied. First, with regard to the third hypothesis, the regression of monitoring procedures on procedural justice must be significant (path a). Second, a separate regression of monitoring procedures on turnover intentions must also be significant (path c). Third, for full mediation, with regard to hypothesis 4, when the monitoring and procedural justice variables are entered simultaneously into a regression equation, the relationship between procedural justice and turnover intentions (path b) must show a significant effect and the relationship between the monitoring variable and turnover intentions (path c') should not be significant.

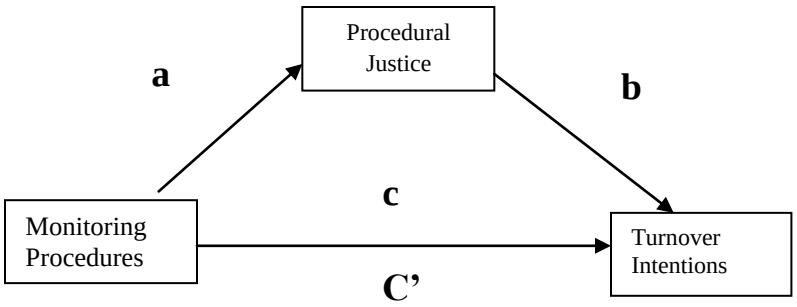

Figure 1. Mediation of the effects of perceptions of monitoring procedures on turnover intentions by procedural justice

Table 8 shows the regression analyses for the mediation effects of procedural justice. Applying Baron and Kenny's (1986) methodology perceptions of monitoring procedures show a significant effect on procedural justice (path a: β = .45, p = .001). This supports hypothesis 3. For the second criterion, perceptions of monitoring procedures have a significant effect on turnover intentions (path c: β = -.26, p = .033). For the third criterion, monitoring and procedural justice were entered simultaneously into the regression equation. The monitoring effect became insignificant (path c': β < .01, p = .987) and procedural justice showed a significant effect on turnover intentions (path b: β = -.36, p =.008). This pattern of results is consistent with a complete mediation effect of procedural justice on the relationship between monitoring and turnover intentions and provides support for hypothesis 4a.

Table 8. Mediation effects of procedural justice on the relationship between perceptions of monitoring procedures and turnover intentions controlling for demographics in an inbound call center.

	Independent variables	Dependent			
Path			Beta	df	Sig.
a	Monitoring Procedures	Procedural Justice	.45	4/58	.001
c	Monitoring Procedures	Turnover Intentions	-.26	4/64	.033
c'	Monitoring[a] Procedures	Turnover Intentions	<-.01	5/57	.987
b	Procedural Justice[a]		-.36		.008

[a]Monitoring and Procedural Justice variables entered simultaneously into regression equation

Figure 2 shows the model for the mediation effects of procedural justice on the relationship between perceptions of monitoring procedures and organizational commitment. Table 9 shows the regression analysis for the mediation effect. Applying Baron and Kenny's (1986) methodology perceptions of monitoring procedures show a significant effect on procedural justice (path a: β = .45, p = .001). This supports hypothesis 3. For the second criterion, perceptions of monitoring procedures have a significant effect on organizational commitment (path c: β = .51, p < .001). For the third criterion, monitoring and procedural justice were entered simultaneously into the regression equation. The monitoring effect became insignificant (path c': β = .17, p = .121) and procedural justice showed a significant effect on organizational commitment (path b: β = .56 p < .001). This pattern of results is consistent with a complete mediation effect of procedural justice on the relationship between monitoring and organizational commitment and provides support for hypothesis 4b.

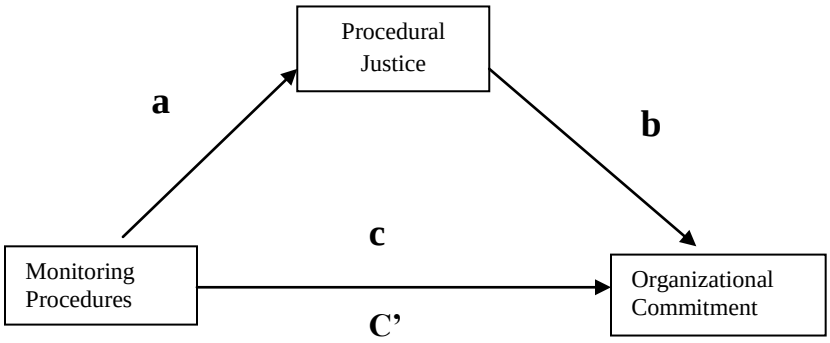

Figure 2. Mediation of the effects of perceptions of monitoring procedures on organizational commitment by procedural justice.

