

# P-27 Do you have Work Related Musculoskeletal Disorders (WRMSDs)? Complaints by Nurses from a Tertiary Hospital in Malaysia



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**Introduction:** Nursing career is one of the most physically laborious professions which is associated with high prevalence of work related musculoskeletal disorders (WRMSDs) which are the major concern worldwide. The incidence rate of WRMSDs was 38 cases per every 10,000 workers. It is responsible for 34% of occupational illnesses<sup>1</sup>. About 33% of the hospital staff is nurses which are accounting for 60% of the recorded occupational injuries<sup>2</sup>.

MSD has been associated with multiple factors including physical hazards, organizational, psychosocial and personal factors<sup>3-5</sup>. However, limited evidences available at the Northern Region of the country on WRMSDs among nurses.

**Objective:** To estimate the prevalence and risk factors of WRMSDs pain for the past 12 months in various anatomical regions among nurses.

**Methodology:** Cross-sectional study involving self-administration of questionnaire by 334 registered nurses with at least 1 year of clinical experiences at Sultan Abdul Halim Hospital, Sungai Petani, Kedah in 2019 using convenient sampling after obtaining informed consent.

**Study tool:** Questionnaire was adopted to fulfill the conceptual ideas (Figure 1) from the National Institute for Occupational Safety and Health (NIOSH)<sup>6</sup>, DOSH 2018<sup>7</sup> and Copenhagen Psychosocial Questionnaire (COPSOQ II)<sup>5</sup> and further pre-tested among 50 nurses.

## Results & Discussion:

Response rate was 85.7% (300/350). Majority of the nurses were 30-39 years old (62.3%), Malay (86.7%), with diploma (83.7%) and married (84.0%). Half of the nurses were obese (Asia-Pacific classification). Almost 86% were on rotating shifts. Nurses presented with occasional mental exhaustion (44.3%) and often physical exhaustion (44.0%). **All nurses (100%) complaint of having work related pain during the last 12 months.** Pain prevalence according to body regions is presented in Figure 2. Pain was occasional for neck and upper back but rated as often pain for the rest of the body parts. Pain intensity was severe for lower back (19.7%), right shoulder (29.7%) and left shoulder (30.3%).

