

Relationship Between Job Satisfaction and Business Excellence: Empirical Evidence from Hospital Nursing Departments

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Business excellence is important in terms of encouraging successful quality implementations, disseminating the result of such implementations to society, making quality culture widespread, creating a basis for comparison of quality implementations, and directing the quality implementer to continuous improvement. Excellence models affect performance and help organizations achieve organizational excellence. Furthermore, employee satisfaction is another concern of organizational excellence. The measurement of job satisfaction has become an important issue in TQM. In this respect, the extent to which employees are satisfied with what they are responsible for may directly influence the level of customer satisfaction with their services and products. The main purpose of the study is to determine the relationship between business excellence and job satisfaction. In order to reach this goal, a survey that contains Job Descriptive Index with 5 factors and EFQM Criteria with 6 factors is applied to different nursing departments of two research hospitals. Both hospitals are in the business excellence process. Data obtained in the study has been analyzed at the base of multivariate data analysis and the results show that the canonical correlation between job satisfaction and business excellence model is significant. Theoretical and practical implications of the findings are also discussed in the paper.

Introduction

Organizational development owes much to quality movement from the beginning of the industrialization era. Over time, quality evolved through various phases from inspection to total quality management (TQM). Total quality incorporates all perspectives of organizational management and requires that all parts are involved in order to achieve the company goal.

The business excellence models including the US Malcolm Baldrige Award, the European Foundation for Quality Management (EFQM), the British Quality Foundation Model, and the Australian Quality Award all originated from the TQM philosophy and they all aim to provide a means to a quantifiable assessment of performance.

In Europe, this interest in self-assessment was heightened with the introduction of the European Quality Award (EQA). The EQA model is the most widely used in Europe; it was developed by the European Foundation for Quality Management (EFQM) in 1991, and was first awarded in 1992. The EFQM was formed in 1988 by 14 leading European businesses, and it encourages European businesses to improve competitiveness through the use of TQM philosophy. Further details of the EQA are given by Conti (1993), Hakes (1995), and Nakhai and Neves (1994).

The EFQM has provided a holistic model (termed “business excellence” or the “excellence model”) to facilitate such a purpose. The model and the associated self-assessment process have given new direction to the quality movement and have driven deep and lasting changes into participating organizations (Dale et al., 2000).

Both in academia and in practice, it is known that there is a link between job satisfaction, the inclination to quit a job, and labour productivity (Igarria and Guimaraes, 1999). The survey results generally demonstrate that job satisfaction plays an important role in non-attendance, labour turnover, tendency to quit a job, and performance (Aamodt, 2001). Many researchers attempt to determine the factors that would help to describe job satisfaction and accordingly a better organizational climate for organizational effectiveness and performance (for example, Tutuncu and Demir, 2002). There are some consequences of the surveys on job satisfaction for profits and/or social benefits.

Excellence models affect performance and help organizations achieve organizational excellence. Furthermore, employee satisfaction is another concern of organizational excellence. The measurement of job satisfaction has become an important issue in TQM. In this respect, the extent to which employees are satisfied with what they are responsible for may directly influence the level of customer satisfaction with their services and products (Eskildsen and Dahlgard, 2000).

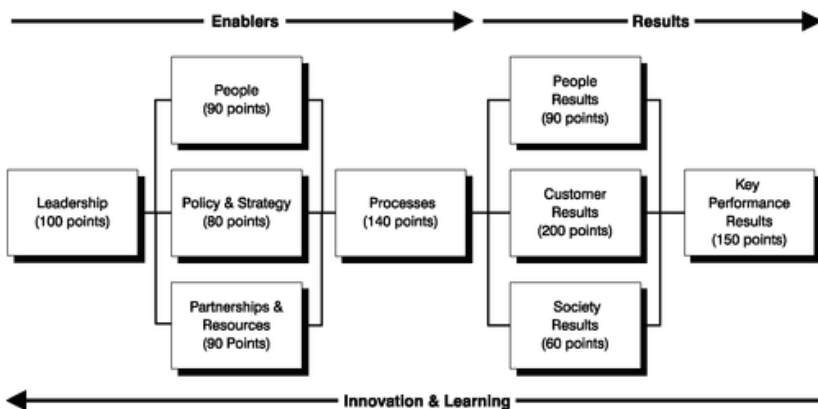
Literature Review

EFQM Business Excellence Model

The main problem of TQM and business excellence in today’s practices exists in their implementation. The application of ISO 9001 and other quality awards is only a step towards achieving TQM. Synchronizing total quality management practices and the ongoing method of working requires very strong motivation and emotional commitment for the implementation (Van der Wiele et al., 2000) of TQM. In 1999, the EFQM revised the model and made a noticeable switch in language from TQM to organizational excellence. Nabitz et al. (1999) stated that the word “quality” does not appear in either the sub-criteria or the areas to address on the revised model. The EQA is now known as the EFQM excellence award.

