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### **Quality Management and Employees' Attitudes: An Example from Certified Enterprises**

**Maria da Graça Batista  
António Marques Feijó  
Francisco Silva**

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**António Marques Feijó**

Universidade dos Açores (DEG)

**Maria da Graça Batista**

Universidade dos Açores (DEG e CEEApIA)

**Francisco Silva**

Universidade dos Açores (DEG e CEEApIA)

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## RESUMO/ABSTRACT

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This study investigates the implications of practices of the quality management system (QMS) in employees' attitudes in relation to job involvement, job satisfaction, career satisfaction and organizational commitment. This study was accomplished through the use of a survey by questionnaire. Twenty hypotheses related to QMS practices and the employees' attitudes were formulated and tested.

The results indicate that responsibility and teamwork have a significant and positive correlation with job involvement, job satisfaction, career satisfaction, as well as organizational commitment. Ongoing improvement and problem solving have significant implications in organizational commitment. In addition, training and education, as well as customer focus, did not demonstrate any favorable contribution to the employees' attitudes.

In practical terms, the study recommends that management be more committed to the development of quality practices as a means to sustain and enhance employees' positive attitudes towards their job. Such practices are a competitive strategy to attract and retain competent employees.

**Keywords:** Quality management system; employees' attitudes; organizational culture; quality.

António Marques Feijó  
Universidade dos Açores  
Departamento de Economia e Gestão  
Rua da Mãe de Deus, 58  
9501-801 Ponta Delgada

Maria da Graça Batista  
Universidade dos Açores  
Departamento de Economia e Gestão  
Rua da Mãe de Deus, 58  
9501-801 Ponta Delgada

Francisco Silva  
Universidade dos Açores  
Departamento de Economia e Gestão  
Rua da Mãe de Deus, 58  
9501-801 Ponta Delgada

**QUALITY MANAGEMENT AND EMPLOYEES' ATTITUDES: AN EXAMPLE  
FROM CERTIFIED ENTERPRISES**

MARIA DA GRAÇA BATISTA

Economics and Management Department

Azores University

CEEApIa

Apartado 1422

9501-801 Ponta Delgada, Azores; Portugal

Tel.: 296 650 084

Fax: 296 650 083

[mbatista@uac.pt](mailto:mbatista@uac.pt)

ANTÓNIO MARQUES FEIJÓ

Economics and Management Department

Azores University

Apartado 1422

9501-801 Ponta Delgada, Azores; Portugal

Tel.: 296 650 084

Fax: 296 650 083

[antonio.feijo@sapo.pt](mailto:antonio.feijo@sapo.pt)

FRANCISCO SILVA

Economics and Management Department

Azores University

CEEApIa

Apartado 1422

9501-801 Ponta Delgada, Azores; Portugal

Tel.: 296 650 084

Fax: 296 650 083

[fsilva@uac.pt](mailto:fsilva@uac.pt)

# **QUALITY MANAGEMENT AND EMPLOYEES' ATTITUDES: AN EXAMPLE FROM CERTIFIED ENTERPRISES**

## **ABSTRACT**

This study investigates the implications of practices of the quality management system (QMS) in employees' attitudes in relation to job involvement, job satisfaction, career satisfaction and organizational commitment. This study was accomplished through the use of a survey by questionnaire. Twenty hypotheses related to QMS practices and the employees' attitudes were formulated and tested.

The results indicate that responsibility and teamwork have a significant and positive correlation with job involvement, job satisfaction, career satisfaction, as well as organizational commitment. Ongoing improvement and problem solving have significant implications in organizational commitment. In addition, training and education, as well as customer focus, did not demonstrate any favorable contribution to the employees' attitudes.

In practical terms, the study recommends that management be more committed to the development of quality practices as a means to sustain and enhance employees' positive attitudes towards their job. Such practices are a competitive strategy to attract and retain competent employees.

