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Relation between job satisfaction and job performance in healthcare services

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Abstract

In an environment of tension and division of labor such as Healthcare Services, the performance of employees is one of the most basic challenges. The reason is that performance as a phenomenon is closely related to aspects of effectiveness, knowledge management and quality from one side and to management, financing and development of the organization from the other. Especially for doctors and nurses performance issues are inextricably linked to patient safety. The international literature shows that a large number of factors influence employee performance such as satisfaction from the profession, work environment, compensation policies, etc. In this work we try to analyze the relationship between job satisfaction and job performance. The analysis takes place in the National Centre of Public Administration and Local Government during the training process, where a questioner with 7-Likert scale is distributed to 246 personnel (nurses). The analysis is taking place between job satisfaction parameters versus self-job performance parameters. Principal components analysis suggests that for job satisfaction the most important parameters are (based on their weights): satisfaction from manager (weight=0.703), satisfaction form manager administration (weight=0.732), satisfaction of ways of working (weight=0.657), satisfaction of recognition (weight=0.627), satisfactory of working hours (weight=0.695) and satisfactory of working security (weight=0.707). For the self - job performance most important parameters are (based on their weights): self-satisfaction of quantity of work (weight=0.896), self-satisfaction of productivity (weight=0.878), self-satisfaction of initiatives (weight=0.794), self-satisfaction of working targets (weight=0.766), and self-satisfaction of quality improvements (weight=0.792).

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1. Introduction

The close relationship between job satisfaction and job performance is not something that has arisen recently addressed (Argyris, 1964), (Gross & Etzioni, 1985). In contrary many research efforts have been made in the past to detect the subject (Emery & Trist, 1960), (Organ, 1977), (Ostroff, 1992), (Peterson & Luthans, 2006). The research has dealt with the relationship between the two features in many forms of economic and productive activities in the market, such as Bunks (Hira & Waqas, 2012), Public bus transport (Padmakumar, 2013) and in quite extensive ways of analysis (Judge. Thoresen, Bono, Patton, 2001). Especially in healthcare services and the nursing profession job satisfaction is considered one of the key factors shaping the growth of performance in the project (Hanan. 2009). The analysis of the specific issues and generally of nurse's working environment holds a large part of modern literature. In this paper, we are trying to investigate the relationship between these two concepts exploring attitudes, perceptions and self-evaluation of Greek nurses working in the National Health System (NHS) of Greece.

2. Job Satisfaction and Nurses

Many studies have addressed the issue of nurses' satisfaction with their work. A careful study of the literature can reveal many interesting factors that contribute to the formation of a sense of satisfaction for nurses (Lu, Barriball, Zhang, While, 2012). Furthermore, job satisfaction is a key issue for health care professionals around the world (Doef, Mbazzi, Verhoeven 2012). Investigations reveal first of all that the organizational features of a structure (usually a hospital) can greatly influence the job satisfaction for nurses (Adams & Bond, 2000). Such features are the personnel shortages, lack of equipment, intention to leave and others (Liu, Zhang, Ye, et.al., 2012). Contemporary management believes that the satisfaction of nurses from their work is the result of rational management and has a strong link with proper leadership and motivation to healthcare organizations (Giallonardo, Wong, Iwasiw, 2010) leadership and job engagement (Wong & Laschinger, 2013). Finally, job satisfaction for nurses has a high correlation with specific issues such as occupational conditions (eg infectious diseases) (Hamama, Tartakovsky, Eroshina, et.al. 2014) (Kinzl, Knotzer, Traweger, et.al., 2004). or ethics (Goldman and Tabak, 2010).

3. Job Performance in nursing profession

Job performance is considered as an important parameter in the nursing profession, in such a way which in the last pent etic, new innovative ways of calculation and consideration have invented (Becton, 2012) even for new registered professionals (Unruh and Nooney, 2011). After a careful detection of international literature, what can be seen is that job performance is directly and strongly related to stress and burnout (Gandi, Wai, Karick, Dagona, 2011). Equally, crucial role in shaping the professional performance playing both the Nursing Leadership (Salanova, Lorente, Chambel, Martínez, 2011) and the procedure of rational decision making (Mohammed, Nassar, Ghallab, Morsy, 2013). Of course, we have to evaluate the close relationship of nurse's job performance with the work schedules, staffing and epidemiological characteristics of the population they serve (Trinkoff, Johantgen, Storr, et.al., 2011).