The EFQM model comprises five “enabler” criteria: leadership, policy and strategy, people, management, resources and partnerships, and processes. It also comprises four “results” criteria: customer satisfaction, people satisfaction, impact on society, and key performance results (EFQM, 2000). These criteria represent critical success factors and are parallel to the TQM principles (Boynton and Zmud, 1984; cited in Kanji and Tambi, 1999). Criteria affect performance and help organizations achieve organizational excellence (Oakland, 1999; Kanji and Tambi, 1999). The EFQM excellence model involves nine criteria and the relative importance of these criteria is indicated by the criterion weight structure (Figure 1). Research on the weight structure has been limited, and this is problematic regarding the use of the model because it raises the question of whether or not it makes any sense to compare companies according to an arbitrary weight structure, which has never been empirically tested (Eskildsen et al., 2002).

Figure 1: The EFQM Criterion Weight



The criterion weights of the award models have been important for the EFQM

Excellence Model as well as for others (Lascelles and Peacock, 1996; Porter and Tanner, 1998; Conti, 1997). The logic behind this is that the award criteria have always been intended to be instruments for comparing an organization with other organizations or to rate an organization against a commonly adopted scoreboard (Conti, 1997).

Peters (2000) noted that quality was seen as old-fashioned and superseded, to an extent, by the concept of “excellence”. Dale et al. (2000a) also stated that people at the center of initiatives including self-assessment against the EFQM Excellence Model often believe that their performance improvement initiatives are based on quality, although they know little about the subject.

The excellence model has evolved to be a framework that can incorporate several other initiatives. Jeanes (2000) noted that every type of organization will be able to include any one of the dozens of quality initiatives under the Model and he then went on to identify the relevance of the Model to several initiatives and practices. This view was also supported by Shephard (2000). Thus, while the Excellence Model provides an overall framework, it presupposes that an organization has a number of established systems and initiatives to deal with process and other operational issues. Morgan (2000) asserted that there are many parallels between Six Sigma and the Excellence Model and that both are complementary approaches.

Job Satisfaction

Job satisfaction can be defined as pleasantness or unpleasantness of employees while working (Davis, 1988). The literature points out that the term job satisfaction is interrelated to the term ‘attitude’ (Robinson and Head, 1983; Yukl and Wexley, 1971). Because social and cultural lifestyle is influenced by several human feelings and values, it leads to an increase in the number of satisfaction attributes. The term job satisfaction is considered an attribute that exists as the equity of a variety of desired and non-desired job-related experiences. It is also defined as the degree of fit between the features of a job and employees’ expectations. According to this approach, job satisfaction appears if expectations are met or fulfilled; otherwise dissatisfaction would be the outcome of any working experience.

There are several variables in the literature associated with a nurse job satisfaction such as autonomy, achievement, interaction, job importance, prestige, professional status, and stress (Blegen, 1993). Organizational structure variables, such as vertical participation, horizontal participation, formalization, and organic versus mechanistic structures, are also related to job satisfaction. Acorn, Ratner, and Crawford’s (1997) model of organizational commitment suggested a relationship between environmental structure, perceived autonomy, and job satisfaction, decentralized or organic organizational structures as opposed to mechanistic or centralized organizational structures, directly supported organizational commitment and indirectly affected autonomy and job satisfaction. In addition, Cumbey and Alexander (1998) found a positive relationship between organizational structure variables of vertical and horizontal participation and job satisfaction among public health nurses. Cumbey and Alexander (1998) and Organ and Greene (1981)

examined the impact of formalization—the extent to which standard practices, policies, and position responsibilities have been explicitly formalized by the organization—finding that role clarity, standard practices, and rules attributed to greater job satisfaction.

