0232 DETERMINANTS OF AGRICULTURAL INJURY: A NOVEL APPLICATION OF POPULATION HEALTH THEORY

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Objective (1) To apply novel population health theory to the modelling of injury experiences in one particular research context, (2) To enhance understanding of the conditions and practices that lead to farm injury.
Design Prospective cohort study conducted over 2 years (2007–2009).
Setting 50 rural municipalities in the Province of Saskatchewan, Canada.
Subjects 5038 participants from 2169 Saskatchewan farms, contributing 10 092 person-years of follow-up.
Main Measures Exposure. Self-reported times involved in farm work; Effect Modifiers. Scaled measures describe socio-economic, physical and cultural farm environments; Outcome: Self-reported farm injuries.
Results 450 farm injuries were reported for 370 individuals on 338 farms over 2 years of follow-up. Amounts of farm work exposure were strongly and consistently related to time to first injury event. Relationships between farm work hours and time to first injury were not modified in the directions suggested by theory between levels of the socio-economic, physical and cultural farm work environments. Respondents reporting high versus low levels of physical farm hazards at baseline experienced elevated risks for farm injury upon follow-up (Hazard Ratio 1.54; 95% CI 1.16 to 1.47).
Conclusions Study findings failed to show interactions consistent with population health theory. Injury prevention efforts should continue to focus on: (1) sound occupational safety practices associated with long work hours; (2) physical risks and hazards on farms and (3) more speculatively, behavioural modification to minimise occupational injury risks.