



Bridging the safety gap for youth using employment centres

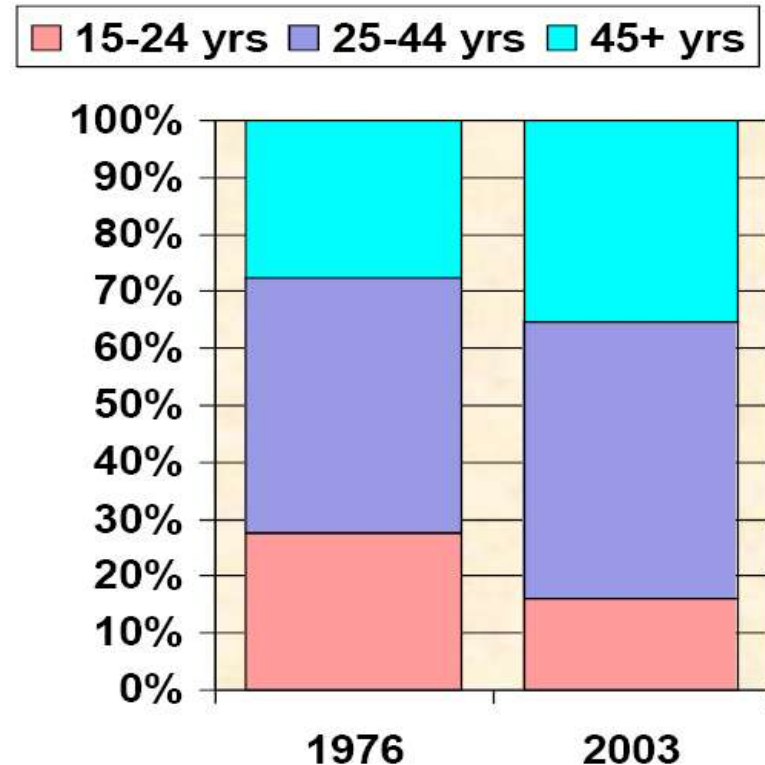
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Matt Wood, and
Cameron Mustard

IWH Plenary, September 15, 2009



Importance of young worker OHS

- Early Baby Boomers reach 65 in 2011
- Almost everyone enters labor market as young worker
- Longer potential duration of disability





Questions about teen and young adult workers

- What are their employment patterns?
- What is the risk they will be hurt on the job?
- What kinds of injuries are most common?
- Why are young people getting injured at work?
- What is the situation for youth using employment centres?

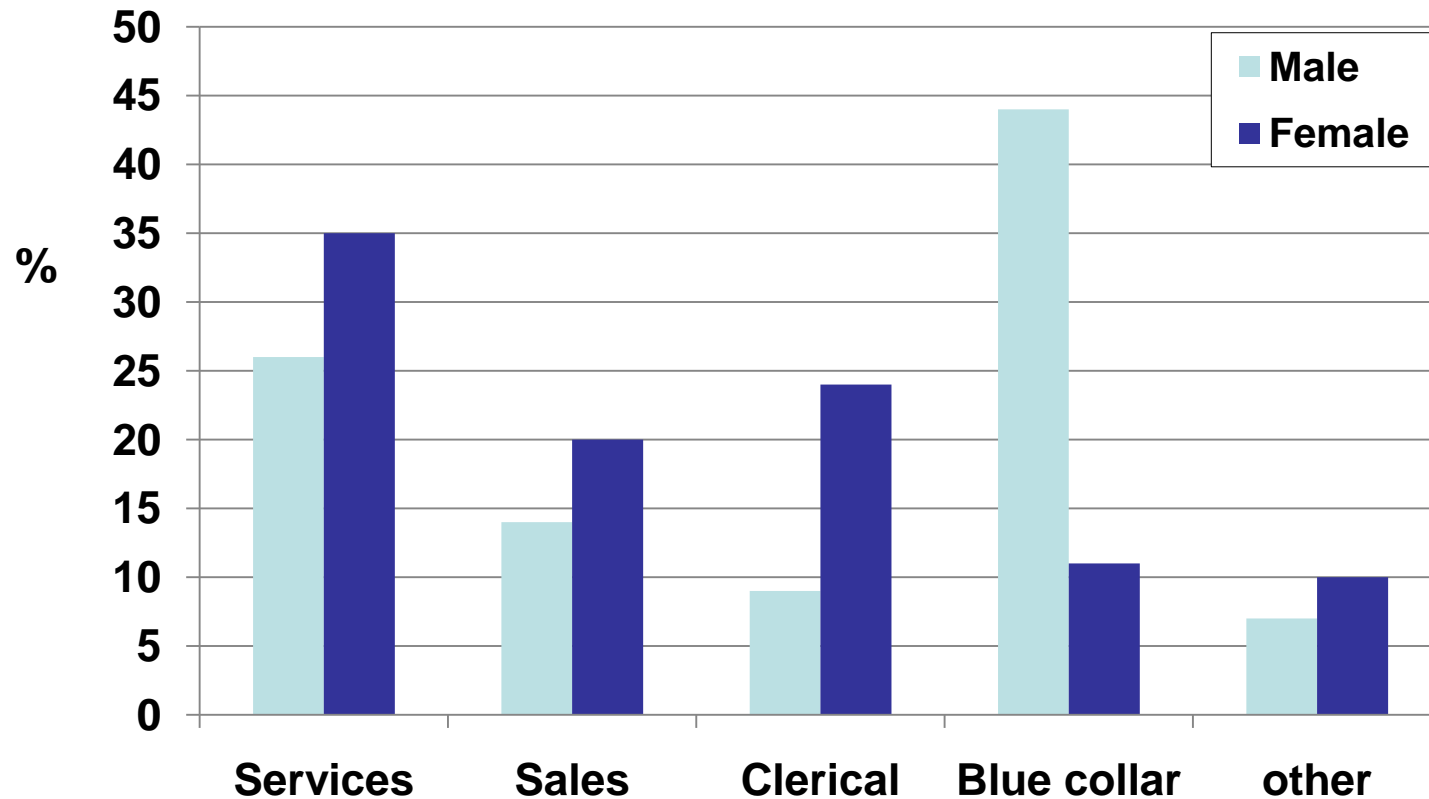


Questions about teen and young adult workers

- What are their employment patterns?

