

## Perceived Procedural Organizational Justice Matters for the Success of Quality Policies

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### Abstract

The purpose of the study was to investigate the role of perceptions of organizational justice in the relationship between changes to improve service quality and the level of job satisfaction of health care workers. The method was to use the fairness heuristic theory framework to compare workers from a primary health care center applying European Foundation for Quality Management (EFQM) practices with workers from centers not applying any quality policy ( $n = 95$ ). Results show that the EFQM workers reported higher ratings of procedural justice than workers without EFQM, although their satisfaction levels were not significantly different. Furthermore, the application of the EFQM model showed a moderating influence on the relationship between procedural justice and satisfaction. Thus, in a changing environment, procedural justice had a strong effect on workers' satisfaction. The value of the study is to deepen the understanding of how quality practices and organizational changes influence workers' perceptions and attitudes towards their work environment.

*Keywords:* Organizational justice, quality management, EFQM, health care workers, job satisfaction, fairness heuristic theory (FHT)

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### Quality Management Research: Implementing Organizational Change

Nowadays, organizations need to compete in a changing environment. For that reason, they have to be able to adapt quickly to offer services of high quality. Therefore, topics related to quality are a major concern for both practitioners and researchers. In the tradition of the American Malcolm Baldrige Award and the quality circles model (Nabitz, Klazinga, & Walburg, 2000), the European Foundation for Quality Management (EFQM) excellence model provides guidelines for a structured analysis of an organization as a whole in order to improve its quality.

The EFQM proposes some general analysis guidelines that must be adapted to each specific organizational context. This model dictates working through nine areas grouped into agent/enabler criteria and result/performance criteria. The procedure helps organizations to distinguish their advantage points from their

areas of potential improvement with the final goal of implementing plans of improvement and reevaluating the system (Junta de Castilla y León, 2003; Nabitz et al., 2000; Pino, 2008). This analysis is based mainly on workers' inputs. This analysis enables the setting of priorities for improvement needs and ways to achieve those changes. The evaluation of the results of the organization focuses on three areas: employees' results, customers' results, and society's results. Employees' results refer to workers' level of satisfaction, motivation, and participation and the measure of the organizational climate. Previous research shows that workers' satisfaction measures, in any of their dimensions, tend not to be considered in the assessment of the model results (Minkman, Ahaus, & Huijsman, 2007). As an attempt to fill this gap, the aim of this research was to consider levels of job satisfaction related to work stress.

Researchers in this area have noted that despite of their widespread use, not much is known about the effects of the intervention of quality models like the EFQM (Minkman et al., 2007; Nabitz et al., 2000). Quality models need to consider the psychological dynamics of the persons implementing them to understand how they function and how to improve their efficacy. Given these facts, the objective of this study was to offer empirical evidence and discussion about the role of perceived organizational fairness on EFQM results in health care.

The basic conceptualization of the EFQM model suggests that its success assumes a high level of worker collaboration and involvement or "mobilization" (Tremblay & Simard, 2005) during the whole procedure. Workers' input during the different steps of the method is a key requirement of the model. So, in line with previous research (Tremblay & Simard, 2005), it can be hypothesized that organizational variables related to the subjective perception of the EFQM procedures will influence the level of workers' involvement over time, and hence, the success of the method. To the best of our knowledge, no research has explored the role of perceptions of organizational justice in the implementation of EFQM practices and its results, so this work is an attempt to shed light on that relationship.

## Organizational Fairness

Although the literature tends to explore health care fairness related to resource allocation (Beuermann, 2010; Lenton, Blair, & Hastie, 2006), perceived organizational fairness is an important variable in this context (Kulik & Holbrook, 2002; Pérez-Arechaederra, Herrero, Lind, & Masip, 2010). Not only clinical variables but organizational variables need to be studied to reach good health care results (Oztekin, 2012). Organizational fairness refers to the role of fairness perceptions in the workplace (Daly & Geyer, 1994). This variable has been widely studied and related to workers' attitudes and behaviors towards their organizations and their organizational policies, including their job satisfaction, organizational citizenship behavior, and job commitment (for a review, see Cohen-Charash & Spector, 2001; Colquitt, 2001; Lind & Tyler, 1988). Considering this literature, the expectation is that perceived organizational justice will relate to the satisfaction linked to the implementation of the EFQM.