Table 9. Mediation effects of procedural justice on the relationship between perceptions of monitoring procedures and organizational commitment controlling for demographics in an inbound call center.

	Independent variables	Dependent			
Path			Beta	df	Sig.
a	Monitoring Procedures	Procedural Justice	.45	4/58	.001
c	Monitoring Procedures	Organizational Commitment	.51	4/64	<.001
c'	Monitoring[a] Procedures	Organizational Commitment	.17	5/57	.121
b	Procedural Justice [a]		.56		<.001

[a]Monitoring and Procedural Justice variables entered simultaneously into regression equation.

Discussion

The purpose of this study was to demonstrate the applicability of the diagnostic method of procedural justice. To this end we tested the four criteria of the diagnostic method. In support of the first criterion we applied a scale that measured employee perceptions of specific procedures. Employees of this organization identified monitoring procedures as relevant to them. We used a scale to measure the perceptions of monitoring routinely carried out by the organization: monitoring of phone conversations by supervisors; and monitoring of phone conversations by an external agency.

In support of the second criterion we derived a general measure of procedural justice from the work of

Colquitt (2001). Using factor analysis we showed that the measure of perceptions of monitoring procedures were distinct from those of the more general measure of procedural justice. In support of the third criterion we showed a significant relationship between the perception of the monitoring procedures and the more general perceptions of procedural justice.

For the fourth criterion of the diagnostic method of procedural justice we tested the mediation effects of procedural justice on effects of the perceptions of monitoring procedures on the two organizational outcomes of turnover intentions and organizational commitment. Our findings show support for both mediation effects suggesting that perceptions of specific procedures of monitoring contribute to the more general perceptions of procedural justice which, in turn, affect both turnover intentions and organizational commitment. These results suggest that it is possible to develop a measure of perceptions, relating to specific procedures, that is distinct from, yet related to, a more general measure of procedural justice.

STUDY 2

Methods

Participants

In this study a survey was directed to agents at an outbound call center. The agents telemarket long-distance telephone plans. The organization employed 312 agents at the time of this study. Participants from this call center were chosen at random using an existing in-house survey program. Of the 90 employees chosen to participate one was unavailable at the time of the study.

Measures

Independent variables. Procedural justice was measured by the same scales employed in Study 1. Focus groups were also conducted, with service representatives and their managers, in this organization to determine which procedures were the most relevant. As with the first study monitoring procedures were also identified as the most important to them. In this organization two types of monitoring procedures were routinely conducted: Monitoring of conversations between service representatives and customers done in house by supervisors; and the monitoring of the time taken by service representatives between calls. The same scale that was used in the first study to measure the effects of monitoring conversations by supervisors was also used here (see Table 3), another scale adapted from Flint et al. (2008) was used to measure perceptions of the monitoring of the time spent between conversations (see Table 10).

Table 10. Monitoring time spent between conversations scale.

MT1	Monitoring the time between my calls is effective.
MT2	Monitoring the time between my calls provides good feedback.
MT3	Monitoring the time between my calls makes me feel good about my job.
MT4	Monitoring the time between my calls makes me feel secure about my job.

Adapted from: Flint, Haley & McNally (2008)

Dependent Variables. Turnover intentions and organizational commitment were measured by the same scales used in Study 1.

Demographic Variables. The demographic variables were determined with the same measures employed in Study 1.

Results

Table 11 shows means, standard deviations, and the correlations between procedural justice, perceptions of internal monitoring procedures, perceptions of the monitoring of the time spent between calls, turnover intentions, organizational commitment, and the demographic variables. Cronbach's alphas are shown on the diagonal. Due to the differences in the demographic variables between the organization in this study and the one in study 1 (see Table 6), gender, age, and time with the organization were controlled for in the regression analyses that follow by entering them in the first step of the regressions and entering the monitoring and/or procedural justice variables in a second step.

Table 11. Means, standard deviations, correlations and reliabilities for the outbound call center.

