

## Research Article

# The Satisfaction for the Organizational Health in Nurses Working in Intensive Care and Accident & Emergency Departments in Different Healthcare Organizations of Rome and its Metropolitan Area

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**Keywords**

- Job satisfaction
- Italy
- Nurses
- Organizational climate
- Organizational health

**Abstract**

**Introduction:** The satisfaction for the organizational health in nurses is fundamental to provide safe and high quality care. Between 2009 and 2011, the research team conducted a survey to measure organizational health and its level of satisfaction in nurses working in various health centres in Rome and its metropolitan area, including intensive care units and accident & emergency departments.

**Materials and methods:** In this study it was used a validated tool developed in 2010, the Nursing Organizational Health Questionnaire. The statistic analysis of the data was performed by means of the SPSS 19.0 package.

**Results:** Dimensions of organizational health calculated in relation to the mean cut-off value of 2.6 showed a poor job environment comfort, high levels of stress and a scarce openness to innovation. Regarding the satisfaction for the organizational health, 28% of the nurses were fully satisfied, 35% were unsatisfied and 37% showed reasonable levels of satisfaction. Stronger associations with dissatisfaction were observed for the following domains: job environment comfort, organizational context, safety and accident prevention and openness to innovation.

**Discussion:** Healthcare organizations involved in this study ought to intervene on various intrinsic factors linked to the job (job environment comfort, organizational context, openness to innovation and safety and accident prevention) to improve the satisfaction for nurses' organizational health.

**Conclusions:** The quality of life and wellbeing of health professionals and of the organizations are linked to the capacity to provide high quality care to patients, especially in areas that have a very stressful impact, such as the intensive care units and the accident and emergency fields. Therefore, the organizational features become instrumental to achieving high quality care outcomes and should be the target of interventions in the healthcare centres included in the study.

**ABBREVIATIONS**

A&E: Accident & Emergency; ICU: Intensive Care Unit; NOHQ: Nursing Organizational Health Questionnaire; OH: Organizational Health.

**INTRODUCTION**

By 'Organisational Health' (hereafter OH) [1] we refer to the ability of an organization to be not only effective and productive, but also to its ability to grow and develop by promoting and maintaining an adequate level of physical and psychological wellbeing in health workers, fostering and constructively

developing their social interactions and the way they live their life together at work.

In the present research, the concept of 'OH' is used as a synonym of 'Organisational Climate' [2]. A large number of studies have reported significant associations between the negative aspects of the hospital organizational climate and nurses' health [3,4]. The organizational health is contextually correlated to the specific setting and, in this study, is linked to intensive care units and accident & emergency departments (hereafter ICU and A&E), where this concept has an important effect on health workers, for instance, on their professional satisfaction or on their perception

of being treated in an equitable manner and with respect [5,6].

For Zangaro and Soeken [7], work satisfaction, in particular for the nursing profession, is a key challenge for healthcare organizations. This is conducive to obtain better healthcare outcomes [8] and a better quality of care for patients [9].

It is fundamental to address the OH of nurses for their satisfaction and their success at work, but this is even more important in the field of ICU and A&E departments, which are clinical areas where patients' conditions require high levels of investment in terms of education and health workers accountability. In ICU and A&E departments, nurses are highly exposed to stressful events, which added to the workload and to the unpredictable and uncertain conditions of the patients, can negatively influence the OH and increase the likelihood of error [10]. Furthermore, nurses who work in the area of ICU and A&E departments sometimes do not have total decisional autonomy and tend to have high turnover rates leading to the desire to leave their job (*job abandonment*) [11,12].

In this line of argument the variables used to measure OH in this study have included: comfort and safety of the environment, the organizational context, stress, safety and the prevention of accidents, tolerability of job tasks, openness to innovation; some positive indicators such as the general satisfaction of health workers (indicators of satisfaction - 13 items) and other negative indicators such as intolerance or lack of interest in one's work (indicators of dissatisfaction - 18 items). The last subscale of the instrument used, that is, the Nursing Organizational Health Questionnaire (hereafter NOHQ) measured the psychosomatic complaints of nurses [13,14].

This research, which is part of a larger study [15], used variables that could quantitatively measure the satisfaction for OH in the ICU and A&E areas. Hence, the aim of this investigation was to measure the satisfaction for the organizational health in nurses working in ICU and A&E areas in different healthcare organizations in Rome and its metropolitan area.