**Keywords:** Quality management system; employees' attitudes; organizational culture; quality.

Quality management systems (QMS) have shown themselves to be capable of developing and sustaining companies' competitiveness. The QMS is a set of practices and guiding principles, as well as a philosophy that guides not only quality management, but also own management quality (Brah, Tee and Rao, 2002). In simple terms, the QMS can be defined as mutual cooperation within an organization, involving business processes in the creation of products and services based on the needs and expectations of customers (Dale and Cooper, 1994). At the same time, it is a management process based on improving teamwork and quality through people (Welikala and Sohal, 2008).

The premises of QMS are ongoing improvement, focus on clients, responsibility at work and commitment from management, satisfaction of employees and shareholders. Those who practice all the QMS ideals are identified as the primary resource for implementing the system. Much of the success in implementing and maintaining the QMS depends on a change in employees' attitudes. Therefore, the QMS is not only focused on product quality, but also on the quality of its assets.

Many organizations that have adopted quality management saw an improvement in employees' attitudes, commitment and retention (Karia and Asaari, 2006). Therefore, this study verifies the implications of quality practices in employees' attitudes, and their commitment to the organization based on the attractiveness and retention of competent employees, as an organization's strategic and competitive approach. It also offers suggestions to management for implementation, maintenance and improvement of quality culture in the organizations, as well as aiding in the selection of better practices to adopt in order to improve employees' attitudes towards work.

## **QMS AND EMPLOYEES' ATTITUDES**

The QMS philosophy consists of a participation system under which the employees are assigned responsibilities to improve the quality of the organization (Karia and Asaari, 2006; Welikala and Sohal; 2008). Instead of the traditional bureaucratic rules for a forced improvement, the QMS proposes a change in organizational culture with a new work environment (Clinton, Williamson and Bethke, 1994; Dale and Cooper, 1994): (1) an open environment for problem solving; (2) participation in developing solutions; (3) trust between all employees; (4) sense of dominance and responsibility to achieve the objectives when solving problems; and (5) self-motivation.

Cultivating this philosophy requires the involvement of all employees. The QMS requires all members of the organization, from management to the front line to be committed to the necessity of constant improvement in product development (Clinton *et al.*, 1994).

The work force must be oriented toward a change of mentality caused by the quality, with a culture focused on production and quality services (Schuler, 1988; Eduards and Sohal, 2003). This makes it necessary to create an organizational culture which is aware of and prepared for this change in work habits, with a view to improvement of its products and services (Welikala and Sohal, 2008).

#### QMS and Job Involvement

One of the most important aspects of QMS is of the delegation of responsibility to employees in decision making (Karia and Asaari, 2006; Welikala and Sohal, 2008). The use of QMS practices encourages employees to work together, increasing their responsibilities and individual sense of achievement (Sommer and Merrit, 1994; Karia and Asaari, 2006).

The QMS requires the participation of all employees at every level (Bayazit, 2003). Therefore, the QMS practices are an important aspect of job involvement. The more

organizations use involvement capabilities, especially those with QMS, the more positive results will be achieved in regards to satisfaction, quality of life, performance and competitiveness (Welikala and Sohal, 2008).

#### QMS and job satisfaction and career satisfaction

Since the QMS is intended to create an environment that brings out the best in each worker, it is expected to improve job satisfaction. As a result, encouraging employees to innovate and implement their own solutions leads to awareness of the need for cooperation, communication and teamwork (Karia and Asaari, 2006).

Career satisfaction is a positive affective reaction of workers to their careers (Greenhaus, Parasuraman and Wormley, 1990). The QMS makes it possible to create an environment that praises workers' accomplishments and success, encourages them to succeed by making use of their experiences, and by improving the quality of their work (Boon, Arumugam and Hwa, 2005). Satisfied employees offer improved customer services and remain longer in the organization (Guimaraes, 1996). According to Counte, Glandon, Oleske and Hill (1992), QMS favors job satisfaction, through employees' sense of accomplishment, the use of their skills and the opportunities for growth. All these scenarios are part of the practices and the purpose of quality.

