

Appendix 1: Definition and measurement of explanatory variables

Pre-injury socio-demographic factors: Age was categorised into 5 categories (18-24, 25-34, 35-44, 45-54, 55-65). Participants reported their annual personal income which was categorised into 4 income categories: \geq \$NZ 50,001, \$NZ 50,000-\$30,001, \leq \$NZ 30,000, no income given. Highest qualification attainment was categorised into three categories: no formal, secondary and post-secondary qualifications. Occupation was coded to New Zealand Standard Classification of Occupations major level 1.⁴¹ and grouped into three categories: white (NZSCO L1 1-3), pink (NZSCO L1 4,5) and blue collar (NZSCO L1 6-9). Participants reported on their relationship status (married or living with partner vs. widowed, separated, divorced, or never married) and gender. Living arrangements were ascertained using Census questions on the number of people living in the household and their relationship to each other.⁴² Material standard of living was assessed using a single item (*How would you rate your standard of living before your injury?*) with three response categories: high/fairly high, medium, fairly low/low. Adequacy of income was assessed using a question asking participants to rate the adequacy of their total household income to meet their everyday needs for things such as accommodation, food, clothing and other daily necessities on a four scale from 'not enough' to 'more than enough'.⁴³ For analysis, those responding 'not enough' were classified as having insufficient financial standing. Financial security was a single item (*Thinking of the next 10 years how financially secure do you feel?*) dichotomised into 2 categories: secure/fairly secure, fairly insecure/insecure.²⁵

Pre-injury physical work factors: As in the European Working Conditions Survey, participants were asked if their job ever involved repetitive hand movements, heavy lifting, working in

painful/tiring positions, standing or physical exertion.⁴⁴ Those participants responding positively to any of these were then asked the amount of time they did the specific physical task on 4 point Likert scale from “occasionally/sometimes” to “all to ¾ of the time”. Those participants who reported no exposure to any of the physical work conditions were treated as “never” exposed.

Pre-injury psychosocial factors: Job demands (4 items), job control (15 items) and job support (6 items) were calculated using the Whitehall II Study adaptation of Karasek’s Job Content Questionnaire.⁴⁵ Job demand and job control sub-scores were summed and dichotomised around the median (high, low). A job strain dimension was created using combinations of job demands and control: high strain (low control, high demands); passive (low control, low demands); active (high control, high demands); low strain (high control, low demands). The job support subscale was divided into quartiles for analysis. Job security was a single item (*How secure did you feel in your main job?*) with responses trichotomised into very secure, secure and insecure/very insecure.²⁵ Job satisfaction was assessed with a single item (*How satisfied or dissatisfied were you in your job overall before you injury?*) with 5 response categories ranging from completely satisfied to completely dissatisfied.⁴⁴ Optimism was measured using a single question (*Overall, I expect more good things to happen to me than bad*) with responses dichotomised into yes (agree and strongly agree) and no (strongly disagree, disagree, neutral).⁴⁶ Self-efficacy was based on the 10 item General Self-Efficacy Scale using response options; strong disagree, disagree, neutral/missed, agree, strongly agree; scored 0-4 respectively.⁴⁷ Scores were summed across the 10 items resulting in a scale from 0 to 40. Scores were dichotomised into two categories: poor self-efficacy (score ≤ 25); good self efficacy (score >25). A prior major

depressive episode (yes/no) was assessed using two DSM-III questions for depressed mood or loss of interest or pleasure in daily activities consistently for at least 2 weeks in the year prior to injury.⁴⁸

Pre-injury work organisation factors: Hours of work was assessed using a single item (*How many hours, to the nearest hour, would you usually work in your main job before your injury?*).⁴⁴ Responses were categorised into 4 groups: ≤ 30 , 31-45, 46-65 and ≥ 66 hours per week. Number of days worked per week was a single item (*How many days of the week would you usually work each week in your main job before your injury*) with response dichotomised into 1-5 and 6-7 days a week. Employment status was identified using the question "*In your main job were you: a paid employee; self-employed and not employing others; or an employer of other person(s)*".⁴⁴ Type of contract was assessed for all employees and was categorised into 6 categories: permanent; temporary/casual; fixed term; other or no formal contract; self-employed; and employers. Multiple job holding was assessed using a single item (*Did you have only one paying job or more than one job – including part-time, evening or weekend work*) dichotomised into "one job only, more than one job".⁴⁴

Pre-injury lifestyle factors: The brief Alcohol Use Disorders Identification Test (Audit-C)⁴⁹ was used to identify hazardous drinking patterns in the year before injury. A score of 4 or more was considered positive for males, while a score of three or more was positive for females. Current smoking status was assessed using a single item (*Before your injury did you smoke regularly?*) with two response categories (yes, no). Body Mass Index (BMI) was calculated using weight and height with the BMI score categorised into three categories:

underweight/normal (≤ 25), overweight (25-29) and obese (≥ 30). Frequency of physical exercise was ascertained by asking participants over a seven day period how many days they had engaged in either 15 minutes of vigorous activity (involving harder breathing or “huff and puff”) or 30 minutes of moderate activity (including brisk walking).⁵⁰ Answers were dichotomised into physical activity on ≤ 4 days a week or 5-7 days a week. Sleep quantity was examined using a single item (*How many nights during a week would you usually get at least 7 hours sleep?*). Responses were dichotomised into ≤ 4 nights or 5-7 nights.

Pre-injury health factors: Overall self-assessment for health was assessed by asking participants to rate their health in general on a five point scale from excellent to poor.⁵¹ Co-morbidities were assessed using a modified instrument developed for the New Zealand Health survey 2006/07.⁵² Participants were asked if they had been informed by a doctor that they had any of 22 specific chronic diseases or conditions such as anxiety or depression, cancer, asthma or diabetes that had lasted, or was expected to last for more than six months. Prior injury was assessed as follows: *“Before your injury did you have any prior injuries that were affecting you?”* (yes, no). Prior disability was assessed using affirmative responses to one of three responses options to the following question: *“Before your injury, did a health problem or condition you have (lasting 6 months or more) cause you difficulty with, or stop you doing: i) everyday activities that people your age do?; ii) communicating, mixing with others or socialising?; iii) any other activity that people your age can usually do”*.⁴² Work capacity was assessed using the modified question *“Assuming that your top working capacity would score 10 points while your total inability to work would score zero, how many points would you give to you working capacity prior to your injury”*.⁵³ Responses

were dichotomised into high (≥ 7) and low (< 7). Pain or discomfort before injury was assessed using a question modified from the EQ-5D with three response options (“no”; ‘moderate’; or ‘extreme’ pain or discomfort”⁵⁴ Work capacity has been found to predict poor health outcomes in working populations.⁵⁵

Injury-related factors: Participants reported if their injury was work-related injury, or not, and if their injury was the result of an assault or violent act (yes, no). Hospital admission was assessed by asking participants if they were admitted to hospital for a day or more (yes, no) as a result of their injury. Self-perceived threat to life was assessed using the question “At the time, did you feel the injury was a threat to your life?”, while self-perceived threat of disability used the question “At the time, did you feel the injury was a threat of severe longer-term disability to you?” The response categories for both questions were dichotomised into: no, yes/maybe. Difficulties accessing health services was assessed using the single item “Did you have trouble getting to or contacting health services?” with open-ended responses coded ‘positive’, ‘mixed’ or ‘negative’. For analysis the positive and mixed response were combined to form the ‘no difficult access’ group while negative response formed the ‘difficult access’ group.

APPENDIX REFERENCES

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