THE INFLUENCE OF EFQM PRACTICE ON HEALTH CARE WORKERS' PERCEPTIONS: INITIAL ANALYSIS.

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—Abstract —

The role of organizational justice has not been frequently explored on health care services but it might play a key role in explaining organizational results. In this work we compared two kinds of primary health care centers: those that did not apply any explicit quality model and one that has been developing the EFQM (European Foundation Quality Model) for several years. We did so including workers from all professional categories at the health care center (physicians, nurses, management personnel, administrative staff, social workers, psychologists, etc.) since each role has a central importance in the delivery of a result with high quality. We expected significant differences among the workers' fairness perceptions, levels of satisfaction and levels of emotional commitment in both kinds of centers (with and without EFQM application). Here we present the relationship of the organizational fairness judgments of health care workers with several variables as emotional commitment and job satisfaction related with their professional group and their quality management policy.

Key Words: *EFQM, Health Care Service Workers, Organizational Justice, Job Satisfaction*

JEL Classification: M12 PERSONNEL MANAGEMENT. QUALITY PRACTICES.

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1. INTRODUCTION:

1.1. European Foundation Quality Model (EFQM) in health care services:

The European Foundation Quality Model was developed as a general model to improve quality in all kinds of organizations. The model proposes working in nine criteria based on the principle of self-assessment and in its European Quality Award Program (Nabitz, Klazinga, & Walburg, 2000).

The model is applicable to a broad spectrum of organizations. Important efforts have been made to the adaptation of the EFQM principles to health care organizations. Because of the nature of their services, improving health-related processes is very valuable not only to the center but also to its customers.

The application of the model in European health care services is quite broad. Depending on the cultural context and the pre-existing model of health care some adjustments have been designed. According to Nabitz et al. (2000) almost every European health care system follows EFQM principles but only UK and The Netherlands have created a stable institution accountable for the support of the practical work.

In the case of the Spanish health care, the model has been developed to a different extent depending on the region. Regional governments encourage its use, but generally it is not mandatory. In the case of the region of Castilla y Leon the adaptation of the model to be applied in primary health care was made in 2003 (Lleras, 2003). After that, a few health care services continued with its implementation (Rodríguez, Alonso, Ballesteros, Gómez, Morán, & Moreno, 2004).

1.2. Organizational variables and the EFQM:

The EFQM model involves changes in the organization to improve its results in four areas. "People results" is our area of interest in this work. We are interested in the effect that EFQM practices have in workers' perceptions and attitudes. We expect that workers in an environment where the EFQM is been applied will show different levels and relationships between those psychosocial variables in comparison with services where the EFQM is not applied.

Hypothesis1: Workers from the EFQM group will show higher levels of satisfaction, organizational fairness perception and affective commitment than those from the control group (without EFQM practices).

1.2.1. Organizational Fairness:

Organizational Fairness or Organizational Justice is defined as the attempt to describe and explain the role of fairness as a consideration in the workplace (Greenberg, 1990: 400). The construct of fairness perception has several dimensions well established: distributive, procedural, interactional and informational (for a review see Perez-Arechaederra, Herrero, Lind & Masip, 2010). In this research we will consider two justice dimensions: procedural and interpersonal (including information quality as an interpersonal fairness feature). *Procedural justice* relates to the fairness of the procedures used to determine outcome distributions or allocations (Leventhal, 1980; Thibaut and Walker, 1975). The most established effect on fairness literature concerns this dimension. The "fair process effect" posits that somebody will be more satisfied with a result if he/she perceives the procedure that determines that result as fair. The opportunity to say your opinion (to have a "voice") about a procedure that affects you is one of the proved ways to increase the perceived fairness of that procedure. Experimental procedures frequently use the manipulation of having voice or not as a way to control the procedural justice perception (e.g., Van den Bos, 1999). *Interactional justice* refers to the quality of the interpersonal treatment that people receive when procedures are implemented (Bies & Moag, 1986). Finally, there is some controversy about understanding interactional fairness as two different facets, setting apart the explanations provided to people about why and how a procedure is set, as another dimension called *informational fairness* (Colquitt, Colon, Wesson, Porter, & Ng, 2001).

Previous research has found significant correlations between fairness perception and important organizational results, such as organizational citizenship behaviour, withdrawal, organizational commitment or job satisfaction (Colquitt et al., 2001). Here, we will explore the role of fairness perceptions, among other variables, on the explanation of the job satisfaction level related to the EFQM practices in health care.

Hypothesis2: We expect to find significant differences in the levels of justice perception depending on the quality management policy (if they apply the EFQM model or not).

1.2.2. Affective Commitment:

The construct organizational commitment is composed by three dimensions: affective, continuance and normative commitment. Here we focus on the affective commitment defined as the employee's emotional attachment to, identification with, and involvement in the organization. We could say that employees with high

affective commitment would remain in the organization because they want so (Meyer & Allen, 1991).