#### QMS and organizational commitment

Work quality requires involvement, motivation, self-criticism, openness to others, persistence and a mentality focused on quality (Boselie and Wiele, 2002). Therefore, the quality programs must provide opportunities for employees' growth (Schalk and Dijk, 2005). The QMS has a set of practices and factors that contribute to improved involvement, performance and employee satisfaction such as education and training (Dahlgard *et al.*, 1998), teamwork (Sommer and Merrit, 1994), management responsibilities, focus on the customer, organizational culture (Boon *et al.*, 2005).



According to Daily and Bishop (2003), employees with an affective commitment remain in the company because they want to.

Boselie and Wiele (2002) show a positive relationship between teamwork and satisfaction. The workers with a greater degree of involvement are more prone to being satisfied with and committed to the organization (Guimaraes, 1996). According to Shore, Sy, and Strauss (2006), a greater responsibility on behalf of management has a positive relationship with greater employee satisfaction and commitment to the organization. The literature shows positive relationships between quality practices and employees' attitudes. We also found that commitment has a tight relationship with satisfaction (Porter, Crampon and Smith, 1976), that is favored by quality practices.

The QMS influences the affective reactions of employees to the organizational lifestyle (Boon *et al.*, 2005). The quality practices favor teamwork, task diversity and employee responsibility. All these factors tend to benefit job satisfaction, which shows an indirect involvement with organizational commitment and a direct engagement with employee retention or decreased turnover.

QMS practices focus on customer, education and training responsibility, teamwork, constant improvement and prevention of problems, tend to increase job and career involvement and job and career satisfaction, yielding a greater organizational commitment. The most committed employees contribute more to the growth and success of the organization (Karia and Asaari, 2006).

## **METHOD**

The data in this analysis was gathered from several organizations certified by the norm EN NP ISO 9001 – Quality Management Systems. The activity spectrum of the organizations ranges from the Manufacturing Industry, Commerce to Services,

Telecommunications, Security, Automobiles, Cement, Civil and Public Construction, among others.

Given the variety and size of the population and information, the instrument for data gathering was a questionnaire. The questions used are based on the relationship between the concept of QMS and the attitudes of employees in relation to work. The choice of questions for each area was based in a categorization of items provided by the experience of Greenhaus *et al.* (1990), Kanungo (1982), Porter *et al.* (1976), Powell (1995), and Weiss *et al.* (1967).

The questionnaires were distributed and handled in two ways: (1) digital format distributed over the internet for an online response; and (2) printed version distributed for manual completion.

## **Hypotheses**

Based on the literature review, twenty hypotheses were formulated and divided into four groups.

(1) For job involvement attitudes, the following hypotheses were formulated:

*H1*: The quality management practices have a positive effect on job involvement.

*H1<sub>a</sub>*: The “customer focus” has a positive effect on job involvement.

*H1<sub>b</sub>*: “Education and training” have a positive effect on job involvement.

*H1<sub>c</sub>*: “Responsibility and teamwork” have a positive effect on job involvement.

*H1<sub>d</sub>*: “Ongoing improvement and problem prevention” have a positive effect on job involvement.

(2) For job satisfaction, the following hypotheses were formulated:

*H2*: The quality management practices have a positive effect on job satisfaction.

*H2<sub>a</sub>*: The “customer focus” has a positive effect on job satisfaction.

*H2<sub>b</sub>*: “Education and training” have a positive effect on job satisfaction.

*H2<sub>c</sub>*: “Responsibility and teamwork” have a positive effect on job satisfaction.

*H2<sub>d</sub>*: “Ongoing improvement and problem prevention” have a positive effect on job satisfaction.

(3) Regarding career satisfaction, these hypotheses were formulated:

*H3*: The quality management practices have a positive effect in career satisfaction.

*H3<sub>a</sub>*: The “customer focus” has a positive effect in career satisfaction.

*H3<sub>b</sub>*: “Education and training” have a positive effect in career satisfaction.

*H3<sub>c</sub>*: “Responsibility and teamwork” have a positive effect in career satisfaction.

