

prevalence was higher among women than men, among migrant workers than non-migrant workers, and among animal producers than plant cultivators. Degree of occupational engagement also appeared to have an impact, with a higher prevalence of LBD in full-time farmers (65.16 %) compared to that in part-time workers (22 %) and retiree farmers (23 %), among those articles that specified employment type. **Conclusion:** Low back disorders are common in agricultural workers, and appears to be more prevalent among women, in developing nations, animal producers and migrant workers. This increased burden may indicate greater need for treatment and prevention among higher risk groups. Future research efforts should focus on these higher risk groups to help contribute to more equitable health outcomes

5532 - A prospective study of musculoskeletal symptoms among agricultural workers in the Midwest region of the United States

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Objectives: We are currently conducting a prospective epidemiological study to 1) examine seasonal trends of low back, neck/shoulder, and hand/arm musculoskeletal symptoms, 2) characterize exposures to physical risk factors for low back, neck/shoulder, and hand/arm musculoskeletal symptoms, and 3) estimate associations between physical risk factors and low back, neck/shoulder, and hand/arm musculoskeletal symptoms among a large sample of agricultural workers in nine Midwest states. The proposed oral presentation will address our study design and data collection instruments, the characteristics of our study sample, and highlight baseline associations between agricultural activities and musculoskeletal symptoms. **Methods:** Study participants include a cohort of 518 agricultural workers distributed throughout the Midwestern United States. Every six months, all participants complete a set of self-administered questionnaires that collect information about musculoskeletal health outcomes, the average number of weekly hours engaged in common agricultural activities, and other variables that may confound estimates of the association between the number of hours engaged in common agricultural activities and musculoskeletal health outcomes (e.g., occupational psychosocial stress). For a subset of participants, our research team obtains on-farm measurements of exposure to physical risk factors during common agricultural activities using direct measurement technologies. **Results:** At this time, we have completed baseline analyses of questionnaire responses from a cohort of 518 agricultural workers. The majority of participants are male (94%), are reporting owning the farm on which they worked (80%), and reported farming as their primary occupation (70%). Grain products were the most common commodity produced (67.8%), followed by beef cattle (25.7%) and field crops (24.5%). At baseline, the 2-week prevalence of low back pain was 33.2%, of neck/shoulder pain was 30.8%, and of elbow/wrist/hand pain was 21.6%. Crude associations between several agricultural activities and musculoskeletal symptoms persisted after controlling for confounding in multivariable logistic regression models. **Conclusion:** We observed a high prevalence of musculoskeletal symptoms among a cohort of regional agricultural workers and associations with agricultural activities. We expect our ongoing exposure assessment efforts to provide information about the fundamental biomechanical aspects of farm work that will be useful for the development of future prevention/intervention research projects.

5490 - Examining differences in biopsychosocial characteristics among people with chronic back disorders across the rural-urban continuum

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Introduction: Chronic back disorders (CBD) are a prevalent and costly public health issue. CBD prevalence is generally higher in more rural and remote regions. The degree of rurality or remoteness is an important consideration for CBD, as people living in rural and remote locations experience different exposures in terms of occupational and environmental factors, social factors, and access to health care. This population-based study compared the demographic, socioeconomic, co-morbidity, and other health status indicators of adult Canadians with CBD across the rural-urban continuum. **Methods:** We performed a secondary analysis of the 2009 and 2010 Canadian Community Health Surveys to develop a profile of adults with CBD, comparing populations defined by relative rurality of residence. We divided rurality into four categories: 1) urban, 2) strong metropolitan influenced zone (MIZ), 3) moderate MIZ, and 4) weak/no MIZ combined with territories. This descriptive analysis included calculation of proportions for categorical variables. A comparison between each level of rurality was completed using a chi-squared test suitable for complex survey data. **Results:** Results from this secondary analysis indicate that there are significant differences among people with CBD across the rural-urban continuum in most of the sociodemographic, lifestyle, and health characteristics examined. Rural and remote residents with CBD were more likely than their urban counterparts to be: older ($P<.001$); male ($P<.001$); have lower levels of education ($P<.001$); have Aboriginal ethnicity ($P<.001$); be married ($P<.001$); be a former or current smoker ($P<.001$); have higher BMIs ($P<.001$); have arthritis ($P=.008$); have high blood pressure ($P=.001$); have lower self-rated work stress ($P=.019$); have lower self-rated overall health ($P=.005$); and higher perceived disability due to pain ($P=.015$). No significant differences found with respect to self-reported physical and sedentary activity levels, number of co-morbidities, presence of asthma, mood disorders, probability of depression, and self-rated stress. There were no clear dose-response relationships evident based on relative degree of rurality. **Conclusion:** Among adult Canadians with CBD, there are significant sociodemographic and lifestyle differences across the rural-urban continuum. These differences may have implications for the design and delivery of more equitable and appropriate health services as well as health promotion and prevention efforts.

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