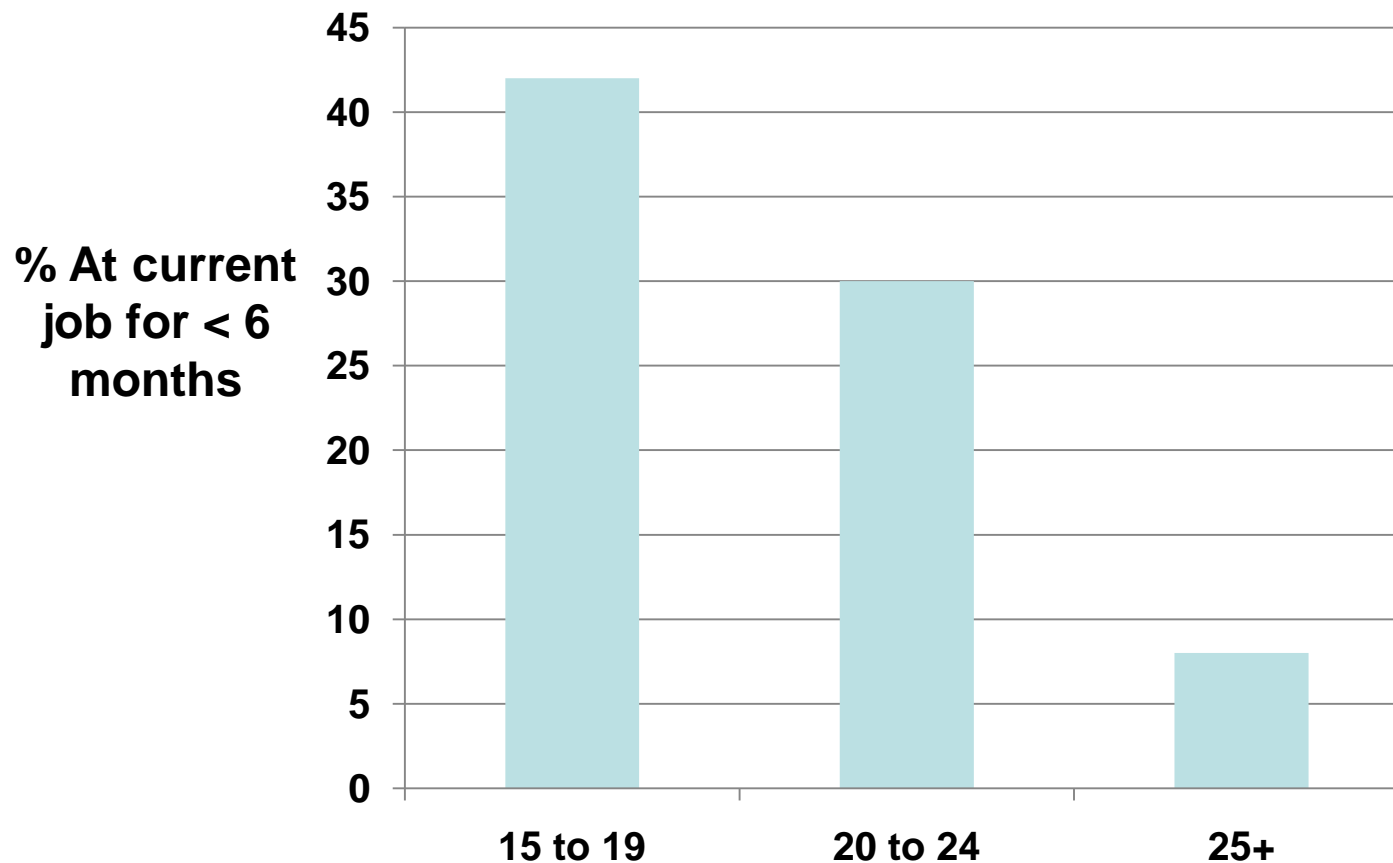


Types of jobs held by Canadian teenagers



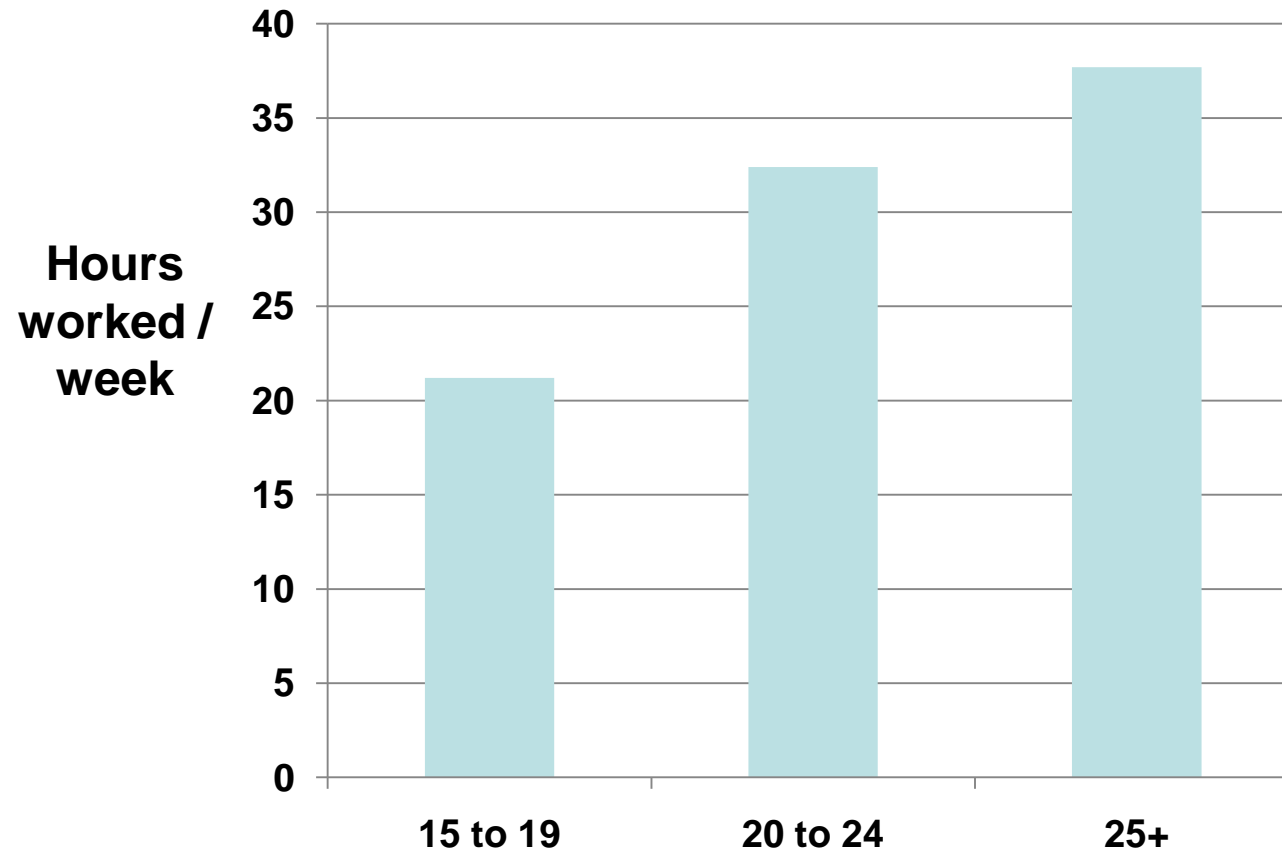


Many young people are new and hold temporary jobs





Many young people work part-time



Source: Usalcas, 2005

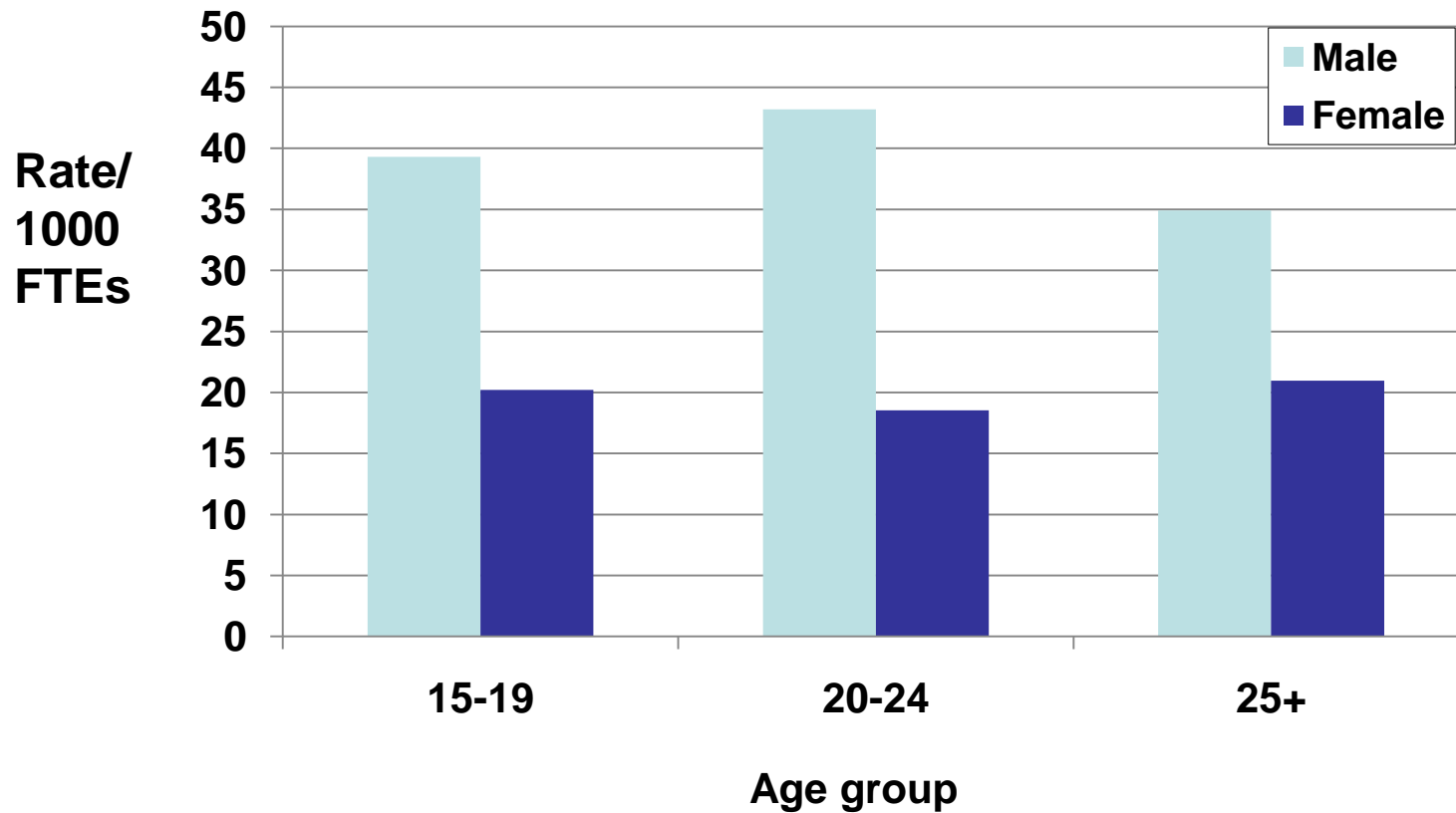


Questions about teen and young adult workers

- What are their unique characteristics?
- What are their employment patterns?
- What is the risk they will be hurt on the job?



Rate of lost-time claims in Ontario



Source: Breslin et al. (2003)

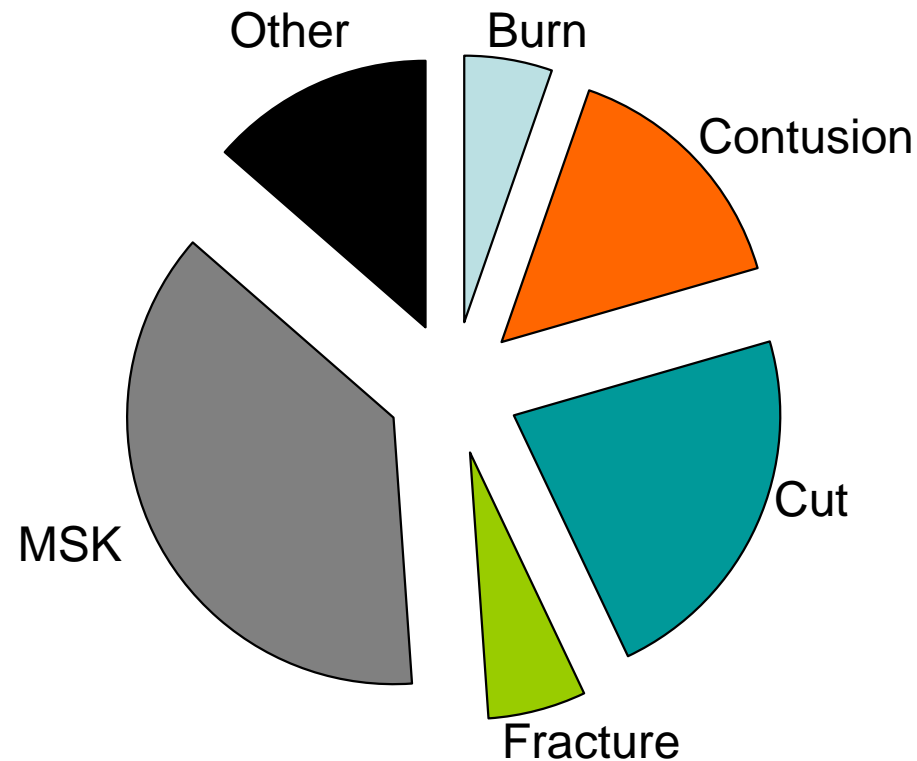


Questions about teen and young adult workers

- What are their employment patterns?
- What is the risk they will be hurt on the job?
- What kinds of injuries are most common?



Types of injury, Teen - males



Source: Breslin, Smith, Koehoorn, Manno (2003)



Questions about teen and young adult workers

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- What kinds of injuries are most common?
- Why are young people getting injured at work?



Summary: Youth vs. Adult risk

- Work-related variables strongly & consistently associated, leaving limited residual risk
- Residual risk possible explanations: hazards or youth specific vulnerabilities
- Less evidence for cognitive functioning as plausible mechanism for youth-specific vulnerabilities than social-emotional functioning



Unsafe work conditions

CONTRAINTES CONSTRAINTS	15-24	25 ANS ET + 25 AND OVER	CONTRAINTES CONSTRAINTS
Horaires irréguliers	35,0%	30,1%	Irregular schedules
Travail répétitif	30,1%	19,4%	Repetitive work
Manipulation de charges lourdes	27,3%	17,6%	Handling of heavy loads
Efforts sur outils	23,1%	16,9%	Effort involving tools, machinery, equipment
Horaire de nuit	13,6%	12,7%	Intense Noise