*H3<sub>d</sub>*: “Ongoing improvement and problem prevention” have a positive effect in career satisfaction.

(4) Lastly, in regards to organizational commitment, these hypotheses were formulated:

*H4*: The quality management practices have a positive effect in organizational commitment.

*H4<sub>a</sub>*: The “customer focus” has a positive effect in organizational commitment.

*H4<sub>b</sub>*: “Education and training” have a positive effect in organizational commitment.

*H4<sub>c</sub>*: “Responsibility and teamwork” have a positive effect in organizational commitment.

*H4<sub>d</sub>*: “Ongoing improvement and problem prevention” have a positive effect in organizational commitment.

## **DATA AND RESULT ANALYSIS**

Analyzing the profile of those surveyed shows that 69.7% of the respondents are men and 30.3% are women. The majority of those surveyed are married (63.3%). In age, the 20-29 and 30-39 categories make up three-fourths of those surveyed.

In terms of education, and in relation to the other categories, the frequency range shows a proximity between high school (10<sup>th</sup> to 12<sup>th</sup> year) with 36.7%, and college with 28.4%. In relation to work, there is also equality in the distribution of those surveyed in relation to the development of functions in the categories Administration/Business (45.9%) and Technical/Operator (47.7%).

Regarding the level of responsibility, 56% of those surveyed do not have management or leadership positions. Many of the respondents are staff personnel with more than six years of experience in services, having some permanence in the organization.

Concerning the QMS in the organizations, the majority of those surveyed serve in organizations where the QMS was implemented more than five years ago. As to the evaluation of the level of commitment from the organization to the QMS, almost all of the respondents (94.5%) reported a high level of commitment.

### **Operational Measurements of Quality**

An exploratory factor analysis was conducted (factor analysis of central components, with Varimax rotation), by extracting four components related to quality practices, based on the variables composing them. For the operational measurement of quality,

components were assembled according to the model of analysis: focus on the customer, education and training, responsibility and teamwork, ongoing improvement and prevention of problems.

#### Customer Focus:

Concerning customer focus, all the variables contribute positively. However, the variable related with continuous concern and incentive for the correct identification of customer needs (weighting of 0.925) has greater influence than others. Therefore, it can be shown that the component is explained by this variable. The second most influential variable in this component is the variable related to personal contact with the customers (weighting of 0.874).

Since we are working with a single variable instead of the four variables in focus on the customer, some of the explanatory power is lost. However, we still manage to account for 73.92% of the total variance.

#### Education and Training

Regarding the component “education and training,” the variable “the organization provides internal or external training on quality,” presents a greater weight (weighting of 0.905) in relation to the others, positioning itself as the explanatory variable of the component.

In second and third place, with weightings of 0.864 and 0.831 respectively, were the variables related to training and disclosure of new practices to workers for troubleshooting and training of management regarding quality. It still accounts for 72.22% of the total data variance.

#### Responsibility and teamwork

All of the variables contribute positively to the component of responsibility and teamwork. However, the practice of involving workers in the planning and scheduling

of activities is evident as the explanatory variable of the component, with a weighting of 0.859.

As a second explanatory variable (weighting of 0.816), there is a concern in encouraging interaction with clients and suppliers. Not all variables contribute with the same weight, such as the variable related to the attribution of the autonomy in decision having a smaller rating. After Varimax rotation, it is still possible to account for 61.94% in the total variance of data.

#### Ongoing improvement and of Problem Prevention

Analysis of the variance performed makes it possible to verify that the component of ongoing improvement and prevention of problems is accounted for by the variable “concern in implementation of programs for prevention of problems,” with a weighting of 0.882. The second explanatory variable with a weighting of 0.857 is in reference to the variable that captures the culture of ongoing improvement in the organization.

In third place, there is the variable related to the concern in developing programs for reducing bureaucracy and increasing the fluidity of the system with a weighting of 0.778. We can also state that all these variables are positive, contributing favorably to the component. In relation to this component, it accounts for 63.95% of the total variance of data.

