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INTEGRATED INFORMATION

International Conference on Integrated Information

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Preface: Proceedings of the International Conference on Integrated Information (IC-ININFO 2011)

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Aims and Scope of the Conference

The International Conference on Integrated Information 2011 took place in Kos Island, Greece, between September, 29 and October, 3, 2011. IC-ININFO is an international interdisciplinary conference covering research and development in the field of information management and integration.

The conference aims at creating a forum for further discussion for an Integrated Information Field incorporating a series of issues and/or related organizations that manage information in their everyday operations. Therefore, the call for papers is addressed to scholars and/ or professionals of the fields of Library and Archives Science (including digital libraries and electronic archives), Museum and Gallery Studies, Information Science, Documentation, Information Management, Records Management, Knowledge Management, Data management and Copyright experts the latter with an emphasis on Electronic Publications. Furthermore, papers focusing on issues of Cultural Heritage Management and Conservation Management are also be welcomed along with papers regarding the Management of Nonprofit Organizations such as libraries, archives and museums.

One of the primary objectives of the IC-ININFO will be the investigation of information-based managerial change in organizations. Driven by the fast-paced advances in the Information field, this change is characterized in terms of its impact on organizations that manage information in their everyday operations.

Grouping emerging technologies in the Information field together in a close examination of practices, problems and trends, IC-ININFO and its emphases on integration and management will present the state of the art in the field. Addressed jointly to the academic and practitioner, it will provide a forum for a number of perspectives based on either theoretical analyses or empirical case studies that will foster dialogue and exchange of ideas.

Topics of general Interest

Library Science, Archives Science, Museum and Gallery Studies, Information Science, Documentation, Digital Libraries, Electronic Archives, Information Management, Records / Document Management, Knowledge Management, Data Management, Copyright, Electronic Publications, Cultural Heritage Management, Conservation Management, Management of Nonprofit Organizations, History of Information, History of Collections, Health Information

Symposia

The Conference offered a number of sessions under its patronage, providing a concise overview of the most current issues and hands-on experience in information-related fields.

- Symposium on Integrated information: Theory, Policies, Tools
- 4th Symposium on Business and Management and Dynamic Simulation Models supporting management strategies

- Session on Open Access Repositories: Self-archiving, Metadata, Content policies, Usage
- Session on Evidence-Based Information in Clinical Practice
- Session on Business Management and Communication Strategies supporting Decision Making Process in Tourism Sector
- Session on Electronic Publishing: A Developing Landscape
- Session on Information and Knowledge Management
- Session on Information Content Preservation as Outcome of Conservation of Cultural Heritage: Ethics, Methodology and Tools
- Session on Advances Information for Strategic Management
- Session on Information History: Perspectives, Methods and Current Topics
- Session on Divergence and Convergence: Information Work in Digital Cultural Memory Institutions
- Session on Contemporary issues in Management: Organisational Behaviour, Information Technology, Education & Hospital leadership.

The wide range of aspects that the sessions covered, highlighted future trends in the Information Science.

Paper Peer Review

More than 300 papers had been submitted for consideration in IC-ININFO 2011. From them, 91 were selected for presentation, after peer review in a double blind review process. The accepted papers were presented at IC-ININFO 2011.

Thanks

We would like to thank all members that participated in any way in the IC-ININFO 2011 Conference and especially:

- The famous publishing house Emerald for its communication sponsorship.
- The co-organizing Universities and Institutes for their support and development of a high-quality Conference scientific level and profile.
- The members of the Scientific Committee that honored the Conference with their presence and provided a significant contribution to the review of papers as well as for their indications for the improvement of the Conference.
- All members of the Organizing Committee for their help, support and spirit participation before, during and after the Conference.
- The Session Organizers for their willing to organize sessions of high importance and for their editorial work, contributing in the development of valued services to the Conference.
- PhDC Marina Terzi for her excellent editorial work, contributing in the production of the Conference proceedings.