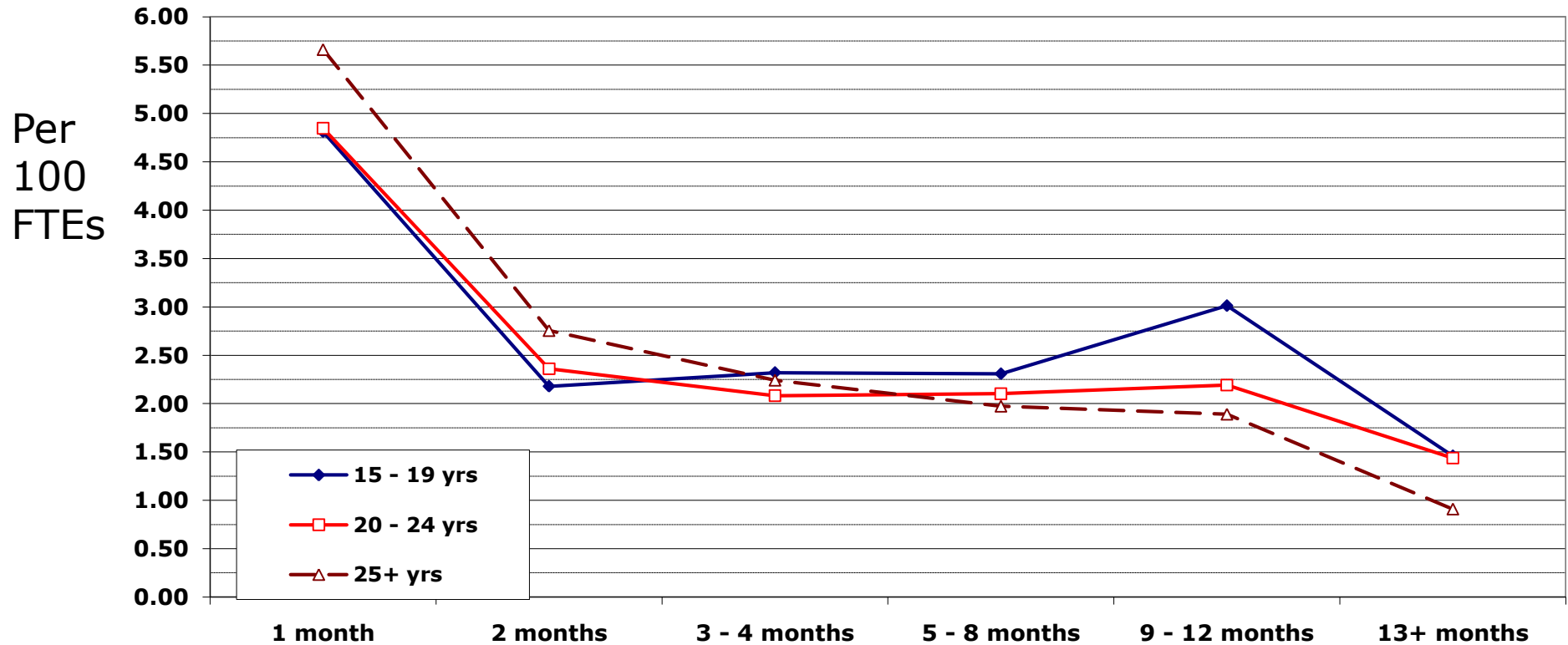
NOTE :Le total peut être supérieur à 100%, car les travailleurs pouvaient identifier plus d'une contrainte de travail
NOTE: The total may be above 100%, because each worker could identify more than one work constraint

Source: Hébert, Gervais, Duguay, Champoux, & Massicotte (2003)



New workers at any age are at risk

1st lost-time claim rate by age group and job tenure
(Adjusted for occupation, industry and gender)





Youth specific vulnerabilities

- Physical mismatch
- Cognitive functioning
 - Risk appraisal
 - Future perspective