Affective commitment has the strongest positive relation with a number of organizational-relevant and employee-relevant variables as: low withdrawal, loyalty behaviours, job satisfaction, organizational citizenship behaviours or stress level (Mattila, 2003; Meyer, Stanley, Herscovitch & Topolnytsky, 2002).

The EFQM model conveys the employees' participation not only in the identification of improvement areas but also in the developing of the actual improvement plans. Given that the model implies the collaboration of the workers:

Hypothesis3: We would expect that the implementation of EFQM model will be related with higher levels of affective commitment.

1.2.3. Job Satisfaction:

Job satisfaction is one of the most frequent measured variables on the organizational behaviour literature. This variable has been understood in many different ways: as a cognition, as an attitude, as a feeling or as an expectation. Here, we understand job satisfaction as an attitudinal disposition towards different work facets (Aranaz & Mira, 1988). High levels of job satisfaction are related to better performance, higher organizational commitment and higher customer satisfaction (Meyer et al. 2002). This means that fostering employees' work satisfaction is a managerial recommendation in all kinds of organizations, including health care. In this work we included job satisfaction as our dependent variable with the goal of shedding light on its relations.

1.3. Organizational variables relationships:

We are interested in exploring the relationships among the variables defined above and how they, quality management policy and professional group relate with job satisfaction.

Due to its managerial implications, we wanted to explore if different professional categories (clinicians vs. non clinicians) had different perceptions and attitudes.

2. METHOD:

2.1. Research setting:

This study was developed in three primary health care centers in a medium-size Spanish urban area. The three of them were equivalent in terms of the service

provided and the professionals groups represented. We grouped these centers to compare them according to their management orientation. One of them (Center A) has been following the principles of the EFQM since 2003; thereafter we will refer it as experimental group. On the contrary, the other two centers do not follow any established quality management model; these will form the control group.

2.2. Sample and procedure:

In each health care center we made a meeting with the workers to introduce them to our study. We asked for their collaboration and we introduced the research assistant that delivered and collected the surveys (she did not work for any of the centers). At the end of each meeting, the surveys were delivered and a collecting date was set. The participation in this study was volunteer and confidential.

In Center A (experimental group), 51 surveys were delivered and 40 surveys were collected. In Center B, 47 surveys were delivered and 28 were collected. For Center C, 30 surveys were delivered and 27 were collected. The response rates were: 78.43% for Center A; 59.57% Center B; and 90% Center C. The total amount of surveys was 95: 40 for the experimental group and 55 for the control group.

2.3. Measures:

- Demographic variables: we registered demographic variables, such as sex, age, years working and professional group.
- Justice measures: we adapted the instrument Colquitt 2001 to be used in our research context in Spain.
    - Procedural justice was measured with 7 items such as « Have you been able to express your views and feelings during the procedures used to organize the patient assistance in your health care center ? »
    - Interactional justice was measured with 4 items such as « Has your center chief (or closest boss in charge) treated you in a polite manner regarding the organization of the patient assistance in you health care center ? »
    - Informational justice was measured with 5 items such as « Has your center chief (or closest boss in charge) been candid in his/her communications with you regarding the organization of the patient assistance in you health care center ? »

- Satisfaction scale: we used the survey FontRoja (Aranaz & Mira, 1988). It was designed for measuring job satisfaction of health care workers in the Spanish context. It has 24 items, an example of them is « I am very satisfied in my work ».
- Affective Commitment scale: we used the dimension of affective commitment of the scale of Allen and Meyer (1991) adapted to the Spanish context by Antón (1999). An example of this scale is « I don't have a very strong feeling of belonging to my health care center ».

3. RESULTS

3.1. Does the EFQM affects levels of job satisfaction, affective commitment and fairness perception?

We made several *t*-tests to assess if there were differences in the organizational variables related with their group belonging.

We made a *t*-test for independent samples to compare the mean score on perceived procedural justice of the control and experimental group. There were statistically significant differences on the scores of the control group (M=2.6, SD=0.92) and the experimental group (M=3.07, SD=0.90; $t(93)$=-2.47, p<.05), the procedural fairness perception of the workers with EFQM model being higher. The size of the difference between those means was moderate (eta squared=.067) (Cohen, 1988), which means that the 6.7% of the variance in procedural justice perception is explained by the group belonging.

We also made a *t*-test for independent samples to compare the mean score on satisfaction in the control and experimental group. There were no significant differences between the control group (M=3.25, SD=0.34) and the experimental group (M=3.26, SD=0.39; $t(92)$=-0.183, p>.10). No significant differences between groups in the level of interpersonal fairness, informational fairness or affective commitment were found as well.