CONFERENCE DETAILS

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KEYNOTE SPEAKER



Professor Amanda Spink

Professor Amanda Spink has published over 340 scholarly journal articles, refereed conference papers and book chapters, and 6 books. Many of her journal articles are published in the Journal of the American Society for Information Science and Technology, Information Processing and Management, and the Journal of Documentation. She is Editor of the Emerald journal Aslib Proceedings. Amanda's research has been published at many conferences including ASIST, IEEE ITCC, CAIS, Internet Computing, ACM SIGIR, and ISIC Conferences. Her recent books include Information Behavior: An Evolutionary Instinct and Web Search: Multidisciplinary Perspectives, both published by Springer. Amanda's research focuses on theoretical and empirical studies of information behavior, including the evolutionary and developmental foundations. The National Science Foundation, the American Library Association, Andrew R. Mellon Foundation, Amazon.com, Vivisimo. Com, Infospace.com, NEC, IBM, Excite.com, AlltheWeb.com, AltaVista.com, FAST, and Lockheed Martin have sponsored her research. In 2008 Professor Spink had the second highest H-index citation score in her field from 1998 to 2008 [Norris, M. (2008)]. Ranking Fellow Scholars and their H-Index: Preliminary Survey Results. Loughborough University, Dept of Information Science Report].

The impact of Occupational Stress on Performance in Health Care

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Abstract: *Nursing stress threatens the performance of health care organizations. This paper examines the influence of work related stress on health outcomes and Organizational Performance of nursing staff working in the health care sector. Although in the relevant literature several studies have examined the direct relationship between stress and job performance, claiming that it is associated with organizational performance, there is lack of an approach which investigates the combined relationships among stress and multiple performance dimensions at the organizational level. This paper presents a field survey based on 96 valid questionnaires. Results confirm a strong negative association among work related stress and all sub dimensions of organizational performance, namely, open system, rational model, internal process, and human relations as well as health outcomes.*

Keywords: *Work stress, Organizational performance, Competing values model, Health care.*

I. INTRODUCTION

Human resources are, without doubt, the core of the health care industry and an effective health care system depends mainly on their adequacy, quality and their right distribution (Firth et al., 2004). Nursing shortages are proved to be related with adverse incidents and aspects of hospital inefficiency (Sellgren et al., 2007). In Greece, except from a plethora of doctors, the health care sector presents human resources' shortages. Therefore, it comes of high importance to study turnover intention and its antecedents in the health care sector.

Additionally, studies have shown that personnel in Greek NHS are mainly influenced by stress, leading to deterioration of the quality level in the services provided (Antoniou et al., 2003).

II. RESEARCH BACKGROUND

A. Work related stress in Health Care

Work related stress has been attracted the attention of various disciplines such as administration (Cooper et al., 2001), sociology (Tsarenko & Tojib, 2011) and psychology (Blackhart, Nelson et. al., 2009). They mainly converge that stress greatly affects productivity and performance of organizations.

Following this argumentation, various studies recently relate stress to health and safety issues in health care organizations (Carr et. al., 2011).

B. Organizational performance in Health Care

Organizational Behavior literature considers organizational performance as a multidimensional concept. Especially in Healthcare Services, organizational performance is considering a highly specialized area and it generally includes elements of leadership, strategic planning, focus on patients, measurement, analysis and knowledge management, staff focus, process management, and organizational outcomes such as service delivery, financial and market results (BNQP, 2006).

C. The link between stress and performance

Work related stress is widely recognized that its role is associated with different variables of the internal environment of organizations such as emotional intelligence, culture and performance (Balthazard et al., 2006).

In Healthcare Services administration, stress is considered to be one of the most crucial factors which influence the professional career of the individual as well as organizational effectiveness (Brazier, 2005). Moreover, specific work practices promoting performance are claimed to be associated with HR outcomes such as stress and motivation in health care (Boselie, 2010; van Veldhoven, 2005).

III. RESEARCH METHODOLOGY

A. Sample

The field research was conducted in public hospitals in the area of Central Greece. Structured questionnaires were distributed to 125 nurses participating in training programs and 96 valid questionnaires were returned. Response rate was 76.8%. Most nurses were female (82%) and the 63.4% of the respondents were between 35 and 45 years old. The 48% enjoyed between 1 and 5 years of experience in the same department/clinic.

B. Questionnaire design

A structured questionnaire was employed to carry out the survey. The measurement instrument was thoroughly evaluated before released. Ten head nurses of the hospitals involved examined it along with two experienced researchers; the instrument's cognitive relevance to the healthcare sector was confirmed prior to data collection. The instrument was developed by adapting existing multi-dimensional scales to capture occupational stress and employee job satisfaction and job performance by providing respondents with 7-point scaled questions for each multi-item measure employed.

The Job- Related Tension Scale (JRTS) was adopted to measure job stress by 15 items (Strahan et al, 2008; Kahn, et al 1964). An example of an item is: “Feeling that you have too heavy a workload”.

