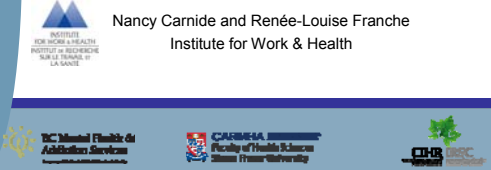


# Course, diagnosis and treatment of depressive symptomatology in workers following a workplace injury: A prospective study

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## Background

- Prevalence of clinical depression in the general working population: 2-5% (Sanderson & Andrews, 2006)
- Depressive symptoms after a workplace injury are significantly associated with:
  - an increase in time receiving wage replacement benefits (Dozois et al., 1995; Lotters et al., 2006)
  - a longer duration before first RTW (Ash & Goldstein, 1995)
  - future recurrences of work absence (Garcy et al., 1996)
- The prevalence of significant depressive symptoms
  - In workers with MSK injuries: 31-55% (Dersh et al., 2002; Keogh et al., 2000)
  - In workers with unspecified work-related injuries: 35-58% (Kirsh & McKee, 2003)
- Qualitative studies: depression is a common experience (Beardwood et al., 2005; Strunin & Boden, 2004)




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## Gaps in the Injured Worker Literature

- Incidence and course of depressive symptoms
- Mental health care utilization




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### Objectives

In a sample of Ontario lost-time claimants with work-related back and upper extremity injuries...

1. To estimate the prevalence, incidence, and course of depressive symptoms over 6 months post-injury
2. To estimate the prevalence of select mental health treatment use at 6 months post-injury




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### Readiness for RTW Cohort Study

- Ontario workers filing a new accepted/pending WSIB lost-time injury claim for a work-related MSK disorder (back or upper extremities)
- Off work due to injury for 5 of the first 14 days post-injury (self-report)
- Telephone interviews and WSIB administrative data
- Baseline (1 month post-injury); follow-up at 6 and 12 months post-injury (completed) and at 24 months post-injury (ongoing)
- Baseline: n=632
  - Participation rate: 632/1038 – 61%
- 6-month follow-up: n=446
  - Retention rate: 446/632 – 71%




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### Selection and Attrition Bias Analyses – Key Findings

- Selection Bias Analyses
  - Using WSIB data, 6 months post-injury
  - Participants more likely to be women and older workers than non-participants
  - Participants with accepted claims (n=559) have a longer duration on wage replacement benefit and a higher rate of recurrences 6 months post-injury than non-participants
- Attrition Bias Analyses
  - Comparison of 6-month respondents (n=446) and non-respondents (n=186) on baseline self-reported and WSIB data
  - Non-respondents are younger and worked more hours/week at time of the injury than respondents




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## Main Outcome Variables

VARIABLE	MEASURE	ASSESSMENT
High levels of depressive symptoms	<ul style="list-style-type: none"> <li>Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977)</li> <li>CES-D score <math>\geq 16</math> <ul style="list-style-type: none"> <li>Sensitivity: 64-88%</li> <li>Specificity: 50-94%</li> </ul> </li> </ul> <small>(Boyd et al., 1982; Turk &amp; Okuku, 1994; Williams et al., 2002)</small>	Baseline and 6-month follow-up
Depression diagnosis since injury	"Since your injury, have you been diagnosed with depression?" (yes/no)	6-month follow-up only
Use of anti-depressants	"Are you currently taking anti-depressants?" (yes/no)	6-month follow-up only
Consultation with a health professional	"Are you currently seeing or talking on the telephone to a health professional about your emotional or mental health?" (yes/no)	6-month follow-up only




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## Other Variables

VARIABLE	DEFINITION	ASSESSMENT
RTW Status	<ol style="list-style-type: none"> <li><b>Sustained 1<sup>st</sup> RTW (RTW-S):</b> remained at work after the 1<sup>st</sup> RTW attempt</li> <li><b>RTW with recurrence(s) of work absence (RTW-R):</b> did not remain at work after the 1<sup>st</sup> RTW attempt, and may or may not be at work at the time of interview</li> <li><b>No RTW:</b> never made a RTW attempt</li> </ol>	Baseline and 6-month follow-up




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## Analysis

- Based on participants who did not self-report a depression diagnosis in the year before injury (n=599 at baseline; n=430 at 6 months)
- Prevalence, incidence, and course of high levels of depressive symptoms
  - Course between baseline and 6 months:
    - Stable low levels: **low** at baseline, **low** at 6 months
    - Emerging high levels: **low** at baseline, **high** at 6 months
    - Resolving levels: **high** at baseline, **low** at 6 months
    - Persisting high levels: **high** at baseline, **high** at 6 months
- Prevalence of depression diagnosis since injury and mental health treatment at 6 months




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### Strengths and Limitations

**Strengths:**

- Prospective follow-up of depressive symptoms in workers following a workplace injury
- Documentation of depression diagnosis and treatment in injured workers
- Relatively representative sample of lost-time claimants

**Limitations:**

- Results may not be generalizable to younger injured workers or those with a shorter work absence duration
- Lack of a comparison group
- Use of a cutoff score to categorize depressive symptom level
- Small sample size = wide confidence intervals
- Self-reported nature of depression diagnosis and treatment




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### Discussion

- Depressive symptoms are pervasive in injured workers (43% and 27% at one month and 6 months, respectively)
  - Prevalence estimates of CES-D  $\geq 16$  in other populations:
    - General working: 14-23% (Iwata et al., 1989; Wada et al., 2006)
    - Community: 11-25% (Eaton & Kessler, 1981; Carroll et al., 2000; Gruzca et al., 2003)
- Depressive symptoms are a significant issue in those with problematic RTW trajectories




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### Discussion (2)

- Persistence and resolution are equally likely to occur at 6 months in those demonstrating high levels of depressive symptoms shortly after the injury
  - Consistent with recovery rates of clinical depression in general population studies (54-63% by 6 months) (Keller et al., 1992; Spijker et al., 2002)
  - Depressive symptoms may be a "normal" reaction to injury and will resolve without treatment
- Few claimants with persistently high levels of depressive symptoms are diagnosed (13%) or treated (24%) for clinical depression
  - High depressive symptom levels not necessarily = clinical depression
  - May signify an  $\uparrow$  risk for clinical depression in this population
- Provision of diagnosis associated with receipt of treatment BUT 27% of workers with a diagnosis were *not* receiving treatment at six months




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## Implications and Future Directions

- Early treatment may not be appropriate for transient depressive symptoms
- Education for health care providers
- Future research:
  - Factors that distinguish “normal” reaction to injury from “problematic” and persistent reaction
  - Predictors of optimal recovery
  - Determinants of depression diagnosis and treatment



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