

**BJMHR**British Journal of Medical and Health Research  
Journal home page: [www.bjmhr.com](http://www.bjmhr.com)

## Significance of work-related stress among emergency department nurses in Australian hospitals – A critical review.

**James Rufus John<sup>1</sup>***1.School of Science and Health, Western Sydney University, New South Wales, Australia.*

### ABSTRACT

Work-related stress (WRS) has been widely recognized as an emerging occupational health issue, resulting in negative ramifications to employees' health due to the pressures of the contemporary workplace environment. Since the nurses working in ER deal with the imminent situations of life or death of their patients, they are forced to act rapidly without prior planning which significantly raises their stress levels, subsequently leading to injuries. Whilst there are numerous legislative standards and industry protocols in place to reduce WRS, the average cost of claims and injury incidence have only further increased. The aim of this article is to critically review the significance of WRS in the healthcare organization among ER nurses. Therefore, this article will provide insights on the economic burden related to WRS with focus on healthcare industry. The critical interplay of the manifestation of WRS as potential health hazards and their harmful effects on ER nurses will be discussed in-depth. Finally, the review will outline the best practices employed in minimizing WRS for further improvement.

**Keywords:** Stress, Occupational health, nurses, health professionals, workplace.

\*Corresponding Author Email: [rufus.benaud11@gmail.com](mailto:rufus.benaud11@gmail.com)

Received 10 March 2017, Accepted 18 March 2017

Please cite this article as: John JR., Significance of work-related stress among emergency department nurses in Australian hospitals – A critical review.. British Journal of Medical and Health Research 2017.

## INTRODUCTION

Work is an important social determinant of health where nature of work and the workplace environment, both contribute significantly to an individual's health (Wilkinson & Marmot, 2003)<sup>1</sup>. According to World Health Organisation (WHO), WRS is defined as the development of inherent response in people due to their inability to cope with workload and other occupational pressures which exceed their competency levels (Leka, Griffiths & Cox, 2003)<sup>2</sup>. Although WRS has been an abiding occupational health hazard in the past, it has come to the forefront of society's attention due to steep rise in the incidence of injuries and the proportion of serious claims world-wide. Safe Work Australia (SWA) (2015)<sup>3</sup> reported that almost 90% of worker's compensation claims were linked to WRS between 2008 and 2013. In comparison to the international occupational health statistics, Health and Safety Executive (HSE, 2015)<sup>4</sup> reported similar figures in Great Britain, where WRS accounted for 35% of ill-health and 43% of days in terms of LTI in 2014-2015. More specifically, it was reported that WRS accounted for 40% of the total 18,270 serious claims for diseases in the year 2010-2011 (SWA, 2013b)<sup>5</sup>. In addition, WRS had the highest proportion of LTI, which rose to 13 working weeks lost in 2010-2011 from 10.2 working weeks in 2001, with highest median payment of \$20,800 doubling all other claims of \$8,200 (Guthrie, Ciccarelli & Babic, 2010; SWA, 2013b)<sup>6,5</sup>. However, Australian Bureau of Statistics (ABS) (As cited in SWA, 2013a) reported that 70 % of employees who reported to experience WRS did not claim workers' compensation, which substantially underestimates the magnitude of WRS in terms of the severity and additional cost incurred. Furthermore, recent statistics report that the trends in WRS rates continue to rise, thus presenting a major threat for employees' health at workplaces and the Australian economy (SWA, 2014a)<sup>7</sup>.

### **Significance of WRS and its manifestation on ER nurses in hospitals**

Emergency departments (ER) in hospitals are one of the most stressful work environments, where nurses are expected to cope with stressful situations on a daily basis (Healy & Tyrrell, 2011)<sup>8</sup>. Since the nurses working in ER deal with the imminent situations of life or death of their patients, they are forced to act rapidly without prior planning which significantly raises their stress levels, subsequently leading to injuries (Bezerra, Silva & Ramos, 2012)<sup>9</sup>. This theory is supported by statistical evidence in Australian workers' compensation claims which reported that healthcare industry accounted for the highest number of serious claims accounting to a total of 19,125 claims in 2012-2013, which shows a 29% increase in claims and 14% increase in LTI compared to previous decade (SWA, 2014b)<sup>10</sup> It is crucial to notice that atleast one in ten healthcare workers claimed compensation due to WRS (SWA, 2015)<sup>3</sup>.