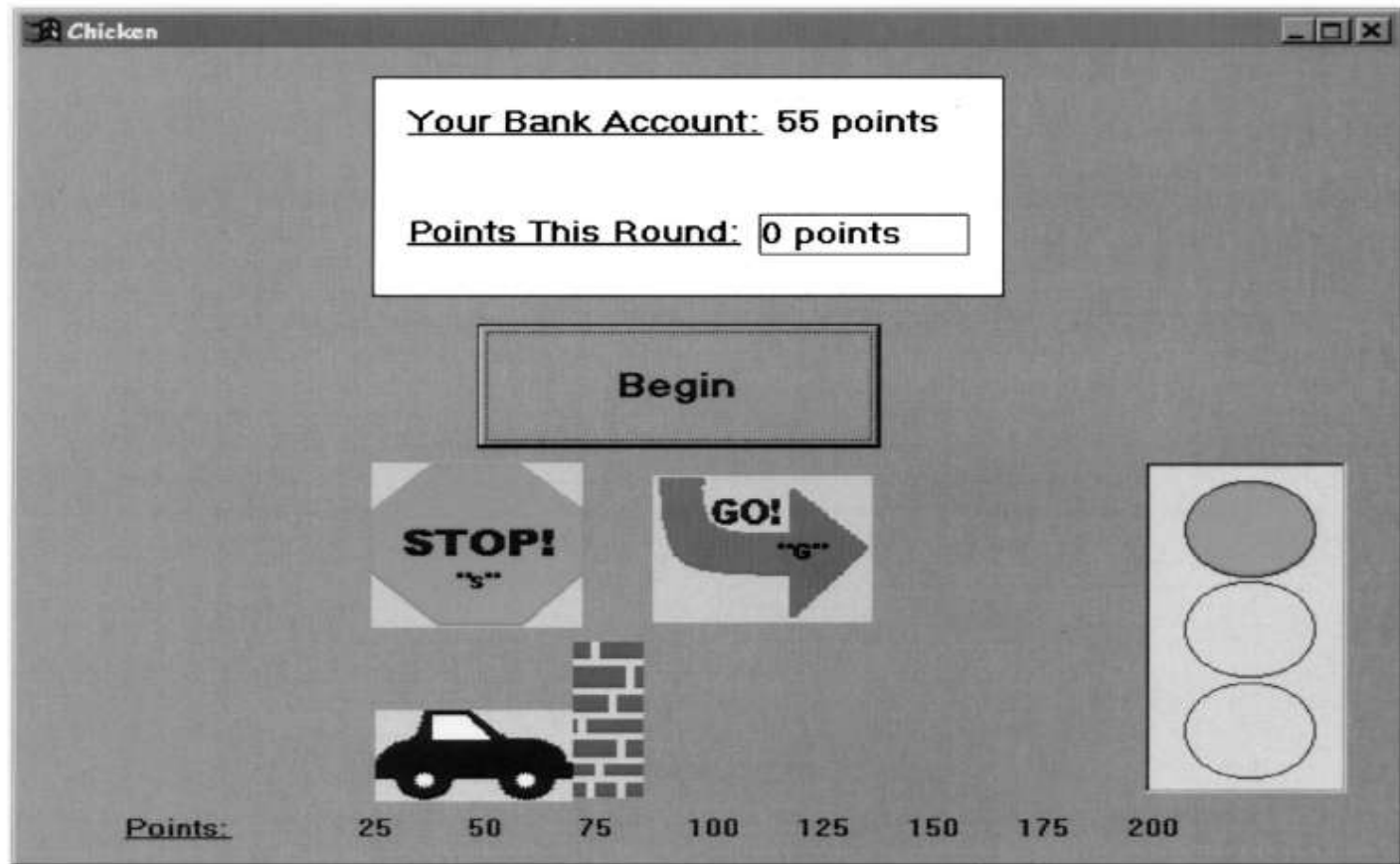
Youth specific vulnerabilities

- Social-emotional functioning
 - Needs for peer affiliation
 - Perspective taking
- Teen brain development
 - Reward sensitivity
 - Self-regulation
 - Context dependent
 - Peer influence
 - Emotional arousal

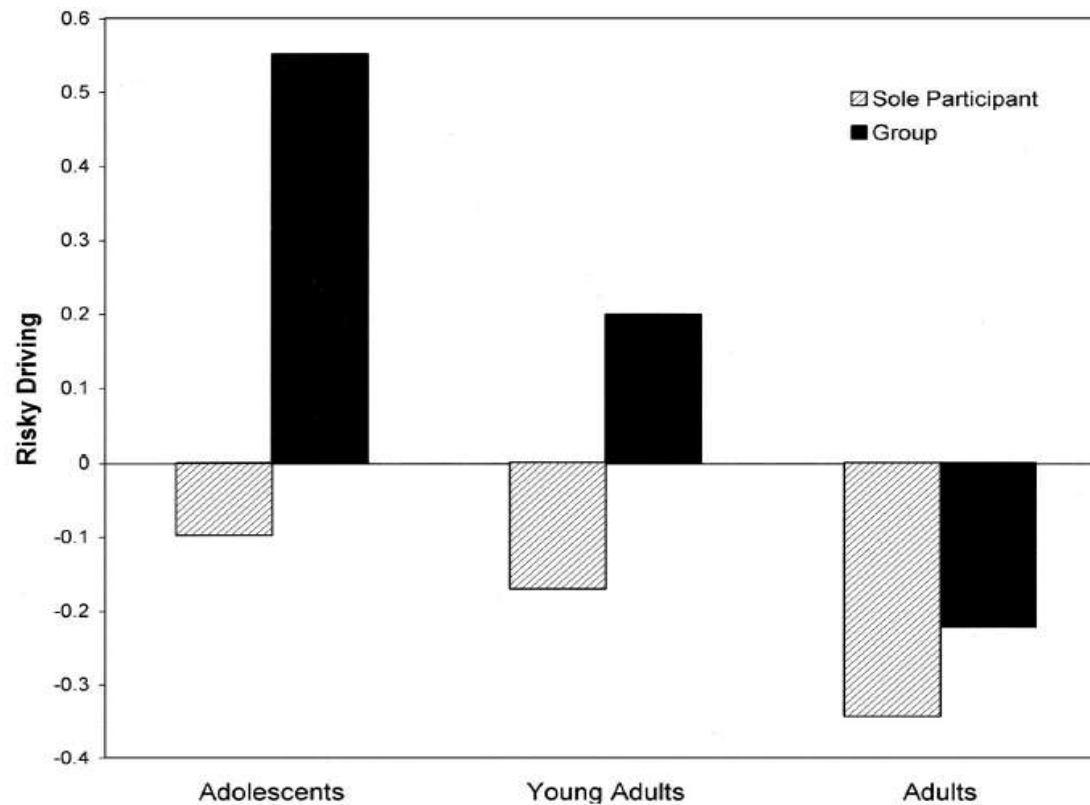




Image from the Chicken video game



Age by condition interaction in risk taking





Summary of systematic review on young workers

- Demographic/individual factors (work factors controlled)
 - Visible minority
 - Not in school (with or without a high school diploma)





Summary of systematic review on young workers

- Job/workplace factors (demographic factors controlled)
 - Work setting/job type
 - Perceived work overload
 - Occupation/work hazards
 - Supervisor safety consciousness





Lack of training & supervision

- Young workers in their 1st year of the job who received safety, orientation, or equipment training: 23%
- 80% of work-related injuries among teens occurred when no supervisor was present





Substantive Recommendations

- Eliminate hazards or remove youth from dangerous jobs
- Since social-emotional development factors may be more relevant, interventions should consider targeting peers and norms





Questions about teen and young adult workers

- What are their employment patterns?
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- What kinds of injuries are most common?
- Why are young people getting injured at work?
- What is the situation for youth using employment centres?



