WORK RELATED STRESS AND PUBLIC HEALTH: A RESEARCH

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ABSTRACT

The research aims to assess the level of work-related stress of a group of workers in the hospitals of Public Health. The Occupational stress is "All the harmful physical and emotional reactions that occur when work demands are not commensurate with the skills, resources or needs of the worker" (NIOSH, - *National Institute for Occupational Safety and Health).*

According to the Italian legislative decree of April 9, 2008 No 81, prolonged exposure to stress can reduce the efficiency at work and cause health problems. The objective of this research is to detect the perception of work-related stress by operators that affect the quality of their work in hospitals. The group interviewed is made from 100 subjects aged between 26 and 65 years. The instrument used is a questionnaire with 169 item that assesses mainly two main areas: "the causes of stress" and "stress symptoms". The results showed that the causes of stress show an average score, while the symptoms of stress a lower score.

Key words: Work-related stress, Public Health, Causes of Stress, Stress Symptoms; Hospital.

INTRODUCTION

The Legislative Decree No.81 (April 9 2008) scales the scope of health protection and safety in the workplace by summing the issues in a single act, with the aim of improving both safety conditions at work and the system's ability to prevent accidents and therefore reduce them.

The decree was drawn accordingly to European directives on the matter as well as to the Decree No.626 (September 19 1994) which "plans" companies' security through the involvement of each subject in the organization. The new consolidated act, however, has introduced a series of innovations and as a matter of fact modernized the legislation to implement a prevention system in the workplace to be effective, efficient, shared and participated.

Once these premises are set, the definition of occupational stress provided by the NIOSH (National Institute for Occupational Safety and Health) *"workplace stress is the harmful physical and emotional response that occurs when there is a poor match between job demands and the capabilities, resources, or needs of the worker"* appears to be well suited.

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Actual data provided by the European Agency for Safety and Health at Work state that more than one in four workers in the EU suffers from work-related stress, being this one a major cause for health problems, increased absenteeism and reduced productivity increasingly menacing companies' competitiveness.

Further investigations reveal that stress is a widespread critical issue, up to be the second health problem reported by workers in EU countries. According to previous studies, the stress condition affects approximately the 22% of workers in Europe, while the "European Foundation for the Improvement of Living and Working Conditions" reports that the same figure for Italian workers is 27% above the EU average (2005 data collected among the twenty-seven countries within the EU).

Studies have also acknowledged stress economic impact over businesses and national economies.

In 2002 the European Union, then consisting of fifteen countries, estimated that the economic cost of work-related stress was about 20 billion euro; the phenomenon is likely to amplify since the work domain is currently being reshaped.

Stress is not a disease but, under certain conditions, it may reduce the individual's efficiency at work and his welfare conditions, thus determine effective pathologies. Negative stress or distress occurs when the subject perceives an imbalance between the demands of the surrounding environment and his personal resources.

According to the World Health Organization, high levels of occupational stress are linked to increasing risks of accidents and fatalities. Moreover, there is an increase in psychological disorders, intimately connected with the apparition of job stress and excessive demands in the workplace. Likely all the conditions where the body cannot cope with the environment demands so to be distressed, the same way the strong pressures an individual is subject at work undermine his ability to stay in control.

It is widely demonstrated that serious job strain may adversely affect the individual well-being, thus producing inappropriate behavior towards what is considered to be the main cause or at least a contributory cause of his emotional state. Classic indicators are absenteeism and chronic "show-up-late", prolonged pauses, repeated injuries and the habit to delay being back to work after vacation or permits. These attitudes affect work performances since the subject becomes intolerant towards his job, the number of error increase, accumulated tension often leads to equipment damages, tasks are incomplete or deadlines are not respected.

These issues affect relationships between colleagues as well, and induce altered perceptions towards the team. Another relevant issue played by stress in determining a state of illness concerns its interaction with the immune system. It is proven that high stress levels increase susceptibility to infections (Bergamaschi and Papadia 2000) and facilitate the development of cancers, autoimmune and inflammatory diseases.

Once these information are acknowledged, the study proposes to make an assessment of work-related stress within a group of healthcare professionals in the city of Rome. This category was chosen because it is assumed that healthcare operators in touch with patients should be in good physical conditions. Thus, the assessment of work-related stress within this professional sample configures possible interventions to reduce stress levels with positive and detectable responses on patient's care.