3.2. Relationship among job satisfaction and some psychosocial variables:

We did a standard regression analysis to find out the psychosocial variables relationships with the satisfaction level. Our sample meets the assumption of absence of multicollinearity. All the independent variables are correlated under .7 (see Table 1). The highest correlation between the IV's was between the interactional and the informational justice measures (r=.69) so we decided to collapse them to form a classic global measure of interactional fairness (which includes quality communication aspects). If we consider the values of Tolerance

($1-R^2$), they are quite far from zero (the lowest is .68), so we can consider that we meet the requirements.

Table 1. Standard Multiple Regression of Procedural Fairness, Interactional Fairness, Affective Commitment, Professional Group and Quality Management on Job Satisfaction.

Variable	M	SD	Scale	1	2	3	4	5	6 (VD)	B	β
1. Procedural Fairness	2.80	0.94	Likert 1 to 5	(0.89)						0.04	0.10
2. Interactional e Informational Fairness	4.02	0.86	Likert 1 to 5	.25*	(0.93)					0.13*	0.31
3. Affective Commitment	4.88	1.25	Likert 1 to 7	.45*	.31*	(0.77)				0.11*	0.37
4. Professional Group	1.21	0.41	Categ.1=Clinicians, 2=Administration	.02	-.04	.28*				0.01	0.02
5. Quality Management	0.58	0.50	Categ. 0=EFQM, 1=Non EFQM	-.25*	.20*	-.02	.07			0.04	0.05
6. Job Satisfaction	3.25	0.36	Likert 1 to 5	.35*	.44*	.50*	.07	-.02	(0.73)	Intercept = 2.14	
									R^2= .36	F= 9.51 ;	p< .001
									R^2_{adj}= .32	df= 5,91	

Note. N=95. Cronbach's Alpha coefficients displayed on the diagonal. *Correlations and coefficients significant at p<.01. B= unstandardized regression coefficients, β= standardized regression coefficients.

Our model explains 35.6% of the variance of global job satisfaction, reaching statistical significance (p<.0001). Examining beta values we find that affective commitment (beta=.37) and interactional fairness (beta=.31) are making a statistically significant unique contribution to the regression equation.

Examining the correlation matrix we can see that the application of the EFQM has some relation with the fairness perception but not with the job satisfaction level (as the *t*-test confirmed). High correlations appear between affective commitment and procedural (r=.45) and interactional (r=.31) fairness perceptions (p<.01). Procedural fairness and interactional fairness are moderately correlated (r=.25).

4. CONCLUSION

We cannot say that the EFQM practices have a direct straightforward effect on the level of job satisfaction, contrary to what we expected (*H1*). There were no differences in the level of satisfaction and commitment between the two groups (*H3*). But we found a difference between quality management groups, the EFQM

practices are actually related to higher levels of procedural justice (*H2*). So, when the EFQM is applied, workers show more positive procedural fairness perception ratings. We suggest that this relationship could be a voice effect example (Van den Bos, 1999) because EFQM practices probably involve increasing workers' perceived voice on the procedures that the organization develops and the changes it makes.

Our result is in line with previous research about the Total Quality Model (TQM), which is the origin of the EFQM approach. It shows that perceived procedural justice mediates the relationship between TQM traits and two dimensions of organizational commitment (Brooks & Zeit, 1999). This suggests that health care administrators should project a clear vision for the TQM program and give information to impact the procedural fairness perception about the changes. Further analysis considering the procedural justice variable as a mediator between the EFQM model and the job satisfaction is necessary.

We found that procedural fairness and interactional fairness are moderately correlated (r=.25). It's common to find some correlation among fairness dimensions, since they are part of the general fairness construct (Greenberg & Colquitt, 2005). High correlations appeared between affective commitment and procedural (r=.45) and interactional (r=.31) fairness perceptions (p<.01). Someone that perceives high levels of fairness is more likely to develop affective commitment towards that organization. These relations are in line with previous literature (Colquitt, 2001).

Our research shows that the affective commitment and interactional fairness contributed the most to the explanation of health care workers' job satisfaction variance. The fact that procedural fairness does not contribute to job satisfaction explanation is in part surprising. Previous literature showed that procedural justice has a strong relation with job satisfaction (Colquitt et al., 2001). We think that the difference can be due to the grouping developed for the analysis. The inclusion of affective commitment in the regression analysis decreased the explicative power of the fairness variables, making the procedural fairness not significant.

We conclude that the interpersonal related fairness and the affective commitment are influencing the job satisfaction of health workers significantly more than the procedural justice, the professional group and the quality management policy. In management practice terms, such policies and behaviours characterized by taking care of managers' relationships with their employees, promoting respectful and cordial relationships, providing good quality information and creating sense of

group belonging seem successful. All these practices could improve employees' job satisfaction through the enhancement of their fairness perceptions and affective commitment.

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