Organizational fairness is a multidimensional concept. A great body of research has focused on the procedural justice (PJ) dimension or the fairness of the procedures used to determine the results allocation (Thibaut & Walker, 1975). Several features have been identified as characteristics of a fair procedure (Leventhal, 1980), but probably the best established feature, and the variable most often manipulated in experimental designs, is the opportunity to voice one's opinion about the procedures (Van den Bos & Spruijt, 2002). In addition, some aspects of interpersonal treatment (Bies, 2001) experienced in the implementation of procedures and the quality of the information and justification received (Colquitt, 2001) have been considered as dimensions of the fairness concept. Because workers have a great input in the EFQM analysis, enhancing their voice opportunities (Van den Bos & Spruijt, 2002), our first hypothesis was as follows:

*H1: Those working in the EFQM center will perceive higher PJ than those not working with the model.*

Given that the EFQM procedure involves close interaction and information exchange, our second hypothesis followed:

*H2: Those working in the EFQM center will perceive higher interactional and informational fairness than those not working with the model.*

Previous research has proved the effect of perceptions of justice on satisfaction (Schappe, 1998). Therefore, we would expect that if any dimension of justice is higher for the EFQM group than for the non-EFQM group,

it is probable that these two groups would also differ in their levels of satisfaction. Hence, we would expect Hypothesis 3:

*H3: Those working in the EFQM center will have higher levels of job satisfaction than those not working with the model.*

## The Fairness Heuristic Theory

Researchers have used several theories to explain how justice judgments are formed and why they are so influential in people's behaviors. The fairness heuristic model (Lind, 2001; Van den Bos, Lind, & Wilke, 2001) is an outstanding example. This theory posits that people form their global evaluations of fairness relying on three kinds of information: distributive, procedural, and interpersonal justice. When people are forming their global justice judgments, they collect the available fairness-relevant information. That is called the "judgmental phase." Once the global judgment is formed, the "use phase" starts. In that phase, the person makes use of that judgment to guide his or her behaviors in a given context, but new fairness information is less likely to influence attitudes and behavior. The theory suggests that going back from the use phase to the judgmental phase, reassessing fairness information, can be triggered by two circumstances: (a) perceived signs that the relationship is changing or (b) fairness-relevant information that falls outside what would be expected from the initial fairness judgment. Based on this line of theory, it seems likely that important and meaningful changes in organizations could have profound consequences for the psychology of workers' perceptions of fairness. Hence, the implementation of quality practices such as the EFQM model can create a context of change that could be perceived as a sign of change in the worker-organization relationship.

Changes are a frequent feature of employees' working lives (Rodell & Colquitt, 2009), so it is important to know how they influence workers' attitudes and behaviors. Previous research has shown that if fairness issues are not considered, changes in organizations can be much more difficult or even unsuccessful (St-Pierre & Holmes, 2010). We know that perceptions of organizational fairness play a role in the workers' behaviors related to the implementation of changes in their work (Gyeke & Haybatollahi, 2014; Lind, Greenberg, Scott, & Welchans, 2000). Significant changes like mergers (Searle & Ball, 2004) or lay-offs (Lind et al., 2000) have been found to affect the dynamics of fairness judgments. Based on those findings, we propose that the fairness heuristic theory (FHT) can provide an explanation of the justice dynamics of changes derived from the EFQM.

The implementation of the EFQM means that people in this group experienced considerable organizational change. The organization surveyed had been working from that model for three years at the time of the data collection, and several procedural changes had been implemented focused in the procedures used to organize patients' assistance. According to the FHT, when people perceive fundamental changes in their work environment, they are likely to reenter a psychological state of reevaluating their fairness judgments. During this reevaluation, fairness topics would be more sensitive for those experiencing the change. Following that, we can expect that people working with the EFQM procedure will be more attuned to evaluating fairness, so the influence of fairness information on their attitudes and behaviors will be stronger for them. Hence, our fourth hypothesis was as follows:

*H4: Applying the EFQM method will have a moderating effect on the relationship between PJ and the job satisfaction of health care workers.*

