

# Icare stress: caring system for stress

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**ABSTRACT** :Background :The health care environment is a notable work place associated with high work stress and high level of fatigue due to high demands according to healthcare professionals are usually exposed to stress at their work- place and thus they usually experience stress in their personal life and this ultimately affect their work performance.

Result :This implies to examine stress in all aspect, example strategies of stress, causes, benefits, consequences and stress management intervention in the healthcare professionals.This focuses on detection of stress using EEG sensors.The patients can available their results of the test through GSM from their own place. Conclusion

Stress management studies has shown that the stress experience in the healthcare environment negatively impacts healthcare professionals and commonly leads to so many health related problems particularly to decreased quality of life, physical and mental ill health, and poor C Submitted to BioMedical Engineering OnLine Page 2 of 4 be sources of strain and Stress for healthcare professional. Thus the theoretical framework that was used for this study is work engagement and change. 3

## AIM

The aim of this study is to examine stress in all aspect, example strategies of stress, causes, benefits, consequences and stress management intervention in the healthcare professionals. The idea of this study came about from participation in Management courses and taking assignments on stress. Having acquired a deeper knowledge on the topic, this grows interest in the subject and started observing the effects of stress on healthcare professionals.

## DEFINITIONS OF STRESS

The term stress defined stress as “a non-specific response of the body to any demand for change”.

## CAUSES AND CONSEQUENCES OF STRESS

The reasons why healthcare professionals are faced with stress daily is due to their work environment, this stresses are also known as work related

organizational performance.This innovation is user friendly as we can access from our own locality.

## I. INTRODUCTION AND BACKGROUND

The current study concerns with the management of stress among health care professionals, the studies associated high turnover among health care professionals with high levels of strain and stress and low levels of work satisfaction, they engage in physically demanding tasks on a daily basis and are often exposed to people’s needs, problems and sufferings.

A lot has occurred in the health care environment, with advancement in technology, change in leadership with new roles and new expectations, limited training in the new work task, increased consumption of health care good and services, short age of healthcare personal and insufficient competence at work task are shown to

(occupation) stress, the work related stress is caused by a number of inherent factor called stressors. Work related stressors have been defined as “any work situation perceived by the participants as threatening the situation and individuals coping abilities. The inherent factors include long working hours, excessive work load, dealing with death and dying, inter personal conflict with other staff, patient’s expectation, and threat of malpractice litigation this factors lead to the classification.

## II. LITERATURE REVIEW

Literature review focused on a research question that tries to identify, appraise, select and synthesize all high quality research evidence relevant to the question. Systematic reviews of high-quality randomized controlled trials are crucial to evidence based medicine. Literature reviews are not limited to medicine they are quite common in other sciences where data are collected, published in the literature, and an assessment of methodological quality for a precisely defined subject would be helpful.

A literature review uses an objective and transparent approach for research synthesis, with the aim of minimizing bias. While many systematic

reviews are based on an explicit quantitative meta-analysis of available data, there is also qualitative review which adheres to standards for gathering; analyzing and reporting evidence.

#### ACCESSORIES

EEG sensor, Arduino UNO, GSM modem and power supply are used for design

#### ARDUINO

An Arduino is actually a microcontroller based kit which can be either used directly by purchasing from the vendor or can be made at home using the components, owing to its open source hardware feature.

#### GSM MODEM

GSM is a mobile communication modem; it stands for global system for mobile communication (GSM). It is widely used mobile communication system in the world.

#### POWER SUPPLY

Power supply is a reference to a source of electrical power.

### III. RESULT

Here used a literature review to examine the management of work related stress, therefore, the result were made in terms of the information from the literature review and supporting evidence from other journals not included in the review. Results from this studies shows that occupational stress is directly associated with the state of health and inversely associated with global constructive thinking and job satisfaction; occupational stressors are aspects of the work environment that cause strains, poor psychological health or well-being of the individual.

### IV. DISCUSSION

Occupational stress can affect individuals' emotional, mental and physical health that is the psychological and physiological well being of healthcare professionals. The results showed that multiple factors relate to the experience of work related stress.

### V. CONCLUSION

The current findings, noted that healthcare professionals need support in address ing the numerous stressors inherent in their work and it is suggested that stress management interventions should be aimed at preventing or reducing stress among healthcare professionals, this should focus on optimizing job demands through corresponding matching type of job resource.

### REFERENCES

- [1]. Mervi F, Laine M, Leino-Kilpi H, Hasselhorn HM, Salanterä S; 2008.
- [2]. Hi I, Chen YC, Kuo HT; 2008.
- [3]. Micheal F; 20012.
- [4]. Howard F; 2008.
- [5]. Coutu C. The relationship of emotional exhaustion to work attitudes, Job performance and Organizational citizenship behaviors. *Journal of Applied psychology*. 2003;88(1):160–169.
- [7]. Benson C; 2006.
- [8]. Denhardt ANR, Denhardt J, p Aristigueta M, editors. *Organizational behavior*; 2015.
- [9]. Fiabane E, Giorgi I, Sguazzin C, Argentero P. Work engagement and occupational stress in nurses and other
- [10]. healthcare workers: the role of organisational and personal factors. *Journal of Clinical Nursing*. 2013;22(17-18):2614–2624. Available from: <https://dx.doi.org/10.1111/jocn.12084>.
- [11]. Flanagan NA, Flanagan TJ. An analysis of the relationship between job satisfaction and job stress in correctional nurses. *Research in Nursing & Health*. 2002;25(4):282–294. Available from: <https://dx.doi.org/10.1002/nur.10042>.
- [12]. Kankaanranta T, Rissanen P. *Nurses' intentions to leave nursing in Finland*. Springer Science and Business
- [13]. Media LLC; 2008. Available from: <https://dx.doi.org/10.1007/s10198-007-0080-3>.
- [14]. Buchan J, Rev; 2002.
- [15]. KANSTE O, KYNGAS H, NIKKIL A J. The relationship between multidimensional leadership and burnout among nursing staff. *Journal of Nursing Management*. 2007;15(7):731–739. Available from: <https://dx.doi.org/10.1111/j.1365-2934.2006.00741.x>.
- [16]. Heponiemi T, Pekkarinen AEM. The effects of Job demands and low Job control on work - family conflict: The role of fairness in decision-making and management. *Journal of community Psychology*. 2008;36(3):387–398.
- [17]. Happell B. Nurses and stress: recognizing causes and seeking solutions. *Journal of Nursing management*. 2013;21(4):638–647.
- [19]. Cunnings G, Greta; 2010.
- [20]. David B. Difference initial effects on response style and psychological distress

- Poster (173) presented at the second Annual Mindfulness in Medicine and Healthcare conference. Worcester, MA; 2009.
- [21]. Lyons JB, Schneider TR. The effects of leadership style on stress outcomes. Elsevier BV; 2009. Available from: <https://dx.doi.org/10.1016/j.leaqua.2009.06.010>.
- [22]. Job stress recognition Job performance and intention to stay at work among Jordanian hospital. Nurses
- [23]. Journal of Nursing Management. 2008;16:227–236.
- [24]. Lambert VA, Lambert CE; 2008.
- [25]. Helen A; 2014.
- [26]. Robinson L, Smith M, A M, Segal R, M. Stress Management. 2016;.
- [27]. Harris JI, Winskowski AM, Engdahl BE. Types of Workplace Social Support in the Prediction of Job
- [28]. Satisfaction. The Career Development Quarterly. 2007;56(2):150–156. Available from:
- [29]. <https://dx.doi.org/10.1002/j.2161-0045.2007.tb00027.x>.