4. The relationship between Job Satisfaction and Job Performance for Nurses

There is a close relationship between job satisfaction and performance in nursing sector (Hanan, 2009) as such in other professional categories (Kahya, 2008) and this phenomenon is observed worldwide (Nabirye, Brown, Pryor, Marles, 2011). Of course, performance as a task, is a complex feature which depends – except global job satisfaction - on many other conditions which are not readily determinable. These conditions are either operational either psychological such as organizational commitment, work values etc (Gutierrez, Candela, Carver, 2012).

Therefore easily explained the effort is made for scientific interpretation and evaluation of this relationship, which is often, involves personal values of nurses (Saari, and Judge, 2004) (Chou, Hecher, Martin, 2012).

5. Research Methodology

The analysis takes place in the National Centre of Public Administration and Local Government during the training process, where a questioner with 7-Likert scale is distributed to 246 personnel (nurses). From them 82.6% were females, and 34% was between 41-45 years old. Also, 33.9% of the participants are working at the same department from 1-5 years.

Due to the large number of questions, a multivariate statistical analysis approach (Mardia , Kent and Bibby, 1979) can be applied to classify the importance of individual questions. This technique is useful where there are many independent and possibly dependent variables, which correlate with each other to varying degrees. Analysis can further be extended using Principal components analysis (PCA) (Everitt and Dunn, 2001; Bartholomew, Steele, Moustaki and Galbraith, 2008). This is a technique that can be applied to a single set of variables to discover which sets of variables form coherent subsets that are relatively independent of one another. Principal components analysis is often used in data reduction to identify a small number of factors that explains most of the variance observed in a much larger number of manifest variables (Anderson, 1996). Variance plays an important part, because PCA attempts to identify factors that explain as better as they can the overall variance (total information) based on the communalities. Communality is the part of the variance share with one or more variables. Calculation of the communalities is based on the measure of sampling adequacy (MSA). The importance of the variables for the proposed model can be calculated using the measure of sampling adequacy (MSA). High values close to 1 indicate strong relationship between the variables (Anderson, 1996; Everitt and Dunn, 2001). To determine if the data are appropriate for factor analysis the Kaiser-Meyer-Olkin Measure of Sampling Adequacy must be calculated (Kaiser, 1974a). Small values of thee KMO MSA indicate problem with sampling. Values higher than 0.7 are acceptable (Norman and Streiner, 2008).

The analysis is taking place between job satisfaction parameters versus self job performance parameters. The reliability of the answers considering the questionnaire, given by the α-Cronbach measure is very satisfactory with values for job satisfaction parameters α=0.879 with KMO MSA=0.76, and for self job performance parameters α=0.871 with KMO MSA=0.801.

Principal components analysis suggests that for job satisfaction the most important parameters are (based on their weights): satisfaction from manager (weight=0.703), satisfaction form manager administration (weight=0.732), satisfaction of ways of working (weight=0.657), satisfaction of recognition (weight=0.627), satisfactory of working hours (weight=0.695) and satisfactory of working security (weight=0.707). These parameters are explaining the 68.7% of the total information proposing two factors. These factors are: Manager Administration including satisfaction from manager, satisfaction form manager administration, satisfaction of ways of working and satisfaction of recognition; Job Productivity including satisfactory of working hours and satisfactory of working security. Descriptive statistics (mean values and standard deviation) as well as the summarized results based on the PCA analysis are illustrated in Table 1.

Table 1. Summarized statistical measures for job satisfaction (MSA=0.76)

Questions	satisfaction from manager	satisfaction form manager administration	satisfaction of ways of working	satisfaction of recognition	satisfactory of working hours	satisfactory of working security	total information
Communalities	0.703	0.732	0.657	0.627	0.695	0.707	68.7%
MEAN	4.41	3.88	4.19	4.29	3.81	4.24	
STD	1.68	1.59	1.53	1.65	1.76	1.82	

Investigation for the normality suggests that (after the application of Kolmogorov-Smirnov test) none of the variables are normal (p<0.0001), leading us to nonparametric analysis. Spearman's rank correlation coefficient is a nonparametric (distribution-free) rank statistic proposed as a measure of the strength of the association between two variables (Spearman 1904a, 1904b, 1910; Siegel and Castellan, 1988). Spearman's correlation coefficient is a

statistical measure of the strength of a non-linear relationship between paired data, with values r∈[-1,1]. The closer r is to ±1 the stronger the relationship (positive or negative) with range scale values: 0.00-0.19 "very weak", 0.20-0.39 "weak", 0.40-0.59 "moderate", 0.60-0.79 "strong" and 0.80-1.0 "very strong" (Kendall, and Gibbons, 1990; Kendall, 1970; Myers and Well, 2003). Correlations between the proposed questionnaires of job satisfaction are represented in the following results (considering r-Spearman) (Figure 1):