## Method

### Sample

This research compared workers from three primary health care centers in a medium sized urban area (Salamanca, Spain). They had similar characteristics in terms of their demographics, and all three were public services with clinical and educational duties. The main difference was that one of the centers instituted the EFQM application, while the others were not using any quality procedure. A total of 95 workers participated. The center working with the EFQM returned 40 surveys (response rate of 78%). The average response rate for the other two centers was 75%. The sample comprised 68% female and 27% male workers with a mean age of 50.13 years ( $SD = 9.2$ ). Because every professional could be involved or affected by the EFQM policies, all professional categories were included. Of the total sample, 46% were physicians, 33% nurses, 12%

administrative staff, and 10% social workers and others. The average organizational tenure of the respondents was 9.23 years ( $SD = 11.08$ ).

### **Procedure**

The study adhered to the principles of the Declaration of Helsinki and was approved by an independent ethics committee. In each health care center, we held a meeting to present the study. The research assistant that delivered and collected the surveys was introduced and the workers' collaboration was encouraged. At the end of each meeting, the informed consent forms and the surveys were distributed, and a collecting date was set. Respondents were free to fill in the survey whenever it was convenient for them. The participation in this study was voluntary and confidential.

### **Measures**

*Justice measures.* Justice measures were adapted from Colquitt (2001). They were translated into Spanish and back translated into English by two different translators. Slight disagreements were discussed to agree on the final version of the measures used in the survey. The PJ scale has seven items ( $\alpha = .89$ ). An example is "Have you been able to express your views and feelings during those procedures?" The interpersonal justice scale has four items ( $\alpha = .79$ ). An example is "Has your superior treated you in a polite manner?" The informational justice scale has five items ( $\alpha = .95$ ). An example is "Has your superior been candid in his/her communications with you?" All justice items were answered on a scale from 1 *Not at all* to 5 *Totally*. The option *I don't know / not applicable* was included for every question.

*Job satisfaction measures.* A job satisfaction scale was developed to measure the satisfaction of health care workers in Spain (Aranaz & Mira, 1988). The factor "work-related stress" was measured with 5 items ( $\alpha = .65$ ); an example of these items is "At the end of an ordinary work day, I'm usually very tired".

### **Analyses**

Given the nature of the hypotheses under research, several *t* tests were developed. We used a hierarchical multiple regression analysis to test the moderating effect of the EFQM group or non-EFQM group on the relationship between the PJ perceptions and the satisfaction level related to the work-stress dimension (Tabachnick & Fidell, 2007). In the first step, we entered demographic variables. In the second step, we entered the main effects of the independent variables of PJ and quality policy (EFQM vs. non-EFQM). In the third step, we entered the two-way interaction between the independent variables. To help illustrate the nature of the two-way interaction, we graphed a simple slope analysis. The procedural justice variable was divided in two groups: (a) the high group: those that had ratings one standard deviation over the overall mean and (b) the low group: those that had ratings one standard deviation below the mean.

## Results

Means, standard deviations, and correlations are presented in Table 1. We tested for demographic differences between the EFQM and non-EFQM respondents. We found no differences except the number of years they had worked in the health care centre ( $t = -2.08, p < .05$ ). The control group mean was 7.73 years ( $SD = 7.47$ ), and the experimental group mean was 11.21 years ( $SD = 11.21$ ).

Table 1  
Means, Standard Deviations, and Correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Age	50.1	9.2									
2. Sex (0 = male; 1 = female)	0.71	0.45	-.19								
3. Job type (1 = clinicians; 2 = administration)	1.21	0.41	-.06	.25*							
4. Tenure in organization	9.23	7.93	.31**	-.18	-.08						
5. Procedural justice (PJ)	2.8	0.94	-.22*	.08	.02	-.04					
6. Interpersonal justice (IntJ)	4.22	0.88	-.15	.06	.00	-.37**	.15				
7. Informational justice (InfJ)	3.81	1.00	-.12	.11	-.08	-.22*	.30**	.69**			
8. Quality management (EFQM)	0.58	0.50	.21*	-.17	.07	-.22*	-.25*	.18	.17		
9. Satisfaction as low work stress	3.09	0.41	-.18	-.15	.08	.02	.13	-.14	.04	.06	

Note. \* Correlation significant at the .05 level. \*\* Correlation significant at the .01 level.