METHOD

Participants

The group consists of 100 interviewed subjects, respectively doctors, medical specialists, nurses and head nurses. The survey was conducted within the following healthcare facilities: Urology and Nephrology, Radiology and Otolaryngology by the Polyclinic in Rome. The sample considers both males (34%) and females (66%) who are aged between 26-35 (35%), 36-45 (32%), 46-55 (20%), 18-

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25 (8%) and lastly between 56-65 (5%). Regarding the marital status: married or lives with partner (47%), never married (45%) and separated/divorced (only 8%). The 29% of the sample holds a new Bachelor or Master degree while the 24% holds the traditional Master degree; the 23% has attended vocational school while the 18% completed high school. Only the 4% holds a Phd, attended a master or higher education while the 2% stopped at middle school. The 69% of the sample has a permanent contract, 20% is temporary employed and the 11% serves as a volunteer, intern or trainee. The tasks are distributed as follows: employees (50%), workers (18%), executives (16%) and managers (10%). Occupation can be full time (92% of the interviewed group) or to a much lesser extent part-time (8%).

Survey tools

The SMART questionnaire was administered, it is composed of 169 multiple-choice items to which a Likert scale (1 = completely disagree to 7 = totally agree, which also includes 8 = no relevant answer where the subjects could not detect any significant match with their activity) has been applied. Subjects were asked to express their level of agreement or disagreement with the statements in the questionnaire, which provided simple and clear instructions to be completed or corrected, in case needed. A second section of the questionnaire required subjects to indicate their level of agreement or disagreement within a given period of time (tlast six months) to detect the presence or absence of psycho-physical symptoms. Lastly, the questionnaire was written anonymously, so it eventually collected general information about gender, age, marital status, education, employment contract, professional department. Schedule and shifts were the last issue to be detected. Compilation time was estimated to be about 20 minutes.

As for the structure of the questionnaire, it explores two main areas: "stressors" and "stress symptoms". The first area includes twelve dimensions while the second one consists of eleven dimensions, as follows:

"Stressors" are considered to be:
1. Physical environment of the workplace
2. Hours and shifts
3. Responsibilities
4. Tasks
5. Information
6. Interpersonal relationships
7. Job satisfaction
8. Mobbing
9. Balance between work and private life
10. Personal relevance addressed to work
11. Subjective response to stress
12. Serious personal events in recent months

"Stress symptoms" investigated by the questionnaire are:
1. Drugs use/abuse
2. Hypertension and heart problems
3. Sleeping problems
4. Depression
5. Anxiety
6. Muscle/skeletal pain
7. Alcohol and tobacco use/abuse
8. Irritability
9. Gastro-intestinal problems
10. Absences
11. Memory difficulties.

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Procedure

Data analysis and work-related stress evaluation was filtered through the normalization of each area score divided between "stressors" (Table 1) and "stress symptoms" (Table 2).

Results

Table 1: Stressors

	Ratings
Environment at work	53,28
Hours and shifts	57,57
Responsibility	57,71
Tasks	59
Information	60,14
Interpersonal relations	52
Job satisfaction	56,71
Mobbing	45,42
Work-private life balance	45,28
Personal relevance addressed to work	58,71
Subjective response to stress	46
Serious personal events in recent months	53,14

Table 2: Stress symptoms

Drugs use/abuse	53.14
Hypertension and heart problems	41,28
Sleep problems	49,14
Depression	44,42
Anxiety	46,85
Muscle-skeletal pain	51,28
Alcohol and tobacco use/abuse	36
Irritability	51,14
Absences	32,71
Gastro-intestinal problems	45,42
Memory difficulties	50