In addition, there are researchers who believe that job satisfaction is a result of both employees' expectations and aspirations and their existing status or as multi-dimensional attitudes towards their jobs and working places (Hamermesh, 2001; Clark and Oswald, 1996). From this argument, it seems reasonable that the level of job satisfaction changes based on working conditions, demographic characteristics, and expectations in the future career or the type of work being carried out. Research findings support the idea that an employee might be satisfied with a particular group of job attributes, while not with others (Qu and Tse, 1996). In line with this argument, it may be possible to suggest that job satisfaction is an abstract of a variety of components in the business where one works.

In a comprehensive empirical investigation of the basic determinants of job satisfaction carried out among 11,000 employees, one sees that social security is the primary factor (Herzberg, Mausner, and Snyderman, 1959). In a number of research studies completed in the 1970s, the most significant factors influencing the level of job satisfaction included gender, age, experience, well-paying salary, promotion opportunities, context of jobs, control, and education (Sousa and Poza, 2000; Clark, 1997; Clark and Oswald, 1996; Clark et al., 1996). As a result of various studies carried out subsequently, some new dimensions were outlined. These are security, skills and qualifications, knowledge, management policy, atmosphere, reliability of labour unions, culture, expectations, and motivations (Ferrie et al., 2005; Furnham, 2002; Heywood et al., 2002). It appears that the findings of such studies also support those of earlier studies. Based on these factors, one could suggest that some job satisfaction related variables appear to be objective values as some others are subjective or psychosocial values (Marsden and Cook, 1993).

The literature review indicates four major measurement theories with regard to the subject of job satisfaction. The first is the Minnesota Satisfaction Questionnaire, improved by Weiss, Davis and England (1967). Second, Porter's (1961) Need Satisfaction Questionnaire, which is based on Maslow's hierarchy of needs. Third, is the face scale elaborated by Kunin (1955). Finally, the Job Descriptive Index (JDI), created by Smith, Kendal and Hulin (1969), which is one of the most common analytic methods for measuring job satisfaction. There are sub-indexes such as work specifications, payment, promotion choices, communication with the people and supervision in JDI (Barrows and Wesson, 2000).

Job Description Index (JDI) (Smith et al., 1969) is the most frequently quoted scale used in measuring job satisfaction. The scale includes topics such as type of job, remuneration, promotion, superior management, and job associates. Spector (1985) identified some problems with JDI when it is applied to employees from the service sector, so he developed the Job Satisfaction Survey (JSS) that underlines the more important aspects of satisfaction of remuneration, promotion, manage-

ment styles and relations, welfare, incentive, operation procedures, associate relationships, job description, and communication.

Job Satisfaction in Business Excellence

It has been empirically verified that the application of holistic management models such as the EFQM Excellence Model has a positive effect on corporate performance (Kristensen et al., 2000). While it can be argued that the wide acceptance of the business excellence model slowed down the growth of the use of classical quality management tools and techniques, it is debatable that quality died or was totally eliminated (Adebanjo, 2001). The move from the EFQM model to the European Business Excellence Model seems justified but more explanation is needed (Sun et al, 2004).

Business excellence as a topic has received considerable attention from academic researchers and is well defined in the literature (Chin et al., 2004; Bemowski and Stratton, 1995; Conti, 1997; Coulambidou and Dale, 1995; Hakes, 1998; Lascelles and Peacock, 1996). The search for excellence and dissemination of the “best practice” is the main philosophy and is a major function of the Business Excellence Model, but many writers, such as Galloway (1996), have difficulty in defining quality this way. It was also seen as addressing the needs of both internal customers and stakeholders in allowing the business to meet set goals and objectives (Ritchie and Dale, 2000).

Some new models are developed for business excellence. One of them is Kanji's (1998) Business Excellence Model. Later, Kanji and Sa (2002) proposed the Business Excellence Measurement System. The system is based on two core factors; leadership and organizational values. Business excellence is related to both quality performance and customer satisfaction. Some empirical studies have addressed cause-and-effect linkages or correlations among organizational performance measures (Evans and Jack, 2003). These include Norreklit (2000), who examined the assumptions and cause-and-effect chain in the balanced scorecard; Brandt (2000), Anderson, Fornell, and Lehmann (1994), Bernhardt et al. (2000), and Edvardsson et al. (2000), who Studied the relationship between customer satisfaction, value and loyalty, and financial performance; Tornow and Wiley (1991), and Hallowell et al. (1996), who studied the relationships between employee attitudes and customer satisfaction; Wiley (1991), and Borucki and Burke (1999), who studied the relationships between work environment and customer service as related to financial performance; and Naumann and Hoisington (2000), who studied the relationships between customer attitudes and market share/financial performance.

