Public Health 2020: Sleep quality, physical and psychological outcomes in nurses with low back pain from a tertiary hospital, South India- Nirmala M Emmanuel, Christian Medical College

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Abstract:

Introduction: Low back pain (LBP) is persistent in many industrialized societies. There is a high persistence of LBP among staff members working in hospitals. Of all the health care employees, a higher persistence of LBP is reported among nurses. A study among nurses in Sudayr region showed that 53.2 % of the nurses had worked related LBP and a positive correlation was observed between place of work and pain duration. The nature of work affects the prevalence of LBP among nurses. Nurses working in areas needing strenuous physical activity are more prone for LBP. Improper postural mechanics also has a direct influence on the persistence of LBP. Patient lifting and postural needs during the work exposes a high risk to nurses in a hospital environment. Especially in the developing nations absence of lifting aids pushes the nurses to strain during shifting of patients. It is reported that poor knowledge of back care ergonomics and unavailability of lifting equipment are major predisposing factors to LBP among nurses. Overweight and obesity also seem to worsen the situation among adults. Nurses are the massive work force of any health care. Their wellbeing will get revealed on the standard and quality of patient care. LBP is a common occupational accident which can affect the performance of nurses in the clinical region.

Christian Medical College is one of the tertiary hospitals with multispecialty units. Nurses comprise of maximum proportion (40 %) of health care workers. LBP is a consistent complaint of nurses working in the institution. On an average, in a week around 15–20 nurses approach to the staff health clinic with low back pain who need leave. Hence this study was conducted to throw light into the level of the problem and to identify the nurses at high risk for physical ailment related to LBP in order to give right services to prevent massive complications. Also, this study was conducted to identify factors which may have associated with low back pain in order to prescribe ways to prevent LBP and to plan for future research in the prevention of LBP.

Methodology: A descriptive cross-sectional study design was adopted to assess the sleep quality of nurses with low back pain in a tertiary care setting, South India and to determine the relationship of sleep quality with the physical

and psychological parameters such as pain intensity, functional disability, anxiety and depression. All the nurses willing to participate in the study and available during the data collection period were screened for LBP. Among the nurses with LBP, 193 subjects were selected using systematic random sampling technique. Study was approved by the Institutional Review Board and informed written consent was obtained from the subjects. Subjects were asked to complete the following questionnaires: Pittsburgh Sleep Quality Index (PSQI), Short-form McGill Pain Questionnaire (SFMP), Oswestry Low Back Pain Disability Questionnaire (ODI), Zung Self-rating Anxiety (ZSA) and Depression (ZSD) scales.

Results: Among 1284 nurses screened, 686 (53.4%) had LBP. Of the 193 nurses included in the study 68.4% of the nurses had good quality of sleep. Majority of the subjects had minimal disability (68.4%), moderate pain (81.3%) and normal anxiety (56.3%) and depression (91.7%) levels. There was a significant positive correlation between sleep quality and pain intensity $(r=.355, p<.01)$, disability $(r=.376, p<.01)$, anxiety $(r=.297, p<.01)$ and depression $(r=.233, p<.001)$.

Conclusion: Improving sleep quality will decrease the physical and psychological manifestations of patients with low back pain and hence improve the quality of life of nurses with LBP.

Low back pain is common among nurses and they are at risk for complications related to LBP. Periodic screening of nurses for LBP may help to identify nurses at risk and prevent major physical injury. Regular in service education on body postures, maintenance of physical fitness, and body mechanics may create awareness among nurses to take precautions. Back schools will be a solution to the existing problem of LBP among the health care providers and must be promoted among health care settings to enhance a healthy group of professionals. Also, good life style practices and food habits are essential to maintain ideal weight which will help in preventing LBP.