Project Rationale

- Teenagers and young adults who are out of school (and especially those with less than a high school diploma) are at elevated risk for work injury
- Ministry of Labour action group made recommendations to improve safety preparation and reduce work injuries in this “high-risk” subgroup of young workers
- One recommendation from the action group was youth employment centres because many of these “high-risk” youth use their services



Research Questions

- What occupational hazards and injuries has this subgroup encountered, and how does their work and injury experience compare to Ontario youth in general?
- What work safety education and training has this subgroup received, from what sources, and what is their current knowledge of work safety?





Project Methods

Population

- youth 16 to 24 years old
- worked for pay for an employer in the past 12 months
- Using one of the youth employment centres in Ontario

Domains assessed

- Demographics
- Information on main job in past 12 months
- Work injury occurrence
- Workplace hazards
- Safety training
- Safety knowledge



Project Methods

Survey

- Recruitment through participating youth employment centres
- Sampled across four regions of Ontario
- Survey Internet-based
- About 20 minutes for completion



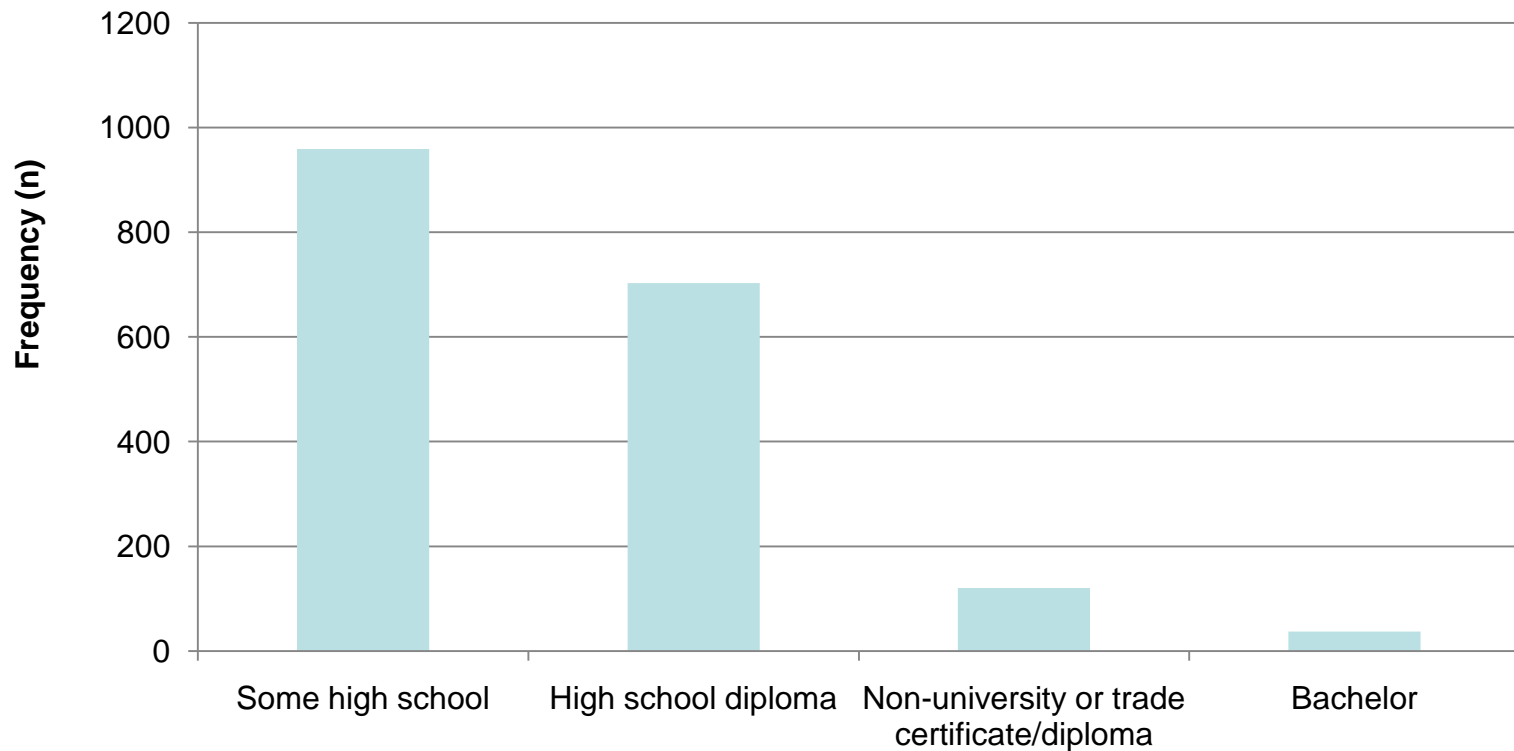
Results: Demographics (1)

Characteristics	Total (n=1886)
Gender	
Female	790 (42%)
Male	1078 (57%)
Age	
16 – 18	888 (47%)
19 – 21	613 (33%)
22 – 24	380 (20%)
Currently attending school	
Yes	899 (50%)
No	948 (48%)



Results: Demographics (2)