Departmental performance items were based on McCusker’s et al. (2004) scale about outcomes of patients’ care and critical incidents such as physical or verbal abuse, hospital acquired infections and mortality rates due to malpractice, lack of personnel or bad administration.

Organizational performance operationalization was developed on Minvielle et al. (2008) suggestions, which in turn were based on Competing Values Model (CVM). The CVM established by Quinn and Rohrbaugh (1983), was proposed originally to clarify and measure organizational effectiveness. This approach was the result of a multidimensional scaling analysis that identified four distinct models clustering judgments of organizational researchers and theorists about the relative similarity of 16 commonly used criteria of organizational performance.

The CVM approach has been selected in this study because it was qualified as the most suitable basis to develop the organizational effectiveness construct, as it covers multiple performance criteria. CVM shares wider acceptance among academics as it has been validated by an increasing number of researchers not only as a model of organizational effectiveness, but also as a measurement instrument for other organizational phenomena such as MIS effectiveness (Trivellas & Santouridis, 2011; Trivellas et al., 2006), organizational culture and leadership (Trivellas & Dargenidou, 2009a,b). CVM has also been utilized as a device for mapping organizations’ profiles and conducting comparative analysis. Furthermore, CVM provides a set of tools and techniques to practitioners in order to develop and sustain more desirable profiles of effectiveness.

CVM emphasizes the competing tensions and conflicts across two primary axes, which form a four quadrant model. The first axis extends from flexibility and change to control and order. The second reflects the conflict between the internal focus and external focus. Thus, the intersection of these two dimensions defines the following four models or archetypes: open system, human relations, internal process and rational. A brief description of each model is provided:

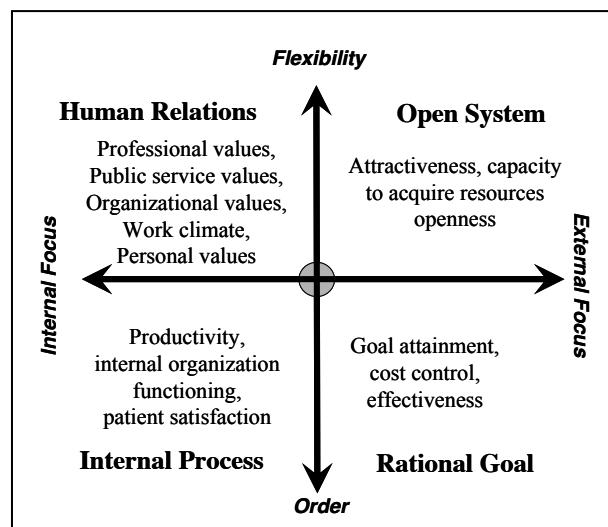
Open system model is linked with creativity, entrepreneurship, adaptability, attractiveness, capability of acquiring resources and external orientations.

Human relations model is characterized by flexibility, morale, teamwork, personal and professional values.

Internal process model is marked by stability, productivity, order, patients’ satisfaction and internal orientations.

Rational goal model is focused on organizational planning, directing, goal setting, effectiveness and external orientation.

Given that most of the scales were created in English, and they have been tested in a different language context, to ensure the validity of the item translation, a (English/Greek) translate/back translate procedure (Brisles, 1970; Laroche et al., 2003) was used. Responses were assessed on 7-point Likert scales.



CVM approach.

C. Data Analysis

Initially, Principal Component Analysis (PCA) has been conducted to examine the underlying factors of job stress, Job Satisfaction and Job performance scales. All scales were proved to be one-dimensional. Cronbach’s Alpha has been calculated to assure internal reliability and consistency. All scales exhibited well over the minimum acceptable reliability level for alpha coefficients of 0.7.

Principal Component Analysis (PCA) was conducted to identify latent factors within job related stress organisational and performance scales. One principal component was extracted explaining approximately 54% of the overall variance for the job stress scale, as well as one component for the departmental performance (52% of the total variation) construct.

Four factors were extracted from the data for the organizational performance scale, applying both Kaizer and Scree plot criteria. These principal components accounted for over 71% of the total variation. A cut-off of 0.50 was used for item scale selection and it was adopted a normalized varimax rotation to bring about simple and interpretable structure. According to Lewis-Beck (1994), this method is the most commonly used in order to reduce the number of items in a survey questionnaire. Following an inspection of the items’ loadings on each factor, five distinct principal components were identified, corresponding to: open systems, human relations, internal processes and rational models.