We conducted a *t* test for independent samples to compare the mean score on perceived PJ of the non-EFQM and the EFQM group (Hypothesis 1). There were statistically significant differences on the scores of the non-EFQM group ( $M = 2.6, SD = 0.92$ ) and the EFQM group ( $M = 3.07, SD = 0.90; t(93) = -2.47, p < .05$ ). The size of the difference between those means was moderate ( $\eta^2 = .067$ ; Cohen, 1988); 6.7% of the variance in PJ perceptions is explained by the group to which the respondent belonged. Mean scores on interactional and informational fairness were not significantly different for EFQM and non-EFQM groups (Hypothesis 2).

We also conducted a *t* test to test for differences in job satisfaction levels between the EFQM and the non-EFQM group (Hypothesis 3). There were no significant differences on the scores of the non-EFQM group ( $M = 3.11, SD = 0.41$ ) and the EFQM group ( $M = 3.07, SD = 0.42; t(93) = -0.549, p > .05$ ).

Regarding the relationship between PJ and satisfaction, their correlation was only significant in the case of the EFQM group ( $r = .39, p = .01$ ), not in the control group ( $r = -.03, p > .05$ ). Thus, the kind of quality policy (EFQM or non-EFQM) in effect in the organization influences the relationship between PJ perception and job satisfaction (Hypothesis 4). Therefore, we tested an interaction effect between PJ and EFQM practices in the prediction of satisfaction. To test the two-way interaction, we conducted a hierarchical multiple regression analysis on the measure of job satisfaction. Table 2 shows the regression results. As expected, the two-way interaction was significant ( $\beta = -.74, p < .05$ ).

Table 2  
*Hierarchical Multiple Regression of Procedural Fairness and Quality Policy on Job Satisfaction as Work-Related Stress*

Variable	Job satisfaction		
	Step 1	Step 2	Step 3
Age	-.23*	-.24*	-.23
Sex	-.21	-.19	-.21
Job type	.12	-.11	.12
Tenure in organization	.07	.10	.08
Procedural justice		.12	.16
EFQM		.12	.82*
PJ X EFQM			-.74*
$R^2$	.08	.10	.15
$R^{2adj}$	.04	.03	.08
$R^{2change}$	.08	.02	.05
Overall $F$	1.81	.90	4.51*
$Df$	4, 81	2, 79	1, 78

Note. Beta values. \* $p < .05$ . Step 1 tested the effects of sociodemographic variables. Step 2 tested the main effects of the procedural justice perceptions and the quality group (EFQM vs. non-EFQM). Step 3 tested the interaction between the quality practice and the perception of procedural justice.

To help understand this interaction, we graphed it following the work of Stone and Hollenbeck (1989). The mean ratings on job satisfaction for both groups (low vs. high PJ) distinguishing between EFQM and non-EFQM were plotted (see Figure 1). The simple slope analysis showed that those in the EFQM group had less job satisfaction when the PJ perception was low than those in the non-EFQM group. When workers from the EFQM center perceived low PJ, their levels of satisfaction dropped more drastically than was the case for the non-EFQM workers when they perceived low PJ.