## MATERIALS AND METHODS

### Design, setting, and sample

This study included a sample of 867 critical care nurses working in ICU and A&E departments in various hospitals of Rome and its greater area. This sample of 867 nurses was part of a previous convenience sample of 4751 nurses working in various healthcare areas [15]. The data were collected during a series of educational events organized by the Centre of Excellence for Nursing Scholarship in three types of healthcare facilities of Rome and its metropolitan area: Local Health Centres, University Policlinics, and Private Accredited Hospitals (Table 1).

### Study instrument

The short version (67 items) of the NOHQ was administered to all the 867 nurses included in this secondary analysis of data [16].

The NOHQ explores eight theoretical dimensions of the organizational health. All the items, except for the sections on personal data and suggestions, are based on a 4-point Likert

scale, with scores from 1 to 4; the higher the score, the more the phenomenon explored is predominant.

### Data analysis

Data analysis was performed using SPSS 19.0 software (SPSS Inc. Chicago, USA).

A 2.6 mean cut-off score was established, both to assess general organizational health and measure the dimensions of organizational health inside the work environment. For instance, to better understand the results, for the positive dimensions (e.g. job satisfaction), a score higher than the cut-off mean indicated a positive result in terms of satisfaction. On the contrary, for the negative dimensions (e.g. stress), a score higher than the cut-off mean indicated a negative result in terms of major stress. Starting from this consideration, the data analysis was also carried out giving prominence to the "satisfaction" domain; this was sub-divided in two groups of indicators: the positive (13 items) and the negative ones (18 items). Based on the satisfaction domain, the nurses interviewed were classified in three groups: satisfied (with a score higher of 2.6 for positive indicators and lower than 2.6 for negative ones); unsatisfied (with a score lower than 2.6 for positive indicators and higher of 2.6 for negative indicators); reasonably satisfied (with a score higher or lower than 2.6 for both positive and negative indicators). The other seven domains were matched with this classification to make evident what was associated to being satisfied/dissatisfied. The analysis of difference among means was generated by an ANOVA comparison of means.

In this very same sub-division it was accomplished a factorial analysis to highlight which domains were mostly associated to being satisfied/dissatisfied regarding organizational health. In this sense, it was utilized a multiple correspondence analysis that is a data analysis technique for nominal categorical data, used to detect and represent underlying models of variability in a data set. To ease the interpretation of the model outlined in the multiple correspondence analysis is pivotal to figure out the distances among the points of the different variables and of each variable with the origin point of the axes on a graph.

### Ethical considerations

The aims and relevance of the study were verbally explained to all participants during educational courses on OH. Voluntary participation was emphasized and verbal informed consent obtained.

## RESULTS

The majority of the nurses working in the ICU and A&E departments, who responded to our questionnaire, were females (68.18% vs 31.82% males). With regard to their age distribution, the majority were aged between 36-50 years (506 nurses = 58.4% of the total). A descriptive analysis of the sample per gender and age showed that under the age of 50 years about 75% of the nurses were female, whereas over the age of 50 years the percentage of female nurses was 68.43% vs. 31.57% of the male nurses (Table 2). The general results regarding the theoretical dimensions of organizational health were examined in relation to the mean cut-off value of 2.6 (Table 3).

**Table 1:** The 3 types of healthcare facilities and the number and percentage of nurses working in ICU and A&E departments included in the study.