#### **Operational Measurements of Workers Attitudes**

In the same way the operational measurements of quality practices, the measurements of workers attitudes involved an exploratory factor analysis, in principal components with Varimax rotations, extracting four components based on the variables comprising them. For the operational measurement of attitudes, the following components were assembled according to the analysis model: job involvement; job satisfaction; career satisfaction; and organizational commitment.

### Job Involvement

The component “job involvement” presents negative effects due to negative factors.

However, it is possible to name the variable “many of my interests are centered in my job,” with greater weight on the influence of the component, with a weighting of 0.847.

The second variable with some influence is “my job is among the most important things that happened in my life,” with a weighting of 0.820. At the same time, the variable “I am personally deeply involved in my job” is the third variable influence of the component. The component itself counts for 56.50% of its total variance.

### Job Satisfaction

In the component “job satisfaction,” all variables have fairly great weight, with a determined positive influence.

Satisfaction with achieved success achieved in the job is translated as the most influential variable in the component with a weighting of 0.913, followed by satisfaction with the overall progress in the outlined objectives for the job, with a weighting of 0.875.

However, despite being in third place as an explanatory variable, valorization related to job completion also contributes positively to explaining the component. The total variance of data accounts for 76.36%.

### Career Satisfaction

The component “career satisfaction” has a very positive influence from all the variables involved. The main explanatory variable is presented as “I am satisfied with the general progress in the objectives related to my career.”

The second explanatory variable with a weighting of 0.893 is “I am satisfied with the progress I have had in the course of my objectives related to the progress in my career.”

The third influence is the variable relative to the relationship between satisfaction and new experiences, with a weighting of 0.824. At the end of the table with the smallest

influence, there is the variable of satisfaction with the income. However, as observed, the component as a whole is quite influenced by all the variables. The total variance of the component accounts for 69.32%.

### Organizational Commitment

“Organizational commitment” is the only component that demonstrated some oscillation related to the different weights of the variables. Instead of what occurred in the previous components, the values are not consistent enough for a positive bias. However, there are issues that contributed to a negative balance.

The explanatory variable with the greatest weight in this component is “I am proud of telling others that I am part of this organization,” with a weighting of 0.870. The second variable, with considerable weight given the scenario of this study is “I tell my friends that my organization is very good to work for,” with a weighting of 0.814. The third influence is the variable “I am very satisfied for choosing this organization when I was looking for work,” with a weighting of 0.792. In fact, only these three variables are shown to have large influence on the component. The remaining variables show very inferior and disparate values. The component can only account for 37.61% of the total variance in the data.

### **Correlation of the QMS Practices on Employees’ Attitudes**

Generally, the coefficients of correlation between quality practices and employees’ attitudes show a wide positive correlation level (Table 1 - Correlation between Quality Practices and Employees’ Attitudes).

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Table 1 about here  
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Given the values obtained in relation to the results provided by the correlations, as seen in the study by Boon *et al.* (2005), the practice with highest rating in employees' attitudes was "responsibility and teamwork" confirming its positive influence. The remaining quality practices, despite having a confirmed positive effect, shows a lower rating in relation to employees' attitudes.

### **Impact of QMS Practices in Employees' Attitudes**

In order to carry out a more incisive analysis on the relationship between quality practices and all the dependant variables, several regressions were conducted to evaluate the individual impact in the involvement and job satisfaction, as well as career satisfaction and organizational commitment.

#### Impact on Job Involvement

For the analysis of regression in job involvement, as seen in Table 2 – Job Involvement Regression, the determination coefficient,  $R^2$ , is of 0.072, a very low value indicating the weak quality of adjustment. However, this type of sectional study is perfectly normal because it gathers information from different surveys.

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Table 2 about here  
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Regarding the significance of the aggregated model, the explanatory variables as a whole explain the dependant variable "job involvement." As to the individual significance of each independent variable, the only explanatory variable of the attitudes "job involvement" is the practice of "responsibility and teamwork." In case the organization tends to direct its strategy to an increase in activity in this practice, the favored tendency is for employees to become more active in their job involvement. In related and practical terms, the concern with identifying customer needs, their

involvement in production and personal contact, as well as teamwork in scheduling and prevention, fostered the positive rating with job involvement.

