Thrita. 2014 March; 3(1): e16158. DOI: 10.5812/thrita.16158

Published online 2014 March 27. **Editorial**

Knowledge and Skill Possible Ability to Represent a Rescue for Personnel Health in the Operating Room

Mariangela Peruzzi [1]; Giuseppe Biondi-Zoccai [1,*]; Giacomo Frati [1,2]

[1]Department of Medico-Surgical Sciences and Biotechnologies, Sapienza University of Rome, Latina, Italy
[2]Department of Angio-Cardio-Neurology, IRCCS Neuromed, Pozzilli, Italy

[*]*Corresponding author*: Giuseppe Biondi-Zoccai, Department of Medico-Surgical Sciences and Biotechnologies, Sapienza University of Rome, Corso della Repubblica 79, 04100, Latina, Italy, Tel: +39-07731757245, Fax: +39-07731757254, E-mail: giuseppe.biondizoccai@uniroma1.it

Received: November 13, 2013**; Revised:** December 9, 2013**; Accepted:** December 10, 2013

Keywords: Nursing; Stress; Surgery

Wisdom is knowing what to do next, skill is knowing how to do it, and virtue is doing it.'

David Starr Jordan, 1851-1931.

Stress, including psychological stress, is a person's response to a stressor, such as an environmental condition or a stimulus. According to the stressful event, stress may have a mixed, negative and positive, impact (1, 2). Although there is occupational stress in all working environments, those related to human health have a great importance (3).

Many people feel stressed at work and not all stress is equal, since not all of it is equally harmful. Research exploring and correlating stress and performance has typically been centered on individual members of staff in the operating room (OR) (4). The operating room is the only location within a hospital where two coequal physicians regularly, and simultaneously, share responsibility for one patient. This often involves interpersonal conflicts, because in many cases, areas of responsibility are poorly delineated and a broad range of professionals have overlapping competencies (5). Within surgery, the operating room is a team setting in which players, consisting of professionals with various expertise, are expected to function optimally (6).

The professional figure of nurses is crucial in this context. Nurses represent the frontline professional staff among this organization, playing an important role in the delivery of high-quality healthcare services (7). The profession of nursing acts as a double source of stress due to the nature of the work itself and the inadequate number of nurses, disproportional to the high workload (8). Recent studies have shown that job-related stress is an important factor, predicting staff satisfaction mainly in the operating room (9).

Yosra Azizpour et al. have expressed an interesting viewpoint on the world of the operating room and stress factors, examining the relationship between workplace environment and stress among operating room personnel, in a large set of teaching hospitals (10). A total of 63 individuals among the operating room personnel (operating room technicians, anesthesia technicians and nurses) were interviewed through two questionnaires. The results showed that higher levels of stress were secondary to the fear of being infected by HIV and hepatitis (3% and 58%, respectively), and to the lack of work-free weekends (3% and 44%, respectively). On the other hand, the lowest levels of stress were related to inadequate personal skills (2% and 32%, respectively) and environment light (2% and 34.7%, respectively). In absolute terms, the study highlights that the majority of participants were experiencing a low level of stress.

This paper offers several interesting insights. First, the survey was conducted among operating room personnel, except for medical staff. This allows for an important reflection on the role of the nurse and of the operating room technician, as well as on the possible sources of stress due to difficulties of communication between medical and nursing staff. Conflict with colleagues and the consequent lack of support and collaboration is considered a bona fide mental stressor, as it creates an inadequate feeling in the context of what it should be a teamwork with very specific skills. Second, an important mental stressor is represented by the manner and by the approach to work. Vowels et al. agreed that the highest impact stressful event was the "pressure to work more quickly" (9). Quickness is in fact an essential requirement in a work dictated by surgical times and where the onset of sudden complications requires decisions and actions

Implication for health policy/practice/research/medical education:
This viewpoint provides a poignant summary of the main features and countermeasures for stress, involving operating room personnel. It emphasizes why stress in this environment is so common and so challenging to prevent, and what action should be taken to limit its negative impact.

as swift as possible. For this reason, the fear of inappropriate skills to deal with emergency situations may represent an additional stressor. A recent study showed a significant inverse association between work experience and levels of stress. In other words, stress is reduced by working, by acquiring skills and by occupational and social experiences (11). Third, the operating room personnel are often subjected to on-call shifts, which mean the possibility to be called during the night in case of an emergency intervention. The feeling of "waiting" for an event that might occur can unquestionably be perceived as a mental stressor and in some cases have a significant impact on family life, as testified by the most stressed categories: female and married. Encouraging data, in the study of Azizpour et al. reveals that the majority of participants were experiencing a low level of stress, most probably, as the author says, because they were young, and thus, with an appropriate physical and mental fitness (10).