Thus WRS among nurses is a critical occupational health issue as it involves individual health of nurses as well as the involved patients' health.

WRS manifests as various health hazards which can be classified according to the content and context of work (SWA, 2013a)<sup>11</sup>. The important constituents of work content are increased workload and work hours, lack of role clarity and lack of control. For example, a multi-centered study conducted in 17 ERs reported that almost 40% of impaired performance was due to WRS as a result of increased workload in ER nurses (Gurses & Carayon, 2007)<sup>12</sup>. Similar claims were made by another study which compared the levels of control, stressors and burnout among emergency nurses, nursing managers and nursing practitioners, and found that emergency nurses had the least levels of control (in mean scores) (198.5 vs 233.8 vs 236.4), highest stressors (194.7 vs 180.8 vs 157.1) and highest burnout (26.8 vs 23.7 vs 21.2) compared to nursing managers and nursing practitioners respectively. The work context involves job insecurity, poor work environment and work culture resulting in stress due to violence, bullying, lack of employee-employer relationship and lack of motivation (Leka, Griffiths & Cox, 2003; SWA, 2013a)<sup>3,11</sup>. Similar findings from two studies reported that violence and bullying were evident among nurses (90.1%), especially in ER nurses (16%) (Roche et al., 2010; Stanley et al., 2007)<sup>13,14</sup>.

SWA (2013a) report on the mechanism of WRS found that 33% of all WRS claims were due to workload with LTI of 8.4 weeks and 22% of claims were attributable to workplace bullying and harassment with LTI of 8.6 weeks. In comparison to the British statistics, whilst workload was the leading cause of WRS with 600 claims per 100,000, violence claims were relatively less when compared to Australian figures (HSE, 2015)<sup>4</sup>. In light to these claims, it is evident from the Australian Workforce Barometer (AWB) report that there was 6.8% of overall bullying and harassment rates which were significantly higher when compared to other countries (SWA, 2012)<sup>15</sup>.

### **Detrimental effects of WRS on individual and organizational levels.**

As aforementioned, WRS significantly impairs health at individual level and the health of the organisation in light to its productivity and profitability. In terms of individual's health, whilst WRS is not a physical illness but rather a condition of mind and body, prolonged exposure could potentially lead to poor physical and mental health outcomes (SWA, 2013a)<sup>11</sup>. WRS results in increased risk of psychological health issues such as depression, anxiety, emotional exhaustion and behavioral changes (Tennant, 2001)<sup>16</sup>. In terms of physical health, prolonged exposure to WRS can lead to range of diseases from minor infirmities such as migraines to development of debilitating diseases such as musculoskeletal disorders and CVD (Leka & Jain, 2010)<sup>17</sup>. For example, Mealer et al. (2007)<sup>18</sup> compared the prevalence of

psychological symptoms associated with WRS between ICU nurses and general nurses, and found that there was increased prevalence of 24% of anxiety, depression and post-traumatic stress disorder among ICU nurses compared to 14% prevalence rates in general nurses. However, the above findings were not consistent across other studies as Kawano (2008)<sup>19</sup> reported that psychological symptoms did not vary significantly among nursing departments. Besides individual's health, WRS also impacts the overall productivity of the organisation due to increased absenteeism and staff turnover, impaired staff performance, poor commitment and increased liability to legal claims in stressed employees (Comcare, 2016)<sup>20</sup>. A recently released report by SWA (2013c)<sup>21</sup> confirms that the increased absenteeism and loss of productivity due to WRS resulted in \$10 billion every year.