The hypothesis  $H_{Ic}$  (The “responsibility and teamwork” have a positive effect on job involvement) is the only one that cannot be rejected. Therefore, it is not possible to affirm that all quality practices have a positive effect in job involvement, or even that in the individual sense, the “customer focus,” “education and training” and “ongoing improvement and problem prevention” have a positive effect. The non-rejection of hypothesis  $H_{Ic}$ , in practical terms, indicates that organizations with the strategy of favoring actions that promote this practice tend to favor job involvement of their employees.

#### Impact on Job Satisfaction

Regarding the regression analysis of job satisfaction, as shown in Table 3 – Job Satisfaction Regression, the determination coefficient,  $R^2$ , is of 0.288, indicating a weak adjustment quality.

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Table 3 about here  
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The global significance of the model is quite significant. Therefore, the variables of the model are explanatory, presenting a certain influence in the attitude of “job satisfaction.”

As to the individual significance of each independent variable, the variable with significance in this regression analysis is “responsibility and teamwork,” which is the explanatory variable in job satisfaction. In this sequence, concern with activities related to responsibility and teamwork favor the tendency of employees to become more satisfied with their job.

In this scenario, the hypothesis  $H2_c$  (“responsibility and teamwork” have a positive effect on “job satisfaction”) is the only one not rejected. Therefore, the actions related to responsibility and teamwork, used as strategies in either troubleshooting or scheduling, are favorable contributions to increased job satisfaction.

#### Impact on Career Satisfaction

In the regression analysis of career satisfaction, as seen in Table 4 – Career Satisfaction Regression, the determination coefficient,  $R^2$ , is of 0.248, indicating a low adjustment quality.

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Table 4 about here  
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As a whole, the set of variables in the model is explanatory, presenting a certain influence in the attitudes of “career satisfaction.” As to the individual significance of each of the independent variables, “responsibility and teamwork” is again the variable with greatest significance.

There is no rejection of  $H3_c$  (“responsibility and teamwork” have a positive effect in “career satisfaction), which is again the only independent variable validated. It is then concluded that as verified in the analysis of involvement and job satisfaction, an organizational strategy intended to increase “responsibility and teamwork” tends to favor most positively employees’ career satisfaction.

#### Impact on Organizational Commitment

Finally, the regression of organizational commitment, as described in Table 5 – Organizational Commitment Regression, the determination coefficient,  $R^2$ , is of 0.370, indicating a low quality of adjustment.

Table 5 about here

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The significance of the model is present in any one of the analyses. In organizational commitment, the variables of the model are explanatory and influential in the dependant variable.

The individual significance of each one of the independent variables shows new data concerning the explanatory variables of organizational commitment. Aside from the already common “responsibility and teamwork” in all of the analyses effected by regressions, “ongoing improvement and problem prevention” emerges as a new explanatory variable. The factor “responsibility and teamwork” in this analysis does not have the main role as the explanatory variable in organizational commitment.

The confirmation of hypotheses does not reject  $H4_c$  (“responsibility and teamwork” have a positive effect in “organizational commitment”) and  $H4_d$  (“ongoing improvement and problem prevention” have a positive effect on “organizational commitment”); making them the only validated independent variables.

In short, as opposed to the previous results of regression analysis in which responsibility and teamwork were prominent, this analysis concludes that the implementation of actions related to teamwork and responsibility for problem solving, a strategy that favors increased activities related to ongoing improvement and problem prevention also has a positive influence in organizational commitment.

As to the validation of hypotheses provided by regression analysis conducted for each of the job attitudes, we can summarize that: (1) “responsibility and teamwork” have a positive effect on “job involvement,” “job satisfaction,” “career satisfaction” and “organizational commitment”; and (2) in the same way “ongoing improvement and problem prevention” has a positive effect in “organizational commitment.”