Human resource management is also important to customer satisfaction as is strategic planning to quality performance (Flynn and Saladin, 2001). Excellence models affect performance and help organizations achieve organizational excellence. Furthermore, employee satisfaction is another concern of organizational excellence. Organizations should focus on internal customers' as much as external customers'. The link between employee satisfaction and customer satisfaction has

been verified empirically (Dahlgaard et al., 1998). Eskildsen and Dahlgaard (2000) have developed a causal model for employee satisfaction. It is based on both the EFQM Excellence Model and Hackman and Oldham's Work Design Model. It has a limitation about the data that was obtained by one company.

The main purpose of this study is to determine the relationship between the excellence model and job satisfaction (JS) in nursing departments. The paper will focus on identifying the relationships that create satisfied employees in the business excellence process. Since the Business Excellence Model (BEM) has previously been proved to improve performance and includes the human factor as one of its main dimensions, enablers of BEM may influence the employees of an organization more than the components of JS. The search for excellence and dissemination of "best practice" is the main philosophy, and a major function of the Business Excellence Model but many writers like Galloway (1996) have difficulty in defining quality this way. It was also seen as addressing the needs of both internal customers and stakeholders in allowing the business to meet set goals and objectives (Ritchie and Dale, 2000).

As one of the modern organization theories, the contingency approach suggests that organizational structure is related to the environment and technology (Duncan, 1972; 1973). On the other hand, as one of the post-modern approaches, the population ecology approach argues that the unit of analysis may be determined as organizations, populations and communities in any given area, as well as any single organization. According to Hannan and Freeman (1977), any sub-level unit of analysis cannot perform accurate research without conceiving a high level unit of analysis. According to Hofstede (2005), Uncertainty Avoidance (UAI) is highly correlated with the country's emotional values. The study conducted among 56 countries showed evidence that UAI is higher than other dimensions in Turkey. Therefore, his study stated that Turkish people are emotional. Taking into account the general features of the Turkish population, the original form of the JDI has been modified for application to this current research.

In fact, the JDI is a technique measuring the level of job satisfaction, which is easy to utilize with under-educated individuals, as it allows the use of questions with single-word answers, for example, "yes" or "no". The fact that Turkish society is characterized by a high-context culture limits the use of JDI in its original form. In other words, in high context cultures, communication is sentimental, symbolic and rather abstract (Smith and Bond, 1994). The pilot study for this current research indicates that participants do not tend to answer questions with single words. As a result, attitude scales are frequently used to evaluate job satisfaction. In doing so, subjects are asked to express their agreement or disagreement on a Likert-type scale. For this reason, the expressions utilized in the JDI are presented at interval scale. With this application, it is aimed to take the JDI out of low context culture, adapting to the characteristics of the Turkish population.

In the JDI, the factors used to evaluate the level of job satisfaction focus on specific work elements that an employee counts as important. Factors like supervi-

sion and companionship are taken into consideration in this model. However, the conducted job satisfaction analysis obstructs the employee from considering other factors. In order to overcome this issue, a summary question is utilized: measuring an overall level of job satisfaction. This question is represented by the statement as “overall, I enjoy doing my job”. With the inclusion of this statement, other omitted slots are filled and a comparative analysis is expected to result. Thereupon, global indexes provide better results while evaluating job performance and inspecting organizational outputs like non-attendance (Bruck et al., 2002). The JDI was restructured with this question and reached a broader conclusion.

Methods

The data were obtained by administrating a structured-questionnaire survey. The questionnaire instrument consisted of four parts. The first part involved 26 likert-type survey items regarding employees’ satisfaction such as “my colleagues are friendly”. The second part of the instrument included 36 questions designed to measure the level of the employees’ perception on EFQM Excellence model criteria and presented statements such as “Leaders motivate, support and recognize the organization’s people”. The third part was devoted to investigating the relationship between employees’ perception level of the Business Excellence Model and Job Satisfaction (2 questions). The reliability and validity of both instruments (JDI and EFQM) were previously proved by other researchers. Since the scales were to be used in Turkey, it had to be retested for validity and reliability. The reliability and validity have been also proven in recent studies (for example, Tutuncu and Dogan, 2005; Tutuncu et al., 2005). A five-point Likert scale was used in this part, ranging from ‘definitely agree’ (1) to ‘definitely disagree’ (5). The final part involved 6 questions regarding basic demographic characteristics of the respondents such as “How old are you?”. The survey instrument was pilot tested among 25 employees. The pilot results were used to improve the clarity and readability of the questions.