### **Legislative standards relevant to WRS**

Strict compliance and adherence to legislative framework is critical to ameliorate the increasing WRS incidence. The legislative standards include the generic Work Health and Safety (WHS) act of 2011, and the Australian guidelines that specifically focus on WRS. The WHS act is a pro-active and holistic framework that guides employers in protecting the health and safety of employees (Comcare, 2012)<sup>22</sup>. Under this act, employers are mandated to ensure safety at workplace by identifying risks of WRS followed by performing regular assessment of risks and hazards that contribute to WRS. This is followed by application of effective control measures to eliminate or minimize WRS and monitoring its effectiveness (Comcare, 2012)<sup>22</sup>. However, lack of specificity in WHS framework and the factor of non-compliance in terms of inadequate training and under-reporting incidents result in unfavourable outcomes. ABS reported that 44% of staff failed to report incidences as 10% received financial assistance, while others were offered sick leave by their employers in order to avoid harm to the organization's reputation (ABS, 2014)<sup>23</sup>.

In light to the specific Australian standards, there are many frameworks and guidelines of which two are closely relevant and recent to WRS management. Comcare's (2013)<sup>24</sup> "Working together: promoting mental health and well-being at work" follows WHO's concept of recognizing mental health as more than absence of disease. It provides practical knowledge regarding promotion of mental health and well-being at workplace by four main principles of people management, prevention methods, early recognition of WRS, and rehabilitation. WorkSafe Victoria (2013)<sup>25</sup> implemented guidelines for preventing WRS by managing harassment and discrimination through effective well-being strategy with performance feedback by employees. It is important to notice that both frameworks emphasize the need for effective leadership with adequate training and counselling sessions in staff to manage stress efficiently. Several experimental studies have produced quantifiable

results confirming the effectiveness of training programs for WRS prevention. For example, cognitive training interventions on assertiveness, stress awareness and workload significantly reduced stress levels from 60% to 20% among ER nurses (Light & Bincy, 2012; Regehr et al., 2014)<sup>26,27</sup>.

### **Health industry guidelines for WRS management and recommended best practices.**

The healthcare industry standards that are confined to managing WRS among healthcare professionals can be classified as international and local standard practices. The international standards include WHO's PRIMA-EF which provides insights on prevention of psychosocial risks by organization's readiness to change, devising realistic interventions, and encouraging continual evaluation, along with specific and well-defined measuring indicators (WHO, 2008)<sup>28</sup>.

In light to the local healthcare organisation practices, VicHealth's (2012)<sup>29</sup> "reducing stress in the workplace" framework provides clarity in terms of managing WRS by primary, secondary and tertiary interventions. The interventions involve the hierarchy of hazard controls beginning with eliminating or substituting WRS hazards by reducing workload, increasing job control and providing regular breaks. Engineering controls in terms of redesigning the workplace environment that are conducive to less WRS such as panic alarms and video surveillance to effectively control bullying and violence. A multi-hospital study conducted among nurses reported that security alarms (36%) and video surveillance (26.3%) proved to be effective safety measures to control violence and bullying (Kennedy, 2005; Kitaneh & Hamdan, 2012)<sup>36,37</sup>. The administrative controls involve effective job rotations and building resilience in staff by equipping them with adequate training and counselling sessions to manage and cope with stress (VicHealth, 2012)<sup>29</sup>. Although, there are no specific PPEs for WRS, it is recommended that primarily exercise along with social support, time management, open discussion about WRS and healthy lifestyle practices are essential in managing WRS (LaMontagne, 2010)<sup>30</sup>. NSW Health (2006)<sup>31</sup> policy also provide essential techniques and exercises such as slow breathing techniques and muscle relaxation methods to assist nurses to effectively manage WRS.