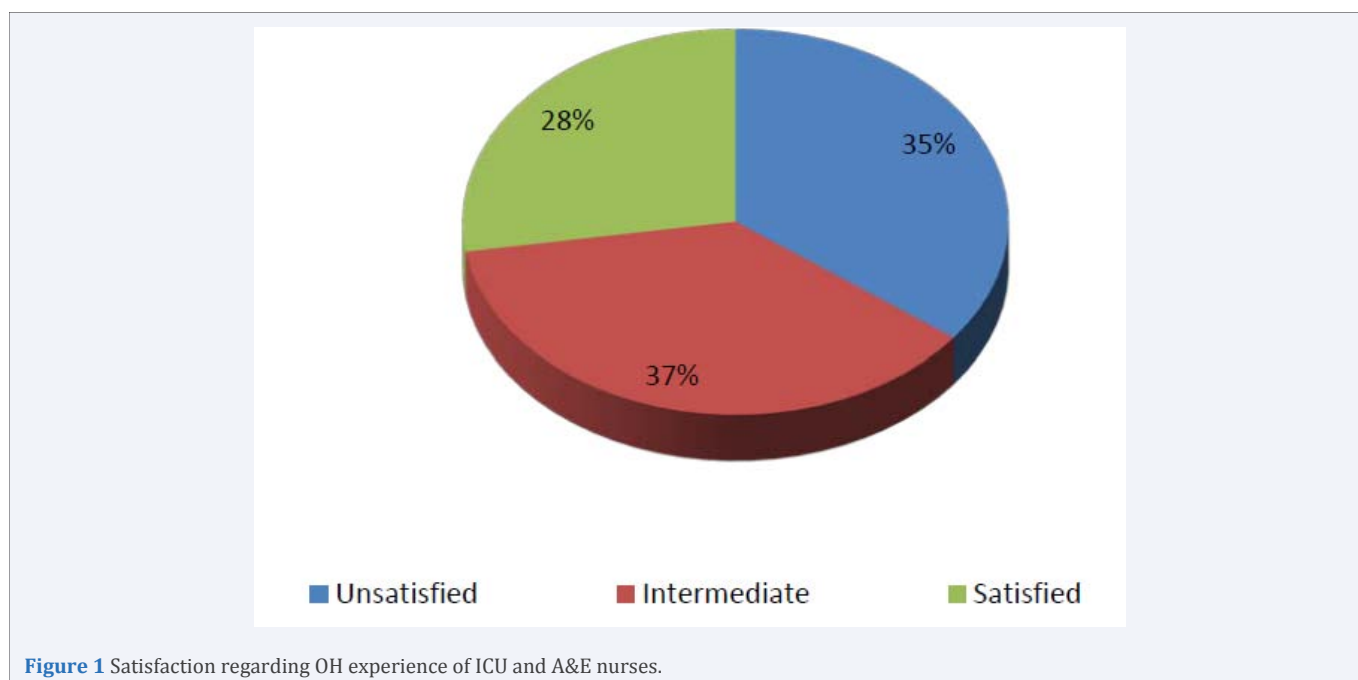
Facility Type	Facility Details	Number of Nurses	Percentage (%)
Local Health Centres (LHCs)	LHC Roma "A", LHC Roma "B", LHC Roma "C", LHC Roma "D", LHC Roma "E", LHC Roma "F", LHC Roma "G", LHC Roma "H"	205	23,6
University Policlinics	Policlinic "Umberto I", Policlinic "Sant'Andrea", "San Giovanni-Addolorata", "San Camillo-Forlanini"	640	73,8
Private Accredited Hospitals	"S. Giovanni Calibita" FBF Hospital – Tiber Island, "S. Carlo di Nancy" Hospital	22	2,6

**Table 2:** Age distribution of nurses working in ICU and A&E departments.

Age brackets	Numbers	Percentage (%)
<35	276	31.8
36-50	506	58.4
>50	85	9.8
Total	867	100.0
<35	276	31.8

**Table 3:** Dimensions of the organizational health calculated for nurses working in intensive care and accident & emergency departments in relation to the mean cut-off value of 2.6.

Theoretical dimensions of organizational health	Mean
Job environment comfort	2.43
Organizational context	2.79
Stress	2.95
Safety and accident prevention	2.44
Tolerability of job duties	3.01
Openness to innovation	2.18
Positive indicators	2.65
Negative indicators	2.71
Psychophysical discomfort	2.38



**Figure 1** Satisfaction regarding OH experience of ICU and A&E nurses.

With regard to the satisfaction for the organizational health of the sample, the same sample was split into those who were 'satisfied', 'reasonably satisfied', and 'unsatisfied' (Figure 1).

Moreover, all the domains results were associated to the classification of satisfaction for the organizational health of nurses (Table 4).

The multiple correspondence analysis of our data enabled us to obtain further information about the theoretical dimensions of OH in the ICU and A&E departments. In Figure 2, a circle highlights the organizational health dimensions of maximum dissatisfaction for critical care nurses in all the healthcare centres included in this study. Workplace comfort, organizational context, safety and accident prevention and openness to innovation were the most unsatisfactory dimensions (Figure 2).

