Objective This cross sectional study was conducted to determine the prevalence of musculoskeletal disorders (MSDs) among government dental personnel in Khon Kaen Province of Thailand.

Methods There were 282 dental personnel enrolled into this study. Data were collected by interviews with the modified structural questionnaires. Descriptive statistics were used to describe characteristics and inferential statistics were MSDs prevalence and confidence interval (95% CI).

Results The results showed that most participants were female (81.9%), the minimum and maximum age were 20 years and 59 years, respectively (mean = 32.8 ± 9.4 years). Most participants had body mass index at normal level (18.5 - 22.9 kg/m²) for 55.3%. Most positions were dental nurses (46.4%), dentists (22.0%) and patient assistants (18.1%), respectively.

For the last 7-day and 1 month period, the prevalence of MSDs were 57.8% (95% CI = 0.52 - 0.64) and 93.6% (95% CI = 0.91 - 0.96), respectively. The highest prevalence at severe level of pain were found at areas of shoulder (23.0%), lower back (18.1%), and neck (15.6%), respectively. Frequency of MSDs considering everyday occurrence found on areas of neck (12.8%), lower back (7.1%), shoulder (6.4%) and upper back (6.4%), respectively. Among 264 MSDs cases of dental personnel, the report of pain impacted to daily activity was 76.1%. The report of work was related-MSDs was 71.2%. Symptoms was occurred at evening time after work (41.3%). The intake of painkillers or treatment by Thai traditional medicine program was 64.4%.

Conclusions The results identified neck-shoulder-back pain among dental personnel by showing the severity and the frequency of pain. Therefore there should be the health surveillance program of neck-shoulder-back pain among dental personnel. This findings are useful for the prospective cohort study to find out the risk factors for neck-shoulder-back pain among dental personnel.

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142 THE ASSOCIATION BETWEEN STANDARD THRESHOLD SHIFT AND HEALTH EFFECTS IN NOISE WORKING ENVIRONMENT AMONG WORKERS IN A MOTOR COMPRESSOR FACTORY

Objective To investigate the relationship between elevated serum alaninetransaminase (ALT) and persistent rotating shift work (p-RSW) among employees with sonographic fatty liver (SLF).

Methods The authors performed a retrospective analysis on a cohort of electronics manufacturing workers. The records of 758 workers (507 males, 251 females) with initially normal ALT and a mean age of 32.9 years were analysed.

Results A total of 109 workers (14.4%) developed elevated ALT (e-ALT) after five years. Compared with those having neither initial SFL nor p-RSW exposure, multivariate analysis indicated that employees who had initial SFL but without p-RSW finally had a higher risk (odds ratio: 2.9; 95% confidence interval (CI): 1.7–5.1) for developing e-ALT; workers with baseline SFL plus p-RSW had a 3.7-fold increased risk (95% CI: 1.8–7.5).

Conclusions SFL poses a conspicuous risk for the development of e-ALT, and persistent p-RSW exposure significantly aggravates the development of e-ALT among on-site workers with preexisting SLF.

144 NEUROPSYCHOLOGICAL EFFECTS AND LOW EXPOSURE TO ORGANIC SOLVENTS IN WORKERS AT A PAINT FACTORY IN MEXICO CITY

Objective It is likely that organic solvents (OS) cause neuropsychological alterations even at low concentrations. The aim is to identify the presence of neuropsychological deficits in workers exposed to low levels of organic solvents.

Methods A cross sectional study was performed on 208 workers from a paint factory who were exposed to lower mean concentrations, as per Mexican official norms, to OS mixtures, mainly of toluene and xylene. Using the cumulative index for toluene (concentration weighted in time x years working at the...