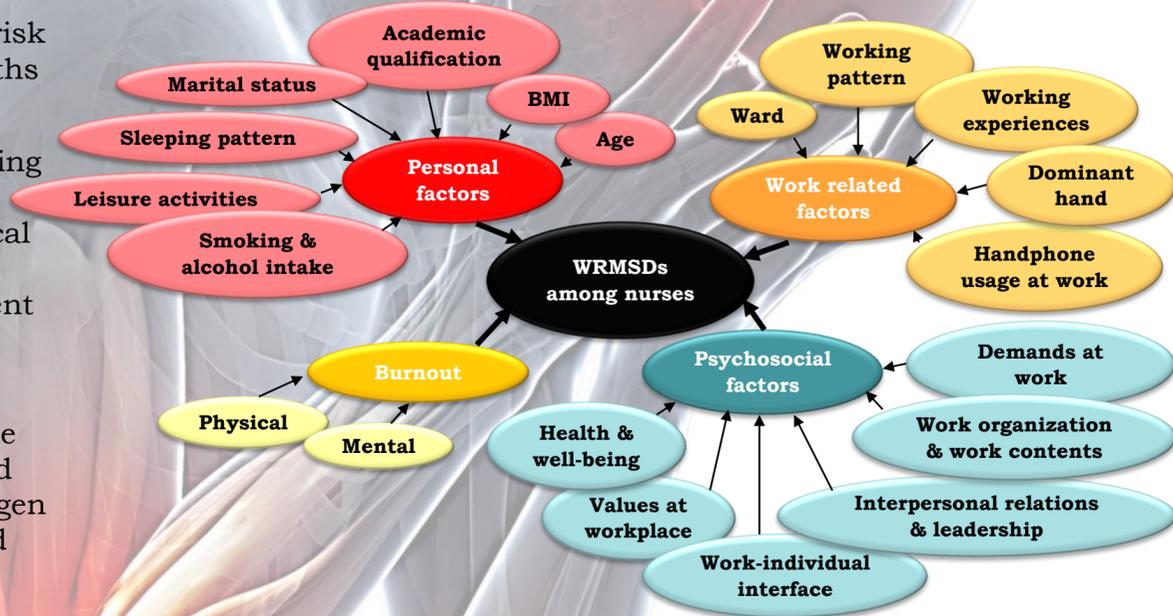


Figure 1: Conceptual framework

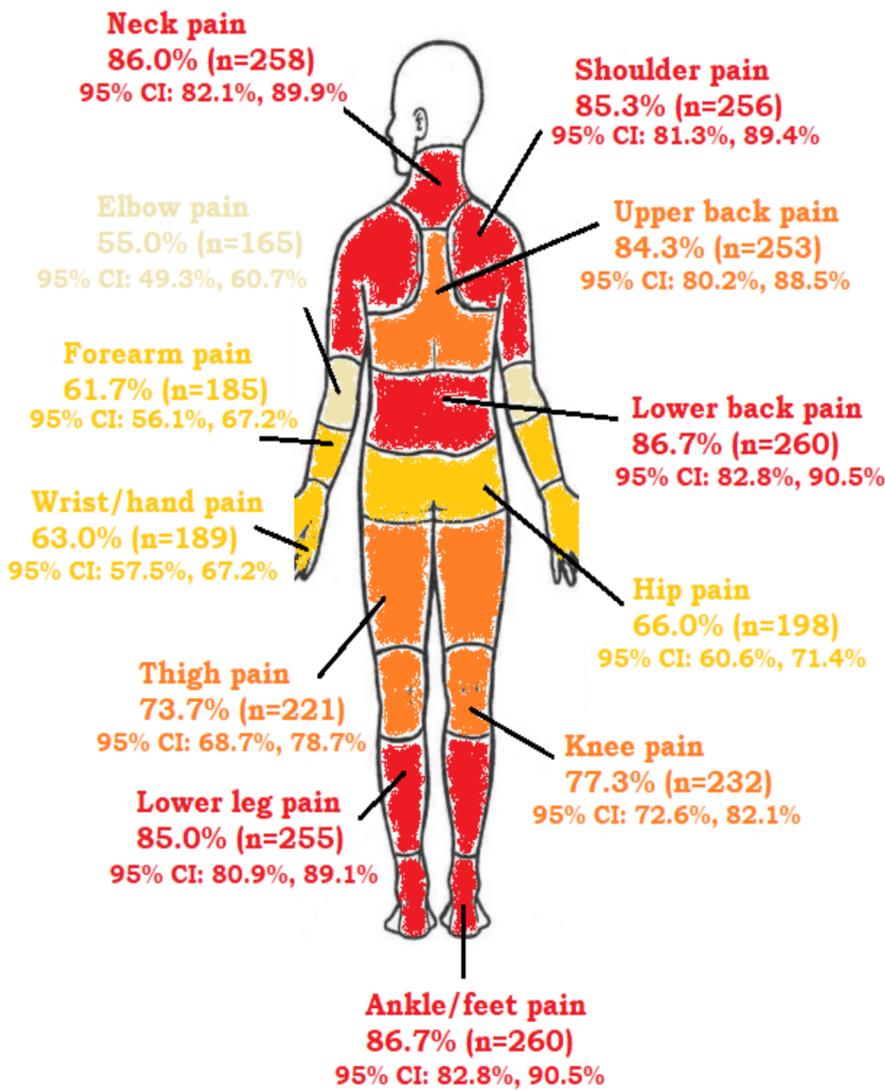


Figure 2: Prevalence (%) of WRMSDs pain by body regions, n=300.