We might ask whether there is a direct correlation between young age and resistance to stress, or if, on the contrary, a greater work experience and the acquisition of more skills might supplant the physical resistance, typical for young people, in coping with work stress. Interestingly, a recent paper of Demetrios and colleagues opens a newsworthy perspective: they have studied the role of music during surgery for its effect on the operative staff, especially the anesthesiologists and nurses (12). Nurses presented the highest preference for music, compared especially with anesthesiologists (13). Besides, music in the operating room is known to have beneficial effects on patients (14).

In conclusion, it can be declared that the operating room is a peculiar and stressful environment, where the work pressure is closely linked to the need of working quickly and frequently in a regime of emergency. Work-related stress is not correlated to a single factor, but to a set of circumstances and relationships that may be considered as "disturbances" and seriously affecting work performance, which also regards patient safety. Attempting to remove the "stressors" probably collides with a reality that does not include working in complete relaxation. This is mainly because the "subject" in the center of everyday work is a suffering human, often on the verge of a life threatening event. Probably, thinking simply to reduce the stressors is definitely a more realistic choice. Finally, we think that wisdom in action, skill acquired and common sense, should guide the choices of all operating room personnel and help to manage the "stress factor" which is an intrinsic element of this type of work, which involves a daily and continuous relationship with a suffering human being.

Authors' contribution

All authors equally contributed to drafting and revising the manuscript.

Financial disclosure

All authors report that they had no financial interests related to the material in the manuscript.

References

1. Cohen S, Janicki-Deverts D, Miller GE. Psychological stress and disease. *JAMA*. 2007;**298**(14):1685–7.
2. Cohen S, Kessler RC, Gordon UL. Strategies for measuring stress in studies of psychiatric and physical disorder. In: Cohen S, Kessler RC, Gordon UL, editors. *Measuring Stress: A Guide for Health and Social Scientists*. New York, NY: Oxford University Press; 1995.
3. Wu S, Zhu W, Wang Z, Wang M, Lan Y. Relationship between burnout and occupational stress among nurses in China. *J Adv Nurs*. 2007;**59**(3):233–9.
4. Nyssen AS, Hansez I, Baele P, Lamy M, De Keyser V. Occupational stress and burnout in anaesthesia. *Br J Anaesth*. 2003;**90**(3):333–7.
5. Katz JD. Conflict and its resolution in the operating room. *Journal of clinical anesthesia*. 2007;**19**(2):152–8.
6. Hull L, Arora S, Kassab E, Kneebone R, Sevdalis N. Assessment of stress and teamwork in the operating room: an exploratory study. *American journal of surgery*. 2011;**201**(1):24–30.
7. Chiang YM, Chang Y. Stress, depression, and intention to leave among nurses in different medical units: Implications for healthcare management/nursing practice. *Health policy (Amsterdam, Netherlands)*. 2012;**108**(2):149–57.
8. Dadsetan P. *Tension or stress, the disease of new civilization*. Tehran: Roshd publications; 2008.
9. Vowels A, Topp R, Berger J. Understanding stress in the operating room: a step toward improving the work environment. *Ky Nurse*. 2012;**60**(2):5–7.
10. Azizpour Y, Shohani M, Sayehmiri K, Kikhavani S. A Survey on the Associated Factors of Stress among Operating Room Personnel. *Thrita J*. 2013;**2**:19–23.
11. Bakhtiari S, Mehrabi T, Hasanzadeh A. An investigation on occupational stress of the operating room staffs in hospitals affiliated to Isfahan University of Medical Sciences and its association with some factors. *Iran J Nurs Midwifery Res*. 2013;**18**(2):101–4.
12. Moris D, Linos D. Music meets surgery: two sides to the art of "healing". *Surg Endoscopy*. 2013;**27**(3):719–23.
13. Hawksworth C, Asbury AJ, Millar K. Music in theatre: not so harmonious. *Anaesthesia*. 1997;**52**(1):79–83.
14. Ayoub CM, Rizk LB, Yaacoub CI, Gaal D, Kain ZN. Music and Ambient Operating Room Noise in Patients Undergoing Spinal Anesthesia. *Anesth & Analgesia*. 2005;**100**(5):1316–9.