

**Category:** Physical Activity

# **D210 - Relationships of Musculoskeletal Symptoms, Employment Status, Obesity and Leisure Time Physical Activity Among Nurses**

Saturday, Apr 1  
10:00 AM – 11:00 AM

**Room:** Indigo Ballroom

There is established evidence for the benefits of physical activity for health, but high rates of physical inactivity were reported among nurses. Musculoskeletal symptom (MS) comorbidities may be risk factors of physical inactivity but data are limited for nurses who are vulnerable to MS comorbidities. The purpose of this study was to describe the relationships of MS, employment status, body mass index (BMI) and leisure time physical activity among nurses.

This study used cross-sectional data of 454 nurses randomly selected from the California Board of Registered Nursing list. Data on demographic and employment characteristics, MS (past 12 month—low back, neck, shoulder and wrist/hand pain—interval, severity, duration), BMI, and physical activity (aerobic and muscle strengthening) were collected using postal and online surveys. For MS, an aggregate pain index was created.

Of the participants (mean age 49.58 years, 91.2 % female, 65.2 % white, 79.5% currently working nurses), 46.5 % were overweight or obese (mean BMI 25.6 kg/m<sup>2</sup>); 44% engaged in regular aerobic physical activity ( $\geq 150$ min/week); and 56% performed regular muscle strengthening activity ( $\geq 2$  days /week). Low back pain was the most frequently reported (61.7%), followed by neck pain (48.5%), shoulder pain (41.9%), and wrist/hand pain (41.6%). In the bivariate analysis, none of MS variables were associated with physical activity. In the multiple logistic regression adjusting for age and pain index score, nurses who did not currently work were more likely to engage in more aerobic physical activity ( $\geq 150$ min/week) (OR= 2.12, 95% CI: 1.11-4.07) than currently working nurses. Nurses with lower BMI performed more aerobic physical activity ( $\geq 150$ min/week) (OR= 0.92, 95% CI: 0.88-0.97) and muscle strengthening physical activity ( $\geq 2$  days /week) (OR= 0.92, 95% CI: 0.88-0.96).

Future physical activity promotion interventions should address employment-related barriers among currently working nurses, particularly, those who have high BMI.

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