	Mean	SD	1	2	3	4	5	6	7	8
1.Procedural Justice	3.52	1.43	.86							
2.Monitoring Conversations	3.90	1.57	.43***	.88						
3.Monitoring Time between Calls	3.16	1.70	.42***	.69***	.93					
4.Turnover Intentions	5.40	1.41	-.25**	-.19	-	.67				
5.Organizational Commitment	2.77	1.09	.29**	.20	.20	-.32**	.73			
6.Gender	1.44	0.50	-.23*	.08	.07	-.08	-.15	--		
7.Age	25.00	8.46	-.28*	-.17	-.18	.04	.18	.13	--	
8.Organization Tenure (months)	10.36	8.74	-.25*	-.07	.01	-.001	.18	-.02	.36**	-

*p < .05, **p <.01, ***p < .001, Cronbach's alphas on the diagonal

We suggest, in support of hypothesis 1, that on their face, both of the monitoring scales measure specific types of monitoring procedures. Hypothesis 2 states that the monitoring scales should be distinct from the global measure of procedural justice. To test this a factor analysis was performed on the procedural justice and monitoring procedure scales (see Table 12). Two factors with eigenvalues greater than 1 emerged. The procedural justice items loaded on one factor and items measuring the perceptions of the monitoring of calls by a supervisor and the items measuring the perceptions of the monitoring of time spent between calls loaded together on a separate factor. This finding suggests that the procedural justice and monitoring procedure scales are distinct, in support of hypothesis 2, but employees did not distinguish between their perceptions monitoring calls by a supervisor and monitoring of time spent between calls. As a result the two monitoring scales were aggregated for use in the rest of the analysis.

Table 12. Factor analysis of procedural justice and monitoring procedures.

	Component	
	1	2
Procedural Justice	.255	*.722*
Procedural Justice	.264	*.670*
Procedural Justice	.239	*.797*
Procedural Justice	.172	*.750*
Procedural Justice	.191	*.785*
Procedural Justice	.196	*.663*
Procedural Justice	.013	*.774*
Internal Monitoring of Conversations	*.671*	.164
Internal Monitoring of Conversations	*.714*	.146
Internal Monitoring of Conversations	*.856*	.199
Internal Monitoring of Conversations	*.768*	.221
Monitoring Time between Conversations	*.760*	.196
Monitoring Time between Conversations	*.870*	.187
Monitoring Time between Conversations	*.856*	.217
Monitoring Time between Conversations	*.806*	.213

Rotation Method: Varimax with Kaiser Normalization.

Table 13 shows the regression analyses for the mediation effects of procedural justice on the relationship between perceptions of monitoring and turnover intentions. The demographic variables gender, age and time worked for the organization were controlled in the first step of the following regressions. Applying Baron and Kenny's (1986) methodology perceptions of monitoring procedures show a significant effect on procedural justice (path a: β = .39, p < .001). This supports hypothesis 3. For the second criterion, perceptions of monitoring procedures have a significant effect on turnover intentions (path c: β = -.33, p = .004). For the third criterion, monitoring and procedural justice were entered simultaneously into the regression equation. The monitoring effect is reduced to insignificance (path c': β = -.14, p = .280) and procedural justice showed a significant effect on turnover intentions (path b: β = -.25, p =.058). This pattern of results is consistent with the complete mediation effect of procedural justice on the relationship between monitoring and turnover intentions and provides support for hypothesis 4a.

Table 13. Mediation effects of procedural justice on the relationship between perceptions of monitoring procedures and turnover intentions controlling for demographics in an outbound call center.

	Independent variables	Dependent			
Path			Beta	df	Sig.
a	Monitoring Procedures	Procedural Justice	.39	4/75	<.001
c	Monitoring Procedures	Turnover Intentions	-.33	4/77	.004
c'	Monitoring Procedures [a]	Turnover Intentions	-.14	5/74	.280
b	Procedural Justice [a]		-.25		.058

[a]Monitoring and Procedural Justice variables entered simultaneously into regression equation

Table 14 shows the regression analysis for the mediation effects of procedural justice on the relationship between perceptions of monitoring procedures and organizational commitment. Applying Baron and Kenny's (1986) methodology perceptions of monitoring procedures show a significant effect on procedural justice (path a: β = .39, p < .001). This provides further support for hypothesis 3. For the second criterion, perceptions of monitoring procedures have a significant effect on organizational commitment (path c: β = .22, p = .047). For the third criterion, monitoring and procedural justice were entered simultaneously into the regression equation. The monitoring effect became insignificant (path c': β = .09, p = .474) and procedural justice showed a significant effect on organizational commitment (path b: β = .26 p < .048). This pattern of results is consistent with a complete mediation effect of procedural justice on the relationship between monitoring and organizational commitment and provides support for hypothesis 4b.

Table 14. Mediation effects of procedural justice on the relationship between perceptions of monitoring procedures and organizational commitment controlling for demographics in an outbound call center.