## CONCLUSIONS

This study confirms many of the factors observed throughout the literature review: that quality practices have positive implications on employees attitudes, and that a strategy directed to implementation and motivation for a culture of quality in the organization, through support from management, favoring attitudes towards the job.

Based on the correlations analysis, “customer focus,” “education and training,” “responsibility and teamwork” and “ongoing improvement problem prevention” have a positive relationship with “job involvement,” “job satisfaction,” “career satisfaction” and “organizational commitment. However, in the formulated hypotheses, it was not possible to confirm that all quality practices have positive correlations in employees’ attitudes. Only five of the twenty hypotheses presented were validated.

As seen in the study by Karia and Asaari (2006), “responsibility and teamwork” appears as the quality practice that contributed the most to “job involvement,” “job satisfaction,” “career satisfaction” and “organizational commitment.” Of all the practices studied, here it is the only one that presented a significant correlation with all activities in relation to the job. According to Daily and Bishop (2003), the greater the emphasis on responsibility and teamwork in relation to the organizations, the greater the positive contribution to the development of employees’ attitudes, especially in job involvement. In the same way, there are direct implications also with satisfaction and subsequently organizational commitment.

One of the most important aspects of QMS, the “ongoing improvement and problem prevention” has been shown as the second practice with a significant correlation. However, this correlation is only confirmed with “organizational commitment.” At the same time, this attitude is favored by involvement and job satisfaction. Therefore, the

development of activities in the areas of responsibility, teamwork, ongoing improvement and problem prevention can lead to greater organizational commitment which then leads to retention of effective personnel (Guimaraes, 1996), making it a strong competitive factor.

In terms of practices related to “customer focus” and “education and training,” there is no significant correlation with employees’ attitudes. According to other studies (Karia and Asaari, 2006), the analysis suggests that these practices may not be sufficiently developed in organizations, showing a mismatch in its significant correlation with attitudes.

In short, this study is an exploratory investigation of the QMS practices on employees’ attitudes, demonstrating the relationship between the variables. However, as instigators of the positive progress in employees’ job attitudes, “responsibility and teamwork” and “ongoing improvement and problem prevention” are the only ones shown to be strategic and contributory.

### **Limitations**

Certain limitations arose throughout the investigation, such as the absence of a response from all the certified enterprises, which limits the spectrum and diversity of responses. The use of a survey led to less control over the number of possible responses received, causing a disparity in the results.

### **Theoretical and Practical Implications**

The results of this study have managerial and human resources practical implications, relative to the attention required for analysis and implementation of activities favoring an organizational culture based on quality practices. An attentive management, sensible to quality practices can ensure a greater employee involvement and commitment, stimulating employees to be more active in training, responsibility and teamwork.

Therefore, it is suggested that management should pay more attention to the involvement of their employees in defining the creation, planning and production of the product, as well as assignment of responsibilities in either this stage or in the problem-solving one.

Another practical recommendation from this study is the suggestion for taking care of the activities related to ongoing improvement and problem prevention. Management should be more committed to these activities in order to promote employee involvement, providing a culture that allows interaction and responsibility for improvement of processes, intensifying their sense of commitment to progress and development in the organization. As verified in literature, organizational commitment promotes employee retention (Daily and Bishop, 2003). Therefore, the greater the degree of each employee's job involvement and job satisfaction, the greater the contribution to their retention in the organization, subsequently making it an attractive factor for competent personnel, proving it as an advantageous strategy in the actual organizational competitive environment.

According to Welikala and Sohal (2008), satisfied and motivated employees lead to satisfied customers. Based on the results, the quality practices, especially responsibility and teamwork, provide high levels of job involvement and job satisfaction. Therefore, it should be stressed that organizations, in managing their human resources, should pay special attention to the motivation and retention of good employees as a method of support for the implementation of quality culture, contributing to increase positive job attitudes. Satisfying employees with the intention of keeping them in the organization can be a strategic competitive factor in satisfying customers and promoting their loyalty. It is suggested that there be more concern for education and training, as well as activities related to customer focus. In addition, more guidance in these practices can

lead to an increase in positive job attitudes. It is proposed that management should pay attention to increasing activities that are sensitive to employees' involvement in relation to the needs and concern of customers, as well as to provide training to sustain this sensitivity. Moreover, perhaps more attention to training of management itself, at the quality level and to the skills of management in human resources, may favor an increase of its involvement with quality practices and consequently its involvement and commitment to the propagation and implementation of quality culture in the organization.