## DISCUSSION

The purpose of this study was to measure the satisfaction for the organizational health in nurses working in intensive care and accident & emergency departments in different healthcare organizations of Rome and its metropolitan area. In this survey nurses were dissatisfied especially with regard to workplace comfort, organizational context, safety and accident prevention and openness to innovation. Apart from safety issues and openness to innovation, nurses' dissatisfaction for the organizational context was influenced by the characteristics of the nursing profession in this particular setting, which requires

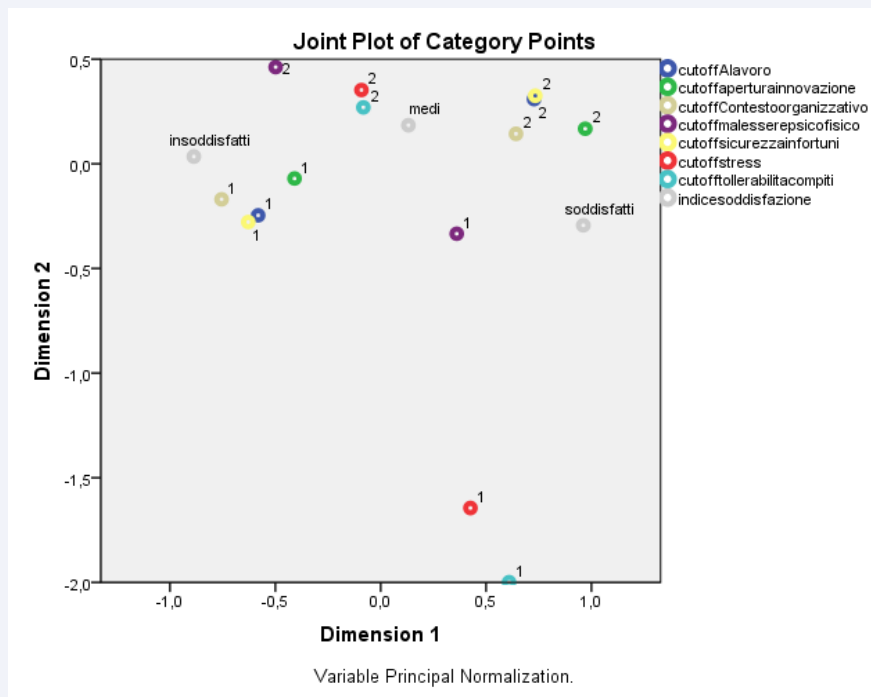
considerable physical and mental resources. In fact, in the field of ICU and A&E departments, nurses have to constantly assess, monitor, and care for patients; coordinate, implement, evaluate, and, if necessary, change the care plan. Besides, they have to manage various treatments at the same time; forecast, prevent and recognize situations that negatively influence the health of patients and establish treatment priorities. A few years ago, Boyle et al., [17] reached the same conclusion: the level of professional satisfaction in nurses working in the area of ICU and A&E was lower than that of nurses working in other clinical fields.

In addition to this, ICU and A&E nurses are particularly exposed to stressful events, characterized by unpredictability and uncertainty for the life of patients. Clinical practice in ICU and A&E fields, where various tasks are carried out simultaneously and often with frequent interruptions, entails the risk of error, which is an additional source of stress [18].

These particular aspects of this area of nursing and the results that emerged from our survey identified *multitasking* as one of the main sources contributing to physical and mental workload. Nursing is a very demanding profession also from an emotional point of view, due to the need to care for and empathically support people who suffer. Interpersonal interactions, not only with patients, but also with colleagues, family members and visitors, constantly require nurses to be emotionally involved, a factor which may trigger burnout symptoms, such as depersonalization and emotional breakdown [19]. Such factors are frequent in