- satisfaction from manager vs satisfaction form manager administration (r=0.6)
- satisfaction form manager administration vs satisfaction of ways of working (r=0.54)
- satisfaction of ways of working vs satisfaction of recognition (r=0.6)
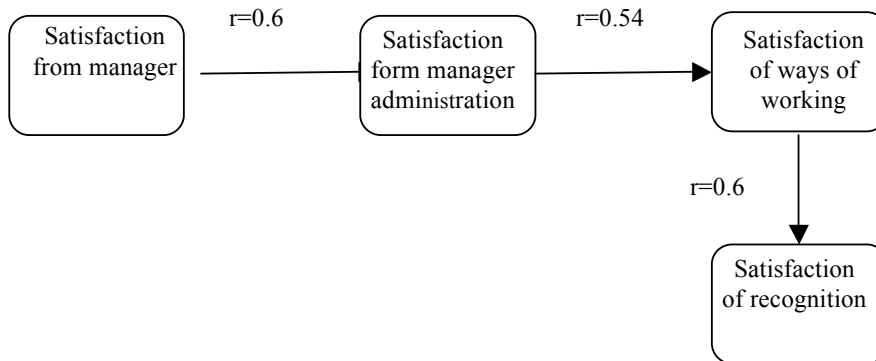

Fig. 1. Graphical presentation between variable correlations for job satisfaction

For the self job performance most important parameters are (based on their weights): self satisfaction of quantity of work (weight=0.896), self satisfaction of productivity (weight=0.878), self satisfaction of initiatives (weight=0.794), self satisfaction of working targets (weight=0.766), and self satisfaction of quality improvements (weight=0.792). These parameters are explaining the 82.49% of the total information proposing two factors. These factors are: Job quality: self satisfaction of quantity of work and self satisfaction of productivity; Job Personality: self satisfaction of initiatives, self satisfaction of working targets and self satisfaction of quality improvements. Descriptive statistics (mean values and standard deviation) as well as the summarized results based on the PCA analysis are illustrated in Table 2.

Table 2. Summarized statistical measures for self job satisfaction (MSA=0.801)

Questions	self satisfaction of quantity of work	self satisfaction of productivity	self satisfaction of initiatives	self satisfaction of working targets	self satisfaction of quality improvements	total information
Communalities	0.896	0.878	0.794	0.766	0.792	82.49%
MEAN	6	5.99	5.77	5.3	5.37	
STD	0.99	0.89	1.15	1.22	1.18	

Investigation for the normality suggests that (after the application of Kolmogorov-Smirnov test) none of the variables are normal (p<0.0001), leading us to us nonparametric analysis. Correlations between the proposed questionnaires of job satisfaction are represented in the following results (considering ρ-Spearman) (Figure 2):

- self satisfaction of quantity of work vs self satisfaction of productivity (r=0.76)
- self satisfaction of initiatives vs self satisfaction of working targets (r=0.66) and self satisfaction of initiatives vs self satisfaction of quality improvements (r=0.7)

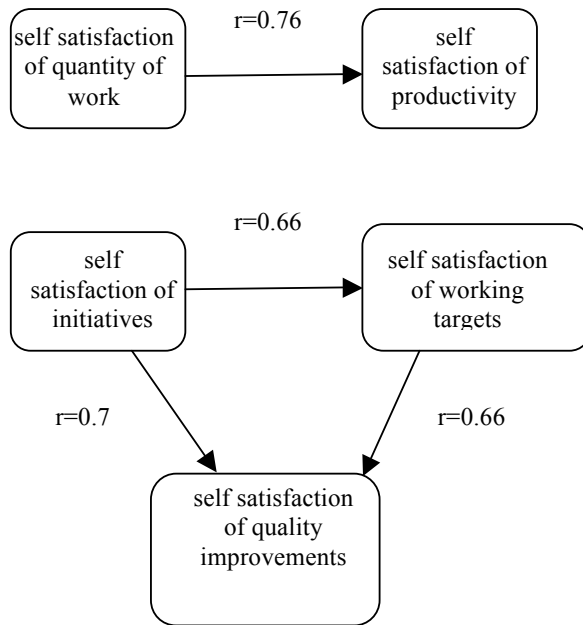- self satisfaction of working targets vs self satisfaction of quality improvements (r=0.66)