The study was carried out in three stages: population, data collection, and data analysis. According to the KALDER, five companies and institutions won the EFQM Business Excellence Award in 2004. All of them agreed to participate in the research. Approximately 9000 total employees worked in the five organizations. As a result, multi-stage sampling was used for the survey due to its efficiency. In total, 600 questionnaires were distributed by the researchers and 407 questionnaires were returned, with a response rate of (69 %) which is statistically acceptable for data analysis. Of these, 2 were eliminated due to missing data. The data obtained were analyzed using a SPSS 13.0 and SAS 9.0 program. Data analysis consisted of descriptive statistics, frequency distribution, and canonical correlation analysis within the multivariate data analysis.

Results

Demographic dispersion and profile of employees under the base of definitive statistics are shown in Table 1. 405 people completed the study. The reliability tests were implemented on data. To increase the reliability coefficient of the test, two participants’

data were taken out of the study. As a result of the test, the general Cronbach alpha of data was found to be as 0,98. This is acceptable for reliability analysis (Nunnaly, 1978).

Table 1: Demographic Dispersion

	Number	%		Number	%
SEX			EDUCATION		
Female	126	31,1	High school	73	18,0
Man	260	64,2	University	244	60,2
Missing	19	4,7	Post graduate	70	17,3
Total	405	100,0	Missing	18	4,4
AGE			Total	405	100,0
At 15 or younger than 25	29	7,2	TOTAL WORKING YEARS		
26-32	138	34,1	0-2	89	22,0
33-42	133	32,8	3-5	108	26,7
43-50	62	15,3	6-9	133	32,8
51 and above	26	6,4	More than 10 years	55	13,6
Missing	17	4,2	Missing	20	4,9
Total	405	100,0	Total	405	100,0
TENURE (PRESENT JOB)					
Less than 1	33	8,1			
1-5	102	25,2			
6-10	75	18,5			
11-20	47	11,6			
21 and more	125	30,9			
Missing	23	5,7			
Total	405	100,0			

Table 2 shows the descriptive statistics of the survey results. The mean values come out between 1-5 numerical values (in reading Likert scale results, 5: strongly agree, 4:agree, 3: neither agree nor disagree, 2: disagree, 1: strongly disagree).

Table 2: Descriptive Statistics

	N	Mean	Std. Deviation
work	405	3,80	,658
wages	405	3,24	,874
promotion	405	3,55	,992
coworkers	405	3,92	,761
supervision	405	3,77	,845
leadership	405	4,04	,813
policy	404	4,06	,736
people	405	3,78	,889
partners	405	4,09	,664
processes	404	4,06	,701
results	402	4,04	,644
JS	404	4,29	,897
BEM	401	4,06	,900
Valid N (list wise)	398		

In order to determine the relationship between two sets of variables, canonical correlation analysis is used. Canonical correlation analysis is a multivariate statistical model that facilitates the study of interrelationships among sets of multiple dependent variables and multiple independent variables. In this study, job satisfaction (JS) and business excellence models (BEM) are specified as the set of dependent variables.

One of the dependent variables, job satisfaction, is measured through a job descriptive index (JDI) with independent areas of satisfaction. There are 6 more dependent variables associated with the other dependent variable in the business excellence model.

The level of significance of a canonical correlation generally considered to be the minimum acceptable level for interpretation is the .05 level, which (along with the .01 level) has become the generally accepted level for considering a correlation coefficient statistically significant (Hair et al., 1984). In this study, both canonical correlations are statistically significant ($p < 0.05$). In addition, multivariate tests like Wilk's lambda, Pillai's trace, Hotelling's trace, and Roy's gcr are also performed (Table 3). The results of these tests also prove that both correlations are significant at the 0.0001 level. Redundancy analysis for the first and the second function is observed.