In regards to the effectiveness, although the frequency of claims due to WRS among nurses have reduced from 517 in 2010-2011 to 328 cases in 2014-2015, the average cost of claims has conversely increased from \$22,087 to \$36,186 (NSW Health, 2012; NSW Health, 2015)<sup>32,33</sup>. Whilst it is clear that the existing WRS policies are not effective, it is critical to shift attention to a better occupational health management (OHM) strategy that focuses on the root causes of WRS and its management with effective control measures. Thus recommendations for future prevention would include adopting best practices such as HSE's

(UK) consideration of six potential sources for WRS such as demand, control, support, role, relationship and change (Kerr, McHugh & McCrory, 2009)<sup>34</sup>. In terms of its effectiveness, two HSE (2009)<sup>35</sup> case studies on Cardiff, Vale, Blackpool and Wyre Hospitals reported that there was 40% reduction in WRS incidence, followed by reduction in the overall absenteeism by 6.9% and legal claims by 50% among healthcare workers following the adoption of HSE framework.

## CONCLUSION

The failure to attend to WRS as an important occupational health hazard has certainly led to its recent emergence, challenging employees' health as well as the overall organization's health. The cost burden and the incidence of injuries due to the manifestation of WRS in ER nurses is critically reviewed with statistically sound reports. Whilst there are active national WHS legislations and industry-specific policies in place, the frequency of injuries and claims due to WRS does not seem to diminish. Therefore, the shortcomings of the existing legislation and standard industry practices demand immediate attention to implement better OHM strategy that adopts best practices on WRS management. It is imperative that a proactive OHM strategy with continuous monitoring of the root causes of WRS is devised and effectively implemented. Clear performance indicators and strict compliance measures with regular audits by independent health and safety inspectors is crucial for its effectiveness (SWA, 2013a). Whilst training programs on stress management are useful, the role of leadership in effecting a high standard of safety culture and performance is pivotal for the success of OHM strategy in mitigating the WRS incidence.

## ACKNOWLEDGEMENT

This is to certify that there is no affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

## REFERENCES

1. Wilkinson, R. G., & Marmot, M. G. (2003). *Social determinants of health: The solid facts*. Copenhagen: World Health Organization. Regional Office for Europe. Retrieved from [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0005/98438/e81384.pdf](http://www.euro.who.int/__data/assets/pdf_file/0005/98438/e81384.pdf)