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┌──────────────┐    r=0.76    ┌──────────────┐
│ self satisfaction │────────────→│      self      │
│ of quantity of    │             │ satisfaction of │
│      work         │             │  productivity   │
└──────────────┘             └──────────────┘
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                    r=0.66
┌──────────────┐           ┌──────────────┐
│     self        │──────────→│ self satisfaction │
│ satisfaction of │           │   of working     │
│   initiatives   │           │    targets       │
└──────────────┘           └──────────────┘
        │                          │
   r=0.7 │                          │ r=0.66
        ↓                          ↓
        ┌──────────────┐
        │ self satisfaction │
        │   of quality     │
        │  improvements    │
        └──────────────┘
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Fig. 2. Graphical presentation between variable correlations for self job satisfaction

Conclusions

In this work investigation of the performance for the quality of job satisfaction and self job satisfaction for nurses is taking place. The analysis applies multivariate statistical analysis to introduce the importance of the given questionnaires, based on the nurse's opinions. For the job satisfaction two factors have been introduced which are Manager Administration and Job Productivity explaining the 68.7% of the total information. Mean values of the satisfaction are about moderate (3.81 - 4.41) introducing average correlations between them The results of our analysis, supported by many findings in literature that emphasize the role of proper management in creating a good climate in the workplace. Modern nursing administration has to face many challenges such as rapid changes in the field of healthcare services, complexity of nursing profession (Hussain, Rivers, Glover, and Fottler, 2012). (Wang, Tao, Ellenbecker & Liu, 2012) and of course the psychological effects incurred by the nursing work (Van Bogaert, Clarke, Willems and Mondelaers, 2013). Although, contemporary practices and shapes of leadership support the building of confidence and promote effects such as job satisfaction (Wang, Chontawan & Nantsupawat, 2012). Furthermore, the ability of nursing managers to communicate with the employees and respect their opinions in considered of high importance for the nursing staff (Garon, 2012). The relationship between productivity (often under the form of personal achievements) and satisfaction in job is also considered strong (Van Bogaert, Clarke, Willems and Mondelaers, 2013) (Khan, Musarrat, Aleem, and Hamed, 2012).

For the self - job performance most important parameters are Job quality and Job Personality explaining the 82.49% of the total information. Mean values of the satisfaction are about high (5.3-6) introducing strong correlations between them. The quality of the job indicated in several more studies as a factor which influence performance (Aiken, et.al., 2013), (Almalki, FitzGerald and Clark, 2012). Finally, the interconnection and interdependence of the two parameters (personality of the worker and job performance) is a phenomenon that has been studied in depth for the most of production processes (Mkoji & Sikalieh, 2012). Especially for healthcare services, personal feelings, opinions and even attitudes of nurses play a crucial role in their performance (Gurkova, Čap, Žiakova & Ďuriskova, 2011). The analysis of this issue highlights several matters such as intensions,

consciousness, personal culture (Chang, et.al., 2012), which require further investigation. For the latter, techniques from other disciplines may be proved very useful. Such as those proposed by (Nasiopoulos et al, 2014a) (Nasiopoulos et al, 2014b).

In the future, scholars investigating the link between job satisfaction and performance should also consider the impact of other variables both at the individual level such as demographics (Belias et al., 2013), emotional intelligence (Trivellas, Gerogiannis & Svarna, 2013), work stress (Trivellas, Reklitis & Platis, 2013; Kakkos & Trivellas 2011), job burnout (Belias & Koustelios, 2014), infrastructure (Trivellas & Santouridis, 2013), work motivation and commitment (Trivellas, 2011) and at the organizational level, such as culture (Belias & Koustelios, 2014a; Trivellas & Dargenidou, 2009; Trivellas, Reklitis & Santouridis, 2006), strategy (Reklitis & Trivellas, 2002; Trivellas, 2012; Trivellas, Reklitis & Konstantopoulos, 2007), TQM (Trivellas & Santouridis, 2009), and leadership style (Belias & Koustelios, 2014b; Trivellas & Drimoussis, 2013; Trivellas & Reklitis, 2014).

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