	Independent variables	Dependent			
Path			Beta	df	Sig.
a	Monitoring Procedures	Procedural Justice	.39	4/75	<.001
c	Monitoring Procedures	Organizational Commitment	.22	4/79	.047
c'	Monitoring Procedures [a]	Organizational Commitment	.09	5/74	.474
b	Procedural Justice [a]		.26		.048

[a]Monitoring and Procedural Justice variables entered simultaneously into regression equation

Discussion

In this second study, we provide a limited generalization of the application of the diagnostic method of procedural justice. In support of the first criterion we developed a slightly different measure of the perceptions of monitoring procedures. Like that of the first study the organization in this study also monitored conversations of service representatives by supervisors. Different from the organization in Study 1 this organization also monitored the time service representatives spent between customer calls. In support of the first criterion we developed a scale that measured the perceptions of these two types of monitoring. In support of the second criterion we used factor analysis to demonstrate that the measure of the perceptions of monitoring were distinct from those of the more general measures of procedural justice. In support of the third criterion we showed a significant relationship between perceptions of the specific monitoring procedures and the more general perceptions of procedural justice.

To examine the fourth criterion we tested the mediation of procedural justice on the relationship between perceptions of the monitoring procedures and the outcomes of turnover intentions and organizational commitment. The findings in this study replicate those of the first study and show support for both mediation effects.

General Discussion

In this paper we propose the use of procedural justice to diagnose potential problems with organizational outcomes. This methodology recommends the use of a general measure of employee perceptions of the fairness of organizational procedures and measures of perceptions of specific procedures. The general

measure is used to determine if there are significant relationships between employees' perceptions of the justice of an organization's procedures and organizational outcomes. If a general relationship is detected our methodology recommends the determination of specific procedures contributing to the perception of procedural justice. Identification of specific procedures should allow organizations to target those procedures in order to improve organizational outcomes. We proposed four criteria that we deemed necessary for the determination of specific measures of procedural justice which are: i)The scale should measure specific procedures. ii) The scale should be distinct from global measures of procedural justice. iii) The scale, as a specific procedural measure, should contribute to general perceptions of procedural justice. iv) The effects of the perceptions of specific procedures on organizational outcomes should be mediated by perceptions of general procedural justice.

In order to test our proposed methodology we applied a general measure of procedural justice and a specific measure of employee perceptions of monitoring procedures. Monitoring procedures were identified as important procedures by consultation with employees in both call centers. We then showed that: i) The scale measures specific monitoring procedures. ii) The monitoring scale is distinct from global measures of procedural justice. iii) The monitoring scale contributes to general perceptions of procedural justice. iv) The effects of the perceptions of monitoring procedures on turnover intentions and organizational commitment are mediated by general perceptions of procedural justice.

We believe that these findings support the utility of the diagnostic method of procedural justice albeit in the very narrow application to monitoring procedures in two specific call centers. We hope that these findings will stimulate further research concerning monitoring procedures and other types of organizational procedures.

There is the potential to examine different types of monitoring. Our studies focused on monitoring done in house by supervisors, monitoring by an external agency, and monitoring the time spent between calls. These types of monitoring were chosen as they are routinely performed by the two organizations participating in our study. However, the literature on monitoring suggests that other types of monitoring might be present in organizations. These include: counting the number and types of calls and call-backs; the number of messages opened and waiting; the number of seconds before the call is answered; the number of times a caller is put on hold (King, 2003); and the duration of calls (King, 2003; Miciak & Desmarais, 2001). Future research is needed to determine if these procedures, acting through perceptions of procedural justice, also affect organizational outcomes.

There is also the potential to examine the effects of other types of procedures. There already exist specific measures of the fairness of procedures such as performance appraisal (Erdogan et al, 2001; Greenberg, 1986; Taylor et al, 1995), salary determinations (Cloutier & Vilhuber, 2008), benefits (Lee, at al., 2008; Cole, & Flint, 2004), etc., which could be tested in organizations to determine whether these procedures contribute to general perceptions of procedural justice in specific organizations.

Our studies examined the impact of general perceptions of procedural justice and specific perceptions of monitoring procedures on the organizational outcomes of turnover intentions and organizational commitment. Our methodology could also be used to examine the effects on other types of organizational outcomes such as performance, satisfaction, absenteeism, etc.

In practical terms the methodology developed in this study could be used as a diagnostic tool to determine specific procedures that may be contributing to organizational outcomes. The organizations in this study were particularly concerned with the high rates of turnover that they were experiencing. The relationship between monitoring and procedural justice found in the mediation effect suggests that perceptions of monitoring procedures are contributing to general perceptions of procedural justice which are, in turn, effecting employees' intentions to turnover. The implication is that improvements to perceptions of monitoring procedures should help to reduce turnover intentions in the call centers in this study. Further research will be needed to determine if specific interventions with regard to monitoring procedures can be developed in order to reduce turnover intentions.

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