**Table 4:** Mean values of the different domains of the organizational health associated to the satisfaction domain.

Domains	Satisfaction domain	Mean	Standard deviation	P-value
Job environment comfort	unsatisfied	2.1507	.66753	<0.001
	reasonably satisfied	2.4934	.75175	
	satisfied	2.7300	.68772	
	Total	2.4374	.74178	
Organizational context	unsatisfied	2.4413	.88966	<0.001
	reasonably satisfied	2.9149	1.30310	
	satisfied	3.0986	1.12269	
	Total	2.7986	1.15345	
Stress	unsatisfied	3.1318	.55815	<0.001
	reasonably satisfied	2.9092	.64081	
	Satisfied	2.7899	.48196	
	Total	2.9550	.58762	
Safety and prevention of accidents	unsatisfied	2.1356	.68529	<0.001
	reasonably satisfied	2.4928	.79081	
	satisfied	2.7780	.67512	
	Total	2.4450	.76669	
Tolerability of job tasks	unsatisfied	3.1944	.41891	<0.001
	reasonably satisfied	2.9640	.66115	
	satisfied	2.8487	.46314	
	Total	3.0137	.55044	
Openness to innovation	unsatisfied	1.8043	.53976	<0.001
	reasonably satisfied	2.2356	.71448	
	satisfied	2.5910	.62245	
	Total	2.1810	.70421	
Psychophysical discomfort	unsatisfied	2.6850	.62259	<0.001
	reasonably satisfied	2.3460	.74414	
	satisfied	2.0578	.65014	
	Total	2.3865	.72104	



**Figure 2** OH dimensions of maximum dissatisfaction for ICU and A&E nurses in the centres involved in this study.

ICU and A&E areas and require interventions to reduce work-related psychic disorders, which across the years have focused on changing the organization to reduce the stress factors, or on the professionals' coping skills, by providing cognitive-behavioural interventions and teaching various types of relaxation techniques or multimodal strategies. According to this logic, Mimura and Griffiths [20] conducted a systematic review of interventions aimed at reducing working stress in nurses. Seven of the studies included in that review adopted strategies to help nurses keep stress under control: music, relaxation, physical exercises, humour, assertive role play, social support education and cognitive techniques. However, it is important to underline that the authors did hypothesize that individual competences (i.e. cognitive-behavioural) in combination with organizational changes increasingly constituted a fertile basis for change.

Another aspect that emerged from the survey was the need to have a comfortable job environment. Various studies have shown that healthy work environments are of benefit either for professionals or organizations in terms of reduced absenteeism, increased productivity and reduced costs for healthcare treatments [21]. The implementation of healthy work environments for nurses requires workplace and organizational interventions [22]. In relation to this, nursing leadership has to play an important role. Leadership styles are related to positive work environments that promote the involvement of their employees, which translates into higher levels of satisfaction and productivity at work. According to Goleman, Boyatzis, and McKee [23] an appropriate style of leadership is resonant leadership, because resonant leaders are in tune with the environment that surrounds them, thus enabling to synchronize the thoughts and emotions of the people who work around them. Resonant leaders are able to control not only their own emotions but also those of

their collaborators. Also Squires *et al.* [24] examined the influence of resonant leadership on interactional equity, the quality of the nursing work environment, safety, patient outcomes, and the safety of nurses. All this falls within a much wider angle of reflection in which institutional policies, cultural, professional and occupational aspects influence the way leadership practices and healthcare outcomes are fulfilled in the field of nursing [25]. Moreover, in the research, openness to innovation, which is the level of attention shown by organizations to technological innovation and to change in general, was also found to be lacking. Nurses' working conditions and openness to innovation are inextricably linked to the quality of care provided to patients and to their safety [26], but these same working conditions are also associated with the nurses' own health and safety [27].

## CONCLUSION AND IMPLICATIONS FOR PRACTICE

Avallone and Paplomatas [1] describe nurses' organizational health as: "A set of processes and management and coordination practices aimed at taking care of people through the engagement of nursing resources. A healthy workplace where care is provided to others is where professional integration and collaboration, the development and promotion of competences, the consolidation of skills and cultural growth are fostered to build the feeling of belonging to a profession and to the organization itself, which, therefore, ensures a workplace where nurses feel that they are real health promoters".

According to this line of reasoning, healthcare organizations ought to intervene on various intrinsic factors linked to the job (physical, emotional, etc), those linked to the organizational context and those connected to the openness to innovation, so as to improve the satisfaction for OH by part of nurses and consequently by part of the recipients of care.



If all these multidimensional variables are not compensated by appropriate situations and interventions to prevent and restore OH, they can have a significant negative impact on a worker's quality of life and performance. In the workplaces included in the present study, these reflections should be fully considered to improve healthcare outcomes. In the next future, we hope that this study will be conducted on a national basis especially in the ICU and A&E settings to have a much wider reference frame.

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## CONTRIBUTIONS

Study Design: RA, MGP, AP, CT

Data Collection and Analysis: CT, AS, GR

Manuscript Writing: CT, AS, AP, GR

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