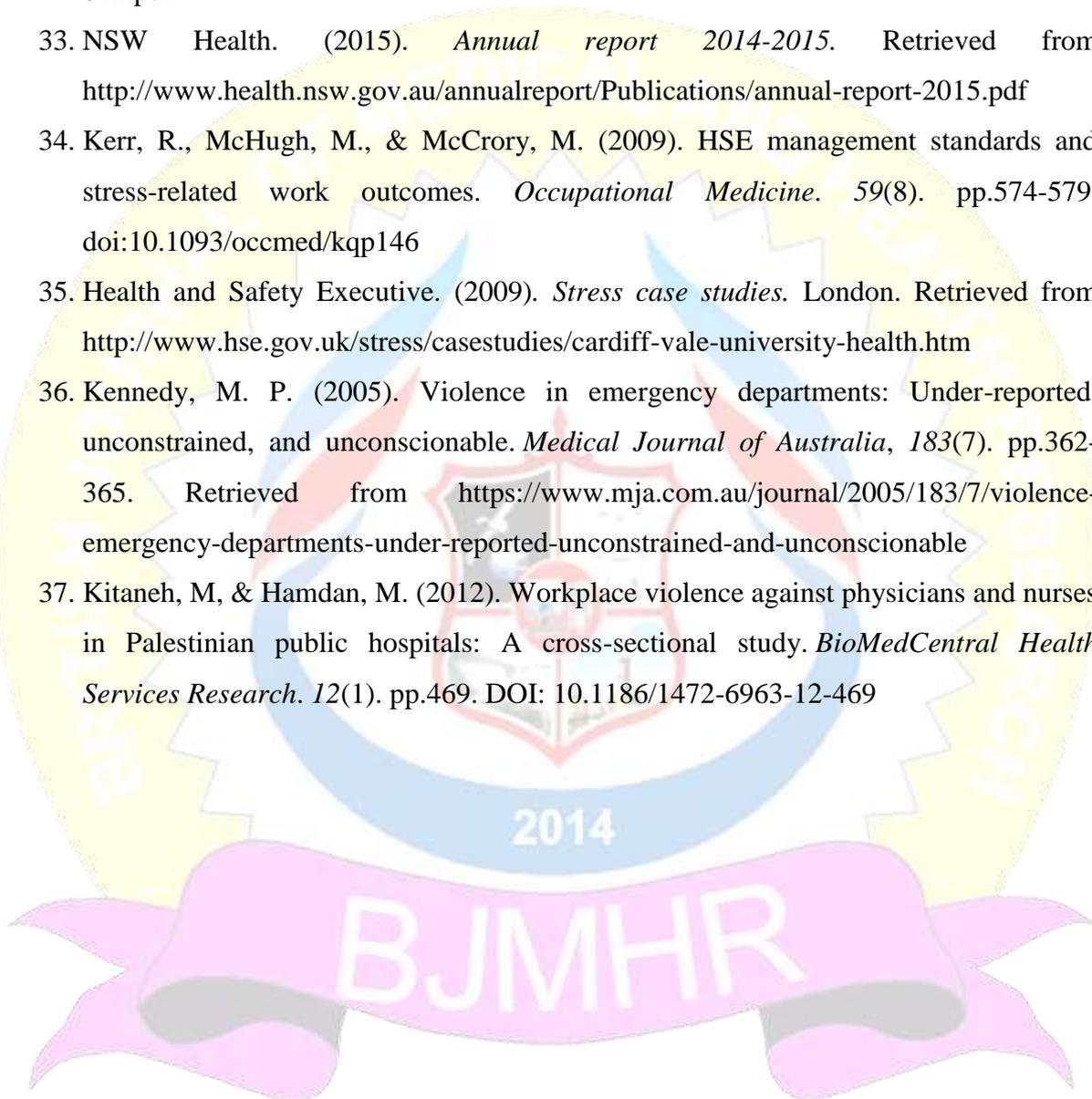
2. Leka, S., Griffiths, A., & Cox, T. (2003). *Work organisation and stress: Systemic problem approaches for employers, managers and trade union representatives*. World Health Organisation. Geneva. Retrieved from [http://www.who.int/occupational\\_health/publications/en/oehstress.pdf](http://www.who.int/occupational_health/publications/en/oehstress.pdf)
3. Safe Work Australia. (2015). *Work-related mental disorders profile: 2015*. Canberra. Retrieved from <http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/945/work-related-mental-disorders-profile.pdf>
4. Health and Safety Executive. (2015). *Work related stress, anxiety and depression statistics in Great Britain 2015*. London. Retrieved from <http://www.hse.gov.uk/statistics/causdis/stress/stress.pdf>
5. Safe Work Australia. (2013b). *Compendium of workers' compensation statistics Australia 2010-11*. Canberra. Retrieved from <http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/766/Compendium%202010-11.pdf>
6. Guthrie, R., Ciccarelli, M., & Babic, A. (2010). Work-related stress in Australia: The effects of legislative interventions and the cost of treatment. *International Journal of Law and Psychiatry*. 33(2). pp.101-115. doi:10.1016/j.ijlp.2009.12.003
7. Safe Work Australia. (2014a). *Occupational disease indicators*. Canberra. Retrieved from <http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/867/Occupational-Disease-Indicators-2014.pdf>
8. Healy, S., & Tyrrell, M. (2011). Stress in emergency departments: Experiences of nurses and doctors. *Emergency Nurse*. 19(4). pp.31-37. Retrieved from <http://dx.doi.org/10.7748/en2011.07.19.4.31.c8611>
9. Bezerra, F. N., Silva, T. M. D., & Ramos, V. P. (2012). Occupational stress of nurses in emergency care: An integrative review of the literature. *Acta Paulista de Enfermagem*, 25(SPE2). 151-156. Retrieved from <http://dx.doi.org/10.1590/S0103-21002012000900024>
10. Safe Work Australia. (2014b). *Australian workers' compensation statistics: 2012-13*. Canberra. Retrieved from <http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/897/australian-workers-compensation-statistics-2012-13.pdf>
11. Safe Work Australia. (2013a). *The incidence of accepted workers' compensation claims for mental stress in Australia*. Canberra. Retrieved from