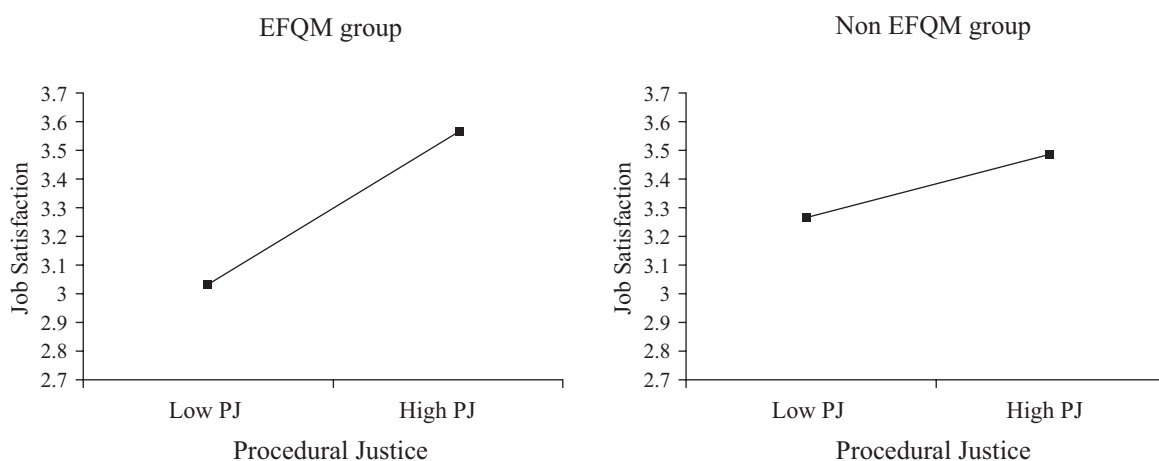


Figure 1. Interaction effect between perceived procedural justice and quality policy on job satisfaction as work-related stress.

The application of the EFQM practices moderated the relationship between PJ and job satisfaction. Procedural justice had a positive significant correlation with satisfaction only in the case of the EFQM group, not in the



non-EFQM group (Hypothesis 4). This is reflected in Figure 1 by the steeper slope in the case of the EFQM line. In the non-EFQM group, PJ did not significantly correlate with the level of job satisfaction.

## Discussion

This research shows the moderating effect of EFQM practices on the relationship between PJ perceptions and satisfaction levels in health care workers. Perceived PJ was higher for workers in the EFQM group than those in the non-EFQM group. No significant differences were found in their levels of satisfaction.

This work sheds light on the role of perceptions of justice and job satisfaction in the implementation of organizational changes derived from the EFQM practice in health care services. Previous research pointed to the lack of empirical evidence of the effects of quality model practices (Minkman et al., 2007); this is a valuable contribution to fill this gap. Coinciding with previous studies (Dahlgaard, Pettersen, & Dahlgaard-Park, 2011), these results also point out the convenience of studying EFQM procedures in health care services and the potential effects in this specific industry.

The EFQM is a potential source of changes in organizations, and its application conveys a profound analysis of the organization and identifies the flaws and strengths of the organization based on workers' inputs. This analysis is performed to establish improvement plans. In the EFQM service studied, the major improvements in the organization were related to the procedures used to give assistance to the patients. Therefore, we asked about the perceived justice of those procedures and their interpersonal and informational characteristics.

Given those changes, we found differences in the level of PJ perceived by workers of the EFQM group compared with the non-EFQM group (Hypothesis 1) but not in the other justice dimensions (Hypothesis 2). The EFQM group perceived higher levels of PJ than the non-EFQM group. If we look at the EFQM method from the fairness literature perspective, we find an explanation of this finding. The EFQM procedure implies an increased chance of voicing workers' opinion as members of that organization. In that way, employees have the opportunity to have a voice in how to improve their work setting. Having a voice improves PJ ratings (Van den Bos & Spruijt, 2002). Hence, the increased voice opportunity derived from the implementation of the EFQM would be related to higher PJ perceptions. Here, we find an organizational setting in which the differences in voice allowed by the EFQM method influence the differences in perception of PJ between workers.

Nevertheless, we did not find differences in the level of satisfaction of workers between both kinds of health care centers (Hypothesis 3). We focused on work-stress related satisfaction as an important but research-neglected outcome of quality models (Minkman et al., 2007). Contrary to what was expected, this result shows that the effect of PJ perceptions on the satisfaction level has not been strong enough to increase the absolute satisfaction level of the EFQM workers over the non-EFQM workers. Previous research showed that the perception of PJ influenced the levels of job satisfaction (Schappe, 1998), but we did not find that result in our research. Job satisfaction and, in this case, work-related pressure, is a construct related to many aspects of the work environment besides the perception of PJ, aspects such as quality of relationships with coworkers and supervisors, work load, or career opportunities (Aranaz & Mira, 1988).