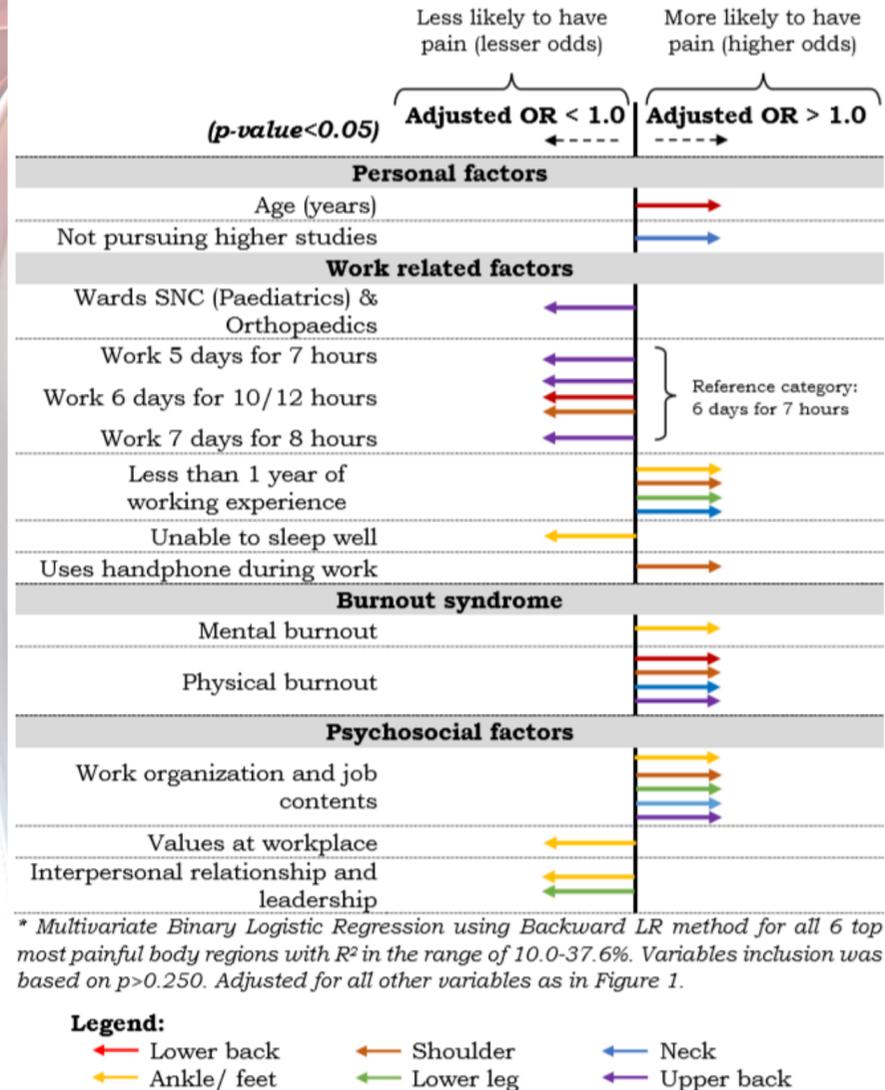


Figure 3: Adjusted Odds Ratio (OR) for multivariate analysis for 6 top most (>80%) painful body regions, n=300.

Older age, not pursuing higher studies, lesser work experience, handphone usage while working, burnouts and work and job related psychosocial factors were associated with increased odds of pain in most of the regions (Figure 3). This is align with previous studies conducted among nurses and medical personals<sup>3-5</sup>.

**Conclusion:** All nurses (100%) complaint of having WRMSDs during the last 12 months especially on lower back, ankle/feet, neck, shoulder and lower leg. Age, academic qualification, working pattern, mental and physical burnout and several psychosocial factors were related with pain in most of the body regions.

**References:** <sup>1</sup>Nur Azma, B. A., Rusli, B. N., Oxley, J. A., & Quek, K. F. (2016). Work related musculoskeletal disorders in female nursing personnel: prevalence and impact. *International Journal of Collaborative Research on Internal Medicine and Public Health*, 8(3), 294-98. <sup>2</sup>Tinubu, B. M., Mbada, C. E., Oyeyemi, A. L., & Fabunmi, A. A. (2010). Work-related musculoskeletal disorders among nurses in Ibadan, South-west Nigeria: a cross-sectional survey. *BMC musculoskeletal disorders*, 11(1), 12. and Dinora Bernal et al., (2015). <sup>3</sup>Akrouf, Q., Crawford, J., Al Shatti, A., & Kamel, M. (2010). Musculoskeletal disorders among bank office workers in Kuwait. <sup>4</sup>European Agency for Safety and Health at Work, Bilbao Office for Official Publication Of the European Communities. *Work-Related Musculoskeletal Disorders: Back to Work Report*. Luxembourg; 2007. <sup>5</sup>Pejtersen, J. H., Kristensen, T. S., Borg, V., & Bjorner, J. B. (2010). The second version of the Copenhagen Psychosocial Questionnaire. *Scandinavian journal of public health*, 38(3 suppl), 8-24. <sup>6</sup>Bernard, B., Sauter, S., Fine, L., Petersen, M., & Hales, T. (1994). Job task and psychosocial risk factors for work-related musculoskeletal disorders among newspaper employees. *Scandinavian Journal of Work, Environment & Health*, 20(6), 417-426. <sup>7</sup>Malaysia, D. (2008). Guidelines for Hazard Identification, Risk Assessment and Risk Control (HIRARC). Malaysia: Department of Occupational Safety and Health.

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