### **Hints of Future Research**

Testing this model in other work environments and cultures can help to generalize and identify how the results can be affected. Therefore, it would be interesting to research the implications that each different culture provides in relation to employees' attitudes.

At the same time, future studies may have to take into account other aspects that might interfere with change and work conditions: the type of internal communication in the organization, the employees' motivational level for reasons unrelated to the organization, as well as their responsibility and participation.

Still in this sequence of future studies, other interesting variables related to changes in attitudes could be introduced through studies at conducted before and after the implementation of the QMS, with the aim of evaluating the amount of change in attitudes presented and factors such as the influence on productivity of the organization.



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Table 1. Correlation between Quality Practices and Employees' Attitudes.

		<b>Customer focus</b>	<b>Education and training</b>	<b>Responsibility and teamwork</b>	<b>Ongoing improvement and problem prevention</b>
<b>Work involvement</b>	Pearson Correlation <i>p</i>	0.244(*) 0.011	0.176 0.068	0.294(**) 0.002	0.192(*) 0.045
<b>Job Satisfaction</b>	Pearson Correlation <i>p</i>	0.232(*) 0.016	0.427(**) 0.000	0.526(**) 0.000	0.423(**) 0.000
<b>Career satisfaction</b>	Pearson Correlation <i>p</i>	0.227(*) 0.018	0.380(**) 0.000	0.506(**) 0.000	0.407(**) 0.000
<b>Organizational commitment</b>	Pearson Correlation <i>p</i>	0.400(**) 0.000	0.477(**) 0.000	0.555(**) 0.000	0.594(**) 0.000

\*\*  $p < 0.01$  \*  $p < 0.05$

Table 2. Job Involvement Regression.

<b>Model Summary</b>			
R <sup>2</sup>			0.072
F			3.078
Sig			0.019
<b>Model</b>	<b>B</b>	<b>t</b>	<b>Sig</b>
Customer Focus	0.182	1.402	0.164
Education and Training	-0.038	-0.299	0.766
Responsibility and Teamwork	0.327	2.233	0.028
Ongoing Improvement and Problem Prevention	-0.143	-0.899	0.371

Table 3. Job Satisfaction Regression.

<b>Model Summary</b>			
R <sup>2</sup>			0.288
F			11.798
Sig			0.000
<b>Model</b>	<b>B</b>	<b>t</b>	<b>Sig</b>
Customer Focus	-0.181	-1.595	0.114
Education and Training	0.154	1.376	0.172
Responsibility and Teamwork	0.423	3.300	0.001
Ongoing Improvement and Problem Prevention	0.152	1.093	0.277

Table 4. Career Satisfaction Regression.

<b>Model Summary</b>				
	R <sup>2</sup>			0.248
	F			9.831
	Sig			0.000
<b>Model</b>	<b>B</b>	<b>t</b>	<b>Sig</b>	
Customer Focus	-0.155	-1.329	0.187	
Education and Training	0.090	0.778	0.438	
Responsibility and Teamwork	0.427	3.236	0.002	
Ongoing Improvement and Problem Prevention	0.151	1.057	0.293	

Table 5. Organizational Commitment Regression.

<b>Model Summary</b>				
	R <sup>2</sup>			0.370
	F			16.555
	Sig			0.000
<b>Model</b>	<b>B</b>	<b>t</b>	<b>Sig</b>	
Customer Focus	-0.053	-0.491	0.624	
Education and Training	0.116	1.104	0.272	
Responsibility and Teamwork	0.219	1.808	0.074	
Ongoing Improvement and Problem Prevention	0.399	3.046	0.003	