As expected, the justice ratings correlated with the satisfaction levels when considering the global sample, both groups of workers. When we split the analysis to consider the relationship between PJ and satisfaction in the EFQM and non-EFQM groups, we found that the significant correlation only stood for the EFQM group, not for the non-EFQM group. Then, we found that the EFQM had a moderating effect on the relationship between the PJ perception and the satisfaction level (Hypothesis 4). Therefore, the quality policy caused workers perceiving high PJ also to have higher levels of satisfaction. On the other hand, the interaction effect showed that when workers perceived low PJ, their levels of satisfaction dropped more drastically if they were in the EFQM group.

In other words, we found that the EFQM, as an organizational change source, made fairness issues salient, influencing the effect of perceptions of PJ on the satisfaction level. This result is explained by the fairness heuristic theory (FHT) which posits that people can reenter the so-called evaluation phase of their fairness judgments when they experience meaningful changes in their relations. We found that the EFQM procedure could establish significant enough changes to foster this assessment phase. During this phase, workers would tend to collect fairness-relevant information available. Then, they would be especially sensitive to this information. Because of this fact, their perceptions of fairness would be especially salient, influencing their satisfaction ratings.

Because the non-EFQM group was not going through any major change, we would not expect that workers would be especially sensitive to fairness information. In such a case, the correlation between their fairness perception and their satisfaction would not be so strong.

The fact that PJ only correlated with satisfaction when the EFQM was applied could be due to the presumed increase of uncertainty in the work organization derived of the EFQM practices. Uncertainty is assumed as an organizational change characteristic (Rodell & Colquitt, 2009). The literature shows that higher uncertainty enhances the effect of fairness perceptions on attitudes and behaviors such as job satisfaction (Van den Bos et al., 2001). We think that it is possible that the organizational changes would make people reenter an assessing phase, in terms of the FHT, due to the increased uncertainty that they may experience under those changes. Further research is required to measure the uncertainty levels derived from the EFQM practices in order to define that aspect of the psychological process of fairness judgment formation.

The practical implications of this finding are that organizations going through major changes should take care of procedural aspects such as increasing workers' voice opportunities so that they can give their opinions about those changes. In more general terms, the implementation of changes derived from quality practices should be made taking special care to make them in a fair way (i.e., following Leventhal's (1980) rules for a fair procedure or fostering the other dimensions of the justice concept).

Furthermore, we need to point out that all three kinds of fairness dimensions (procedural, interactional, and informational) appeared to be significantly correlated with job satisfaction in the case of the health care workers studied (see Table 1). Thus, the characteristics of the procedures, how workers were treated, and the quality of the information they received were significantly related to their levels of job satisfaction in the health care context, in line with results of previous research (Cohen-Charash & Spector, 2001; Colquitt, 2001). Given these results and the importance of this psychological variable, including employees' perceived justice levels can be really meaningful in EFQM and total quality management (TQM) models (e.g., Chang, Chiu, & Chen, 2010; Dahlgaard et al., 2011).

The recommendation of working in this line is especially relevant because if workers do not perceive fairness in the changes, those changes can potentially damage the satisfaction levels of the workers and quality practices of the organization. Job satisfaction is a context-related attitude, so it depends strongly on the immediate circumstances (Schappe, 1998) such as changes in everyday work-life procedures like those implemented by EFQM model.

When applying the EFQM model, it is necessary to create realistic expectations about the procedure and the changes implemented. Previous research showed that the implementation of new managerial practices tended to find resistance (Chen, Yu, & Chang, 2006) and had the potential to increase employees' cynicism if the promises did not live up to reality after the effort required by the change (Brooks & Zeitz, 1999). Incomplete or insincere implementation could damage employees' sense of PJ and, hence, reduce their satisfaction and commitment.

A limitation of this work was the size of the sample. Although other works with similar sample size have been published before (Sousa & Vala, 2002; Van den Bos, Maas, Waldring, & Semin, 2003), the total number can be seen as somehow limited. Nevertheless, it represents most of the population addressed in this study with a response rate of over 70%. In any case, ongoing research is studying new centers to address this limitation.

In conclusion, when changes are made in organizations, the fairness information involved acquires a central role. We can state that the success of the EFQM is related to the workers' perception of PJ. To the extent that workers perceived that the EFQM implementation was procedurally fair, workers' levels of job satisfaction were high. That indicates the convenience of considering perceived justice in TQM models.

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