Table 3: Canonical Correlation Analysis Relating Levels of Dependent and Independent Set

Measures of Overall Model Fit for Canonical Correlation				
<i>Canonical Function</i>	<i>Canonical Correlation</i>	<i>Canonical R²</i>	<i>F Statistics</i>	<i>Probability</i>
1	0.6672	0.445	9.78	0.0001
2	0.4771	0.227	2.58	0.0001
Multivariate tests of significance				
	<i>Value</i>	<i>Approx. F Statistics</i>	<i>Probability</i>	
Wilks' lambda	0.429	9.78	0.0001	
Pillai's trace	0.673	9.45	0.0001	
Hotelling's trace	1.096	10.13	0.0001	
Roy's gcr	0.802	14.95	0.0001	

Table 4: Canonical Results

	<i>Canonical Function 1</i>		<i>Canonical Function 2</i>	
	<i>Loadings</i>	<i>Cross-loadings</i>	<i>Loadings</i>	<i>Cross loadings</i>
<i>Criterion set</i>				
JS-Job Satisfaction	0.9374	0.6254	-0.3482	-0.1664
BEM-Business	0.4911	0.3277	0.8711	0.4156
<i>Excellence Models</i>				
Explained Variance	56%		44%	
<i>Predictor set</i>				
Work itself	0.8724	0.582	-0.1909	-0.0911
Wages	0.3699	0.2468	-0.2828	-0.1349
Promotion	0.6452	0.4305	-0.0207	-0.0099
Co-workers	0.3396	0.2266	0.1324	0.0632
Supervision	0.548	0.3656	-0.0967	-0.0461
Leadership	0.6841	0.4564	0.1032	0.0493
Policy	0.6708	0.4475	0.3951	0.1885
People	0.7256	0.4841	0.0539	0.0257
Partners	0.6104	0.4072	0.3756	0.1792
Processes	0.493	0.3289	0.6485	0.3094
Results	0.5603	0.3738	0.521	0.2486
Explained variance	37.30%		10.40%	
Canonical Coefficient	0.6672		0.4771	
Redundancy R^2	44.50%		22.70%	

From the redundancy analysis, it is seen that the canonical R^2 of the first function is .6672, and the redundancy analysis for the second function produces a lower value as Canonical R^2 of .4771. From the redundancy analysis and the significance tests, the first canonical function should be accepted. Table 4 represents canonical results of the dependent and independent sets for both functions (variates).

Table 4 shows the canonical coefficients of the dependent variables (JS and BEM) that belong to the criterion set and the 5 satisfaction measures and the 6 components of business excellence model that belong to the predictor set. Canonical function 1 has been found significant from the significance tests and redundancy

values. Function 2 has not been taken into consideration since it is significant but with lower loadings.

In Function 1, both dependent variables (criterion set) have loadings exceeding .45. This indicates a positive correlation between JS and BEM. As the canonical loadings of the predictor set were examined, all of the independent variables loadings have positive values. Work itself (0.8724), people (.7256), processes (.7856), partners (.7817), leadership (.6841), policy (.6708), and promotion (.6452) have the highest loadings. Co-workers (.3396), and Wages (.3699) have lower loadings, which may mean that coworkers and wage factors have relatively a weak effect on dependent variables.

As far as JD components are concerned, supervision and promotion also have a positive but relatively moderate impact on the criterion set. According to Hofstede (2005) emotional values are respected more than other factors. In other words, of the five factors belonging to JDI, work itself (working conditions and its types) and people are perceived as being more meaningful on the road to job satisfaction

In order to validate the canonical correlation analysis, sensitivity analysis of the independent set also has been made. Independent variables like promotion, leadership, partnership, and supervision have been deleted but there have not been significant changes at the factor loadings. This analysis ensures the validity of the data.

Conclusion

The wages which take place in Herzberg's two factor theory also appear empirically as hygiene factor in this study. Besides this, the absence of other hygiene factors of the theory in this study can be attributed to the oriental characteristics of Turkish people. Nevertheless, it is remarkable that all other independent variables are positively interrelated.

As far as the rigor in the working conditions of the healthcare sector is concerned, the canonical relationship between job satisfaction and business excellence may help healthcare managers improve working conditions, human resource management, and leadership issues. When canonical loadings are examined, it is seen that the enablers of BEM have a stronger impact on job satisfaction.

As a result, there is a positive relationship between job satisfaction and business excellence. Wage factor has the weakest effect on JS and BE. Employees do not evaluate their job satisfaction in relation to their wages in the process towards business excellence. Although there is a strong relationship between canonical criteria variables, it is seen that business excellence criterion is more affected by the predictors, especially the independent variables related to the BEM's original measure.

Management that wants to implement a business excellence model practically

should also take work itself, supervision, promotion, and leadership variables into consideration. These results also support previous research that advocates the vital role of supervision and leadership. The relationship between JS and BEM shows that organizations that implement business excellence models should be aware of job satisfaction, which has a supporting role in successful implementation.

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