Preceding PCA, the Bartlett sphericity testing on the degree of correlation between the variables ($p < 0.001$)

and the appropriateness of the sample according to Kaiser–Meyer–Olkin (KMO over 0.70) verified the appropriateness of the sample.

Finally, multiple regression analyses applied to test the hypotheses and provide conclusions.

TABLE I
DESCRIPTIVE STATISTICS AND RELIABILITY ANALYSIS

	mean	S.D.	Cronbach's alpha	Items	KMO ^a
Job Stress	3.55	1.141	0.849	15	0.729
Departmental performance	2.91	1.179	0.802	8	0.671
Organizational Performance					
OS	3.80	1.444	0.934	7	0.871
HR	4.68	1.114	0.910	10	0.855
RM	4.25	1.202	0.904	8	0.750
IP	4.33	1.274	0.929	7	0.835

^a The Kaiser–Meyer–Olkin (KMO) indicator was calculated to assess sample size adequacy. The minimum acceptable level is 0.5. Bartlett's test of sphericity is significant at $p < 0.001$ for all scales. Valid N=121.

D. Results

To test the hypotheses multiple regression analyses were conducted. Demographic data (gender, age, working experience, education level, income, position and marital status) were treated as control variables. In the following tables, the reciprocal of the tolerance known as the Variance Inflation Factor (VIF) has been used to show how much the variance of the coefficient estimate is being inflated by multi-collinearity (i.e., to ensure that multi-collinearity among independent variables is not an issue during regression analyses). VIF coefficients of above 5 points indicate a multi-collinearity problem.

Table 1 presents the statistical analysis results for testing the relationships between job stress and different aspects of performance. The independent variables explain the 26.5 percent of the total variation of departmental performance (negatively defined), as well as the 32.7%, the 27.4%, the 18.3% and the 13.9% of the total variation of the OS, RM, IP and HR performance aspects (positively defined), respectively.

The first regression model has tested if job stress is related to departmental performance reflecting indices such as mortality rates, complaints, hospital acquired infections, and wrong medical treatment. In Table 1, the values of the standardized coefficients beta show that work stress has a positive and significant relation to the deterioration of departmental performance (Std. beta=0.240, $p < 0.01$). In similar vein, job related stress is negatively associated with all organizational performance dimensions, namely open system (Std. beta=-0.315, $p < 0.001$), rational model (Std. beta=-0.257, $p < 0.01$), internal process (Std. beta=-0.337,

$p < 0.001$), and human relations (Std. beta=-0.275, $p < 0.05$).

Regarding hierarchical position, higher ranked employees are engaged with more serious incidents and higher performance failure rates (Std. beta=0.216, $p < 0.01$).

Additionally, educational level is negatively and significantly related to the four organizational performance aspects, interpreted as the lower the educational level, the higher the organizational performance achieved. Often, higher qualified personnel are engaged with administrative and other activities, thus they are not directly linked with organizational performance.

Furthermore, working experience is linked with lower performance levels of externally oriented dimensions, namely OS (Std. beta =-0.320, $p < 0.001$) and RM (Std. beta =-0.285, $p < 0.01$) models.

Considering age, older employees are more oriented to goal attainment (Std. beta =0.255, $p < 0.01$). In addition, females are higher performers than their male colleagues in all performance aspects but the human relation model.

	Dpt. Perf.	OS	RM	IP	HR
Gender	-.207*	.254**	.266**	.218*	.143
Age	-.032	.206	.255*	.089	-.014
tenure	.135	-.320***	-.285**	-.147	-.096
income	.033	.027	.129	.100	.249
Position	.216*	-.016	.075	-.037	-.120
Education level	-.193	-.404***	-.365**	-.263*	-.357**
Marital status	-.300	-.092	-.149	-.118	-.130
Job Stress	.240**	-.315***	-.257**	-.337***	-.275*
R square	.265***	.327***	.274***	.183**	.139*

* Significant at the 0.05 level, ** significant at the 0.01 level, *** significant at the 0.001 level, N=145

Table 2. Results of multiple regression analyses.

IV. DISCUSSION

This study has examined the impact of job stress upon departmental and organizational performance, drawing from a sample of 96 valid questionnaires. Results confirm a strong negative association among work related stress and all dimensions of organizational performance, namely, open system, rational model, internal process, and human relations as well as health outcomes.

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