Figure 1 Stressor

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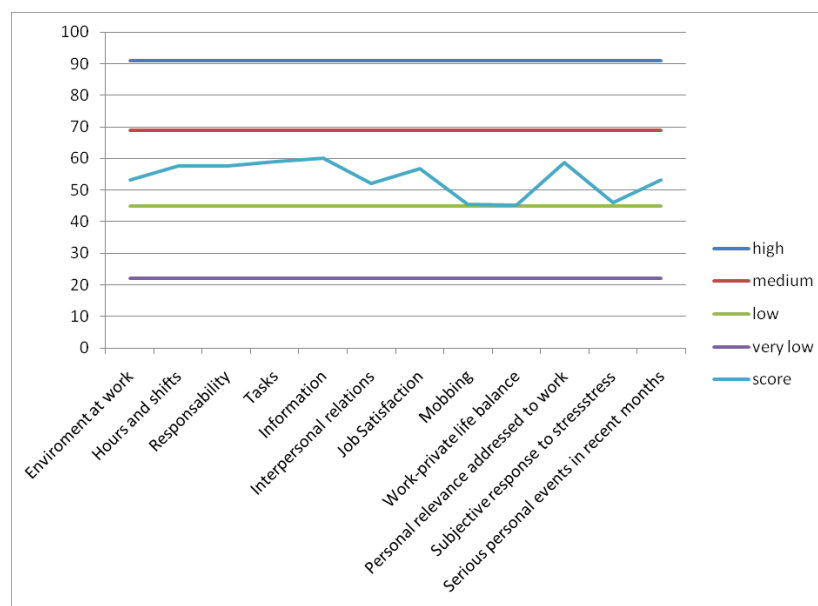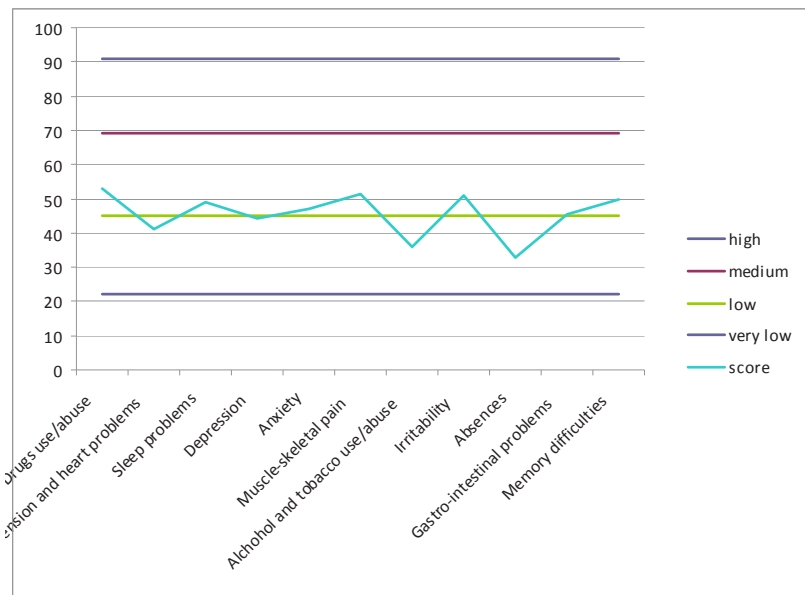© INFAD y sus autores
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Figure 2 Stress symptoms

Scale scores were compared with the normative criteria of the SMART questionnaire to make their interpretation easier. The scores have been represented and distinguished between stressors (Figure 1) and symptoms of stress (Figure 2).

DISCUSSION AND CONCLUSION.

As shown by the two graphs above, the causes of stress reveal average scores, while the symptoms of stress hold lower scores.

Among stress symptoms with the higher scores, graph No.2, there are the muscle –skeletal pains (51.2) and irritability (51.14). Anxiety (46.85) mostly represents a state of resistance to a specific situation, which needs the subject to deal with a change.

Sleep problems are just as widespread and common among health professionals, scoring 49.14. Interviewed subjects complain they don't get enough sleep, do not sleep well or are not able to sleep. The effects of sleep deprivation are immediate and visible, i.e. eye bags, heavy eyelids, as well as anxiety, irritability, nervousness, fatigue and sleepiness, all of which determine a reduction in performances. The analysis of stress symptoms highlights memory difficulties as well, scoring 50. It is clear that substance abuse has its own specific weight within the interviewed group (53.14).

The analysis of the stressors, Figure N.1, intercepts higher values.

Here, the presence of average risks is a matter to be considered since the analysis of the indicators reveals the existence of organizational conditions that can determine work-related stress. In this case, job critical indicators value a59 and represent a major cause of stress for health professionals.

Unfortunately we cannot detect any difference within the different department approaches to the tasks since the issue was not included in the survey (where only the distinction between workers, employees and manager was considered), although such factor can be surely identified as a critical issue to be studied more over.

Further attention should be given to work schedules and shifts management.

As shown by the research, as much as the 92% (compared to the 8%) of the sample works full time, if shifts are not well distributed there is an emerging stress condition. The value of shifts here

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is 57. "Responsibility" is a cause of work-related stress as well, scoring 57, and recalls the issue of autonomy, which means operative margins on objectives and modalities, so that the worker can fit specific requirements and deal with possible accidents.

"Information" is a considerable relevant stressor (60.14), being the key variable for the proper functioning of a service which does not depend exclusively on skills and professionalism involved in the various organizational processes but on the efficiency of organizational processes in place as well: communication flows grant efficiency.

Indeed, communication, being its semantic meaning "to know", "to make known", is far more than a simple process of transmission. The act of communication consists of a person who intends to make the receiver think or do something (Grice, 1975), therefore it's a two-way exchange. Moreover, one should emphasize the value (58.71) of "personal relevance addressed to work" and "job satisfaction" (56.71).

The survey demonstrates that job dissatisfaction and lack of consideration to the individual's performances are relevant and interdependent stressors. Surely communication feedbacks, that is to say ability to recognize good performances (reward and recognition) are considerable components in job satisfaction, but the adoption of compensation systems or more generally reward systems would be equally useful, as well as the chance to join training courses to develop individual skills.

In conclusion, although the sampling is random circumstance (Pedon, 2009) and consists of 100 subjects, the study introduces the opportunity to deepen work-related stress causes and consequences within health structures and hospitals. Thus, to find channels in order to improve working conditions and the mental and physical well being of healthcare professionals, likely to influence their approach to patients.

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