- [http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/769/The Incidence-Accepted-WC-Claims-Mental-Stress-Australia.pdf](http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/769/The%20Incidence-Accepted-WC-Claims-Mental-Stress-Australia.pdf)
12. Gurses, A. P., & Carayon, P. (2007). Performance obstacles of intensive care nurses. *Nursing Research*, 56(3). pp.185-194. doi: 10.1097/01.NNR.0000270028.75112.00
  13. Roche, M., Diers, D., Duffield, C., & Catling-Paull, C. (2010). Violence toward nurses, the work environment, and patient outcomes. *Journal of Nursing Scholarship*. 42(1). pp.13-22. doi: 10.1111/j.1547-5069.2009.01321.x
  14. Stanley, K. M., Martin, M. M., Michel, Y., Welton, J. M., & Nemeth, L. S. (2007). Examining lateral violence in the nursing workforce. *Issues in Mental Health Nursing*. 28(11). pp.1247-1265. DOI: 10.1080/01612840701651470
  15. Safe Work Australia. (2012). *The Australian workplace barometer: Report on psychosocial safety climate and worker health in Australia*. Canberra. Retrieved from <http://www.safeworkaustralia.gov.au/sites/swa/about/Publications/Documents/748/The-Australian-Workplace-Barometer-report.pdf>
  16. Tennant, C. (2001). Work-related stress and depressive disorders. *Journal of Psychosomatic Research*. 51(5). pp.697-704. doi:10.1016/S0022-3999(01)00255-0
  17. Leka, S., & Jain, A. (2010). *Health impact of psychosocial hazards at work: An overview*. World Health Organisation. Geneva. Retrieved from [http://apps.who.int/iris/bitstream/10665/44428/1/9789241500272\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44428/1/9789241500272_eng.pdf)
  18. Mealer, M. L., Shelton, A., Berg, B., Rothbaum, B., & Moss, M. (2007). Increased prevalence of post-traumatic stress disorder symptoms in critical care nurses. *American Journal of Respiratory and Critical Care Medicine*. 175(7). pp.693-697. doi: 10.1164/rccm.200606-735OC
  19. Kawano, Y. (2008). Association of job-related stress factors with psychological and somatic symptoms among Japanese hospital nurses: Effect of departmental environment in acute care hospitals. *Journal of Occupational Health*, 50(1). pp.79-85. Retrieved from <http://doi.org/10.1539/joh.50.79>
  20. Comcare. (2016). *Work-related mental stress*. Australian Government. Canberra. Retrieved from [https://www.comcare.gov.au/preventing/hazards/psychosocial\\_hazards/work-related\\_mental\\_stress](https://www.comcare.gov.au/preventing/hazards/psychosocial_hazards/work-related_mental_stress)
  21. Safe Work Australia. (2013c). *Mental stress costs Australian businesses more than \$10 billion per year*. Canberra. Retrieved from

<http://www.safeworkaustralia.gov.au/sites/SWA/media-events/media-releases/Documents/2013%20Media%20Releases/MR08042013-Mental-Stress-Cost-Australian-Businesses.pdf>

