

Stress management in crisis event simulations for enhancing performance

Citation for published version (APA):

Ignacio, M. J. J. (2017). *Stress management in crisis event simulations for enhancing performance*. [Doctoral Thesis, Maastricht University]. <https://doi.org/10.26481/dis.20170209mi>

Document status and date:

Published: 01/01/2017

DOI:

[10.26481/dis.20170209mi](https://doi.org/10.26481/dis.20170209mi)

Document Version:

Publisher's PDF, also known as Version of record

Document license:

Unspecified

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VALORISATION

VALORISATION ADDENDUM

The research presented in this doctoral thesis addresses the importance of developing stress management strategies that could be utilised in health professions' curricula. These stress management strategies should be able to help trainees prepare themselves for actual clinical practice. Such a preparation is not just needed for technical skills, which could affect patient outcomes. It is also needed for non-technical skills, such as managing stress. Stress, at excessive amounts, has been shown to affect clinical performance in negative ways. Such a negative impact could have unfavourable consequences for patient outcomes. As such, patients could suffer more due to complications, prolonged hospitalisations, or possible frequent re-admissions. These less than optimum outcomes not only have impact on the patients involved, but also on their families who would be caring for them. Furthermore, poor patient outcomes adds burden to the healthcare industry in terms of costs.

The programmatic approach to developing a stress management strategy (Chapters 3, 4, 5, 6) that this thesis highlights could be used to develop similar strategies that train healthcare professionals to cope with stressful and emotionally-charged situations in clinical practice; situations that require them to think fast and act immediately. The emphasis of training, thus, should not only focus on the competent performance of technical or procedural skills.

The stress management strategy that has been developed and implemented for final year nursing students (described in Chapters 5 and 6) utilised mental rehearsal, which involves the repeated

visualisation of a task in the mind as a form of practice. This strategy was shown to be effective in other disciplines, such as sports and music. Mental rehearsal has then been integrated into authentic simulations to facilitate stress management and performance training of students. As mental rehearsal can be done independent of simulations, it is a cost-effective method of training that has the possibility of benefiting health professions' trainees.

TARGET GROUPS

As the main goal of this thesis is to address the emotional component of health professions' training, that is, to develop and implement a stress management strategy integrated into simulations, the primary target group naturally is the academic community which includes the *educators and the health professions students*. However, the thesis may be of interest to other groups as well.

Patients are the end-users of any healthcare service. As such, they are one of the main target groups that could benefit from the research findings. As patient outcomes may be affected by poor health professional performance due to stress, a stress management strategy that could be utilised in the training of health professionals could minimise the patients' risks for complications, prolonged hospitalisations, and hospital re-admissions.

Stress is inherent in the hospital setting. Hence, *individual hospital staff*, such as physicians, nurses, and those belonging to the allied health professions, may find some significance in the research's results. The mental rehearsal component of the strategy is very easy to

use any time in any place, and for hospital staff who are open to the idea of using the principles of this strategy in their own work areas, a workshop on how this strategy is applied in their setting could be done. After which, staff would be individually equipped to use mental rehearsal for the long-term as a stress management routine.

One group that may also be interested in the research results would be *hospital administrators*. Hospitals are sometimes burdened by patient re-admissions that strain hospital resources. Some of these re-admissions result from less than adequate patient management during prior hospitalisation, and as mentioned in the previous section of this chapter, healthcare professionals' excessive stress may have negative impact on performance, and consequently, to patient outcomes. A stress management strategy, therefore, such as mental rehearsal, has principles that are easy to understand, and with a practicality that makes it easy to integrate to hospitals' continuing training for staff.

Patient safety advocates may also be interested. One of the most common human factor errors that happens in the hospital setting result due to hospital staff stress. Because of this, advocates of patient safety or those in the hospital's patient safety committee may be interested to scrutinise this thesis to see whether mental rehearsal integrated into authentic simulations, or the principles of mental rehearsal, may be tailored and/or further developed to work for their unique setting.

Finally, *government agencies that regulate health professionals* may also be interested in the research results. These agencies pay close

attention to how health professionals are trained such that they could qualify as competent professionals in their area of specialty. Majority of the training programmes for health professionals focus on technical skills competence. However, expertise in procedural skills is not the only factor that determines the competency of the healthcare professional. Thus, regulating agencies may need to also consider mandatory stress management strategies, such as mental rehearsal together with simulation training, to be taught, not just as part of health professions students' training, but as an integral component of continuing medical/nursing/allied health education.

ACTIVITIES/PRODUCTS

This thesis comprises of a series of research that led to the development of the mental rehearsal strategy in patient deterioration simulations. These studies were conducted in the context of the Clinical Decision-Making module for final year undergraduate nursing students. The principles and the use of mental rehearsal in assessing and managing deteriorating patients have thus been taught to nursing students in said module in subsequent semesters after the research. The main products of this thesis, however, include papers that have been published in reputable journals, and the presentation of findings derived from the individual studies that comprise this thesis. These findings have been presented in local and international conferences, as well as in workshops on simulation that the author has facilitated. The aim of these presentations is not just to disseminate what has been done in terms of training health professions students to manage stress,

but to elicit an interchange of ideas that could further improve the stress management strategy that has been developed.

INNOVATION

The focus of the thesis is innovative as it tries to address stress management that seems to be lacking in health professions' training programmes. The application of mental rehearsal, a stress management and performance enhancing strategy that has been used successfully in other areas, such as sports and music, and its integration into a more complex patient deterioration simulation is something new.

SCHEDULE AND IMPLEMENTATION

As mentioned under a previous section of this chapter, the principles and use of the mental rehearsal strategy has been taught to final year nursing students in subsequent runs of the Clinical Decision-Making module. As this module, however, will be phased-out commencing on Academic Year 2017 - 2018 as a result of the switch to a new curriculum, the mental rehearsal strategy in deteriorating patient simulations may need to undergo further refinements so that it could be integrated into a new simulation-based module that prepares final year nursing students for clinical posting. It has also been suggested that the principles of mental rehearsal be taught to nursing and medical students to help them in their learning. There are also potential collaboration plans with clinical staff to integrate the mental rehearsal (as a stress management strategy) into their existing training

programme as it has been found that stress is one of the factors that negatively impacts on their performance-based training programmes.