22. Comcare. (2012). *Work health and safety act 2011*. Canberra. Retrieved from [https://www.comcare.gov.au/the\\_scheme/the\\_whs\\_act](https://www.comcare.gov.au/the_scheme/the_whs_act)
23. Australian Bureau of Statistics. (2014). *Work-related injuries*, Australian 2013-14, cat. no. 6324.0. Canberra. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/6324.0>
24. Comcare. (2013). *Working together: promoting mental health and wellbeing at work*. Canberra. Retrieved from [http://www.apsc.gov.au/\\_data/assets/pdf\\_file/0006/56994/working-together-mental-health-wellbeing-accessible.pdf](http://www.apsc.gov.au/_data/assets/pdf_file/0006/56994/working-together-mental-health-wellbeing-accessible.pdf)
25. WorkSafe Victoria. (2013). *Workplace prevention of mental health problems: Guidelines for organisations*. Victoria. Retrieved from <https://mhfa.com.au/sites/default/files/GUIDELINES-for-workplace-prevention-of-mental-health-problems.pdf>
26. Light, I. C., & Bincy, R. (2012). Effect of stress management interventions on job stress among nurses working in critical care units. *Nursing Journal of India*. 101(6). pp. 269-271. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/23923598>
27. Regehr, C., Glancy, D., Pitts, A., & LeBlanc, V. R. (2014). Interventions to reduce the consequences of stress in physicians: A review and meta-analysis. *The Journal of Nervous and Mental Disease*. 202(5). pp.353-359. doi: 10.1097/NMD.0000000000000130
28. World Health Organisation. (2008). *PRIMA-EF: guidance on the European framework for psychosocial risk management: A resource for employers and worker representatives*. Geneva. Retrieved from [http://www.prima-ef.org/uploads/1/1/0/2/11022736/prima-ef\\_brochure\\_english.pdf](http://www.prima-ef.org/uploads/1/1/0/2/11022736/prima-ef_brochure_english.pdf)
29. VicHealth. (2012). *Reducing stress in the workplace (an evidence review: summary report)*. Victorian Health Promotion Foundation. Melbourne. Retrieved from [https://www.vichealth.vic.gov.au/~media/resourcecentre/publicationsandresources/economic%20participation/2012%20workplace/vh\\_reducing\\_workplace\\_stress\\_16.pdf?la=en](https://www.vichealth.vic.gov.au/~media/resourcecentre/publicationsandresources/economic%20participation/2012%20workplace/vh_reducing_workplace_stress_16.pdf?la=en)
30. LaMontagne, A. D., Keegel, T., Louie, A. M., & Ostry, A. (2010). Job stress as a preventable upstream determinant of common mental disorders: A review for

- practitioners and policy-makers. *Advances in Mental Health*. 9(1). pp.17-35. DOI:10.5172/jamh.9.1.17
31. NSW Health. (2006). *Stress Management for Nurses*. Retrieved from <http://www.health.nsw.gov.au/nursing/Publications/stress-mngt.pdf>
32. NSW Health. (2012). *Annual report 2011–12*. Retrieved from [http://www.health.nsw.gov.au/publications/Publications/annual\\_report12/HealthAR\\_2012.pdf](http://www.health.nsw.gov.au/publications/Publications/annual_report12/HealthAR_2012.pdf)
33. NSW Health. (2015). *Annual report 2014-2015*. Retrieved from <http://www.health.nsw.gov.au/annualreport/Publications/annual-report-2015.pdf>
34. Kerr, R., McHugh, M., & McCrory, M. (2009). HSE management standards and stress-related work outcomes. *Occupational Medicine*. 59(8). pp.574-579. doi:10.1093/occmed/kqp146
35. Health and Safety Executive. (2009). *Stress case studies*. London. Retrieved from <http://www.hse.gov.uk/stress/casestudies/cardiff-vale-university-health.htm>
36. Kennedy, M. P. (2005). Violence in emergency departments: Under-reported, unconstrained, and unconscionable. *Medical Journal of Australia*, 183(7). pp.362-365. Retrieved from <https://www.mja.com.au/journal/2005/183/7/violence-emergency-departments-under-reported-unconstrained-and-unconscionable>
37. Kitaneh, M, & Hamdan, M. (2012). Workplace violence against physicians and nurses in Palestinian public hospitals: A cross-sectional study. *BioMedCentral Health Services Research*. 12(1). pp.469. DOI: 10.1186/1472-6963-12-469



**BJMHR is**

- **Peer reviewed**
- **Monthly**
- **Rapid publication**
- **Submit your next manuscript at**

[editor@bjmhr.com](mailto:editor@bjmhr.com)