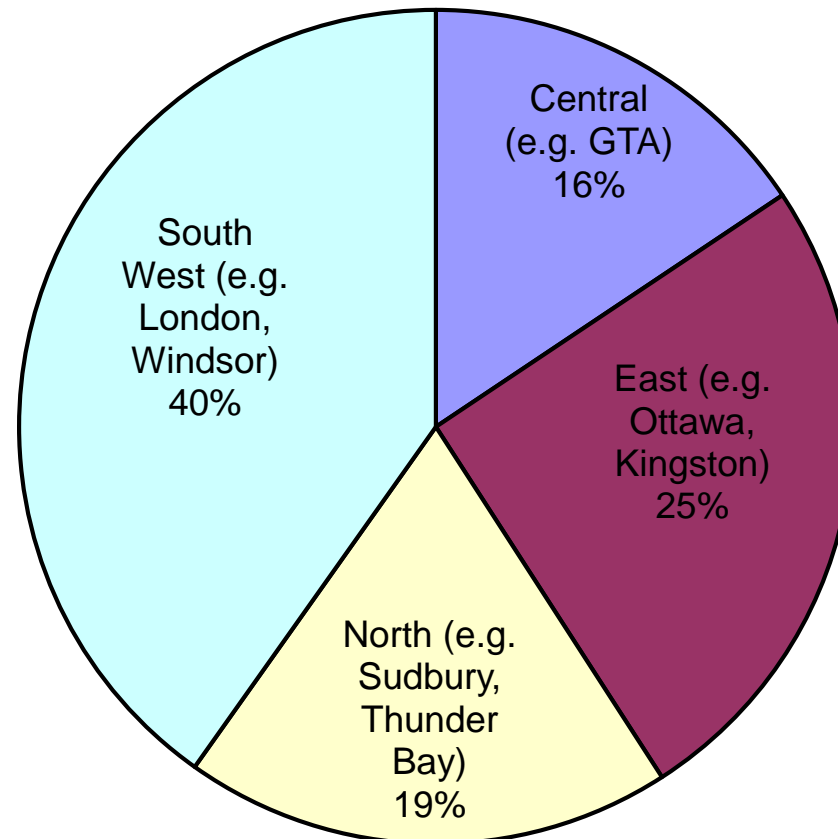
Respondents by highest degree, certificate, or diploma earned





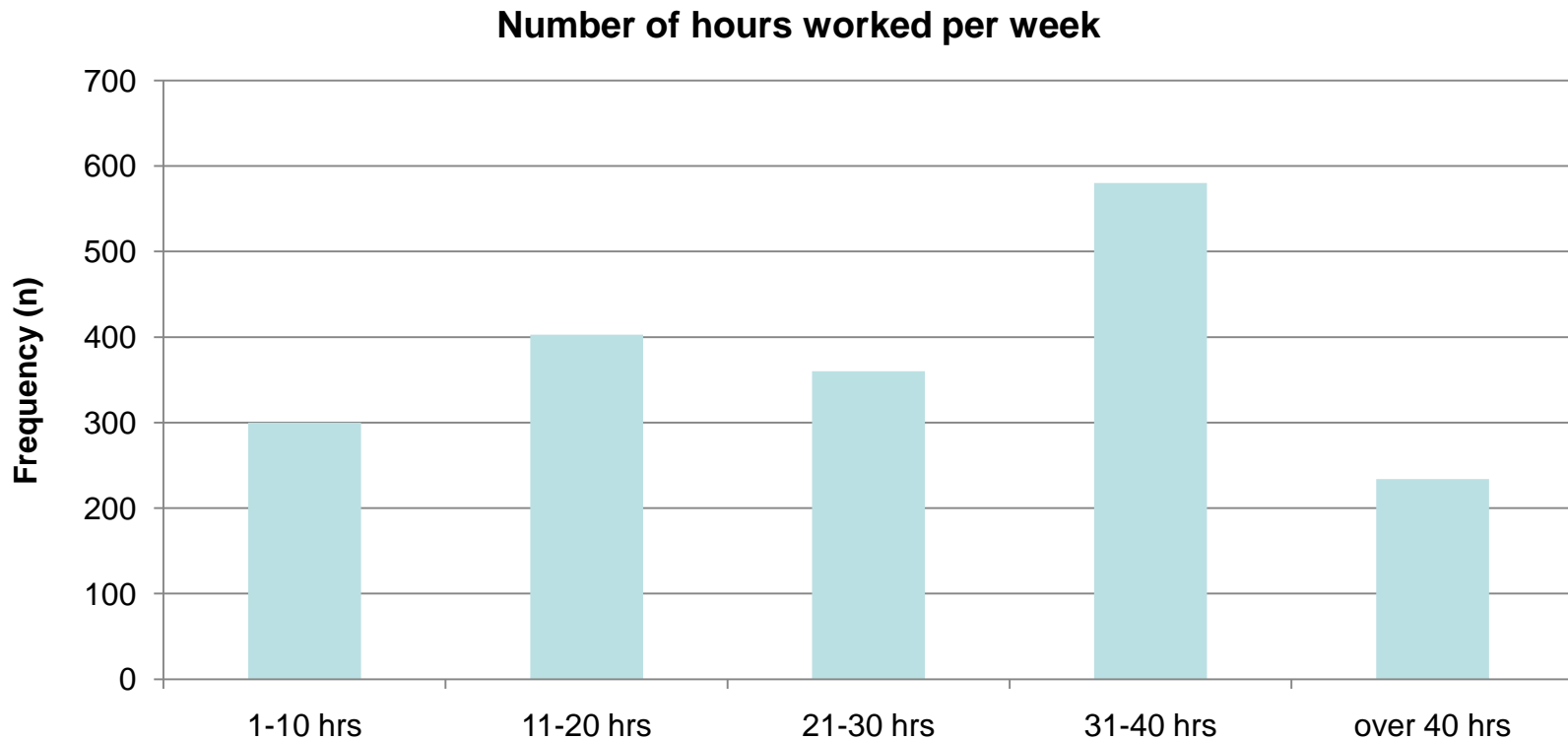
Results: Demographics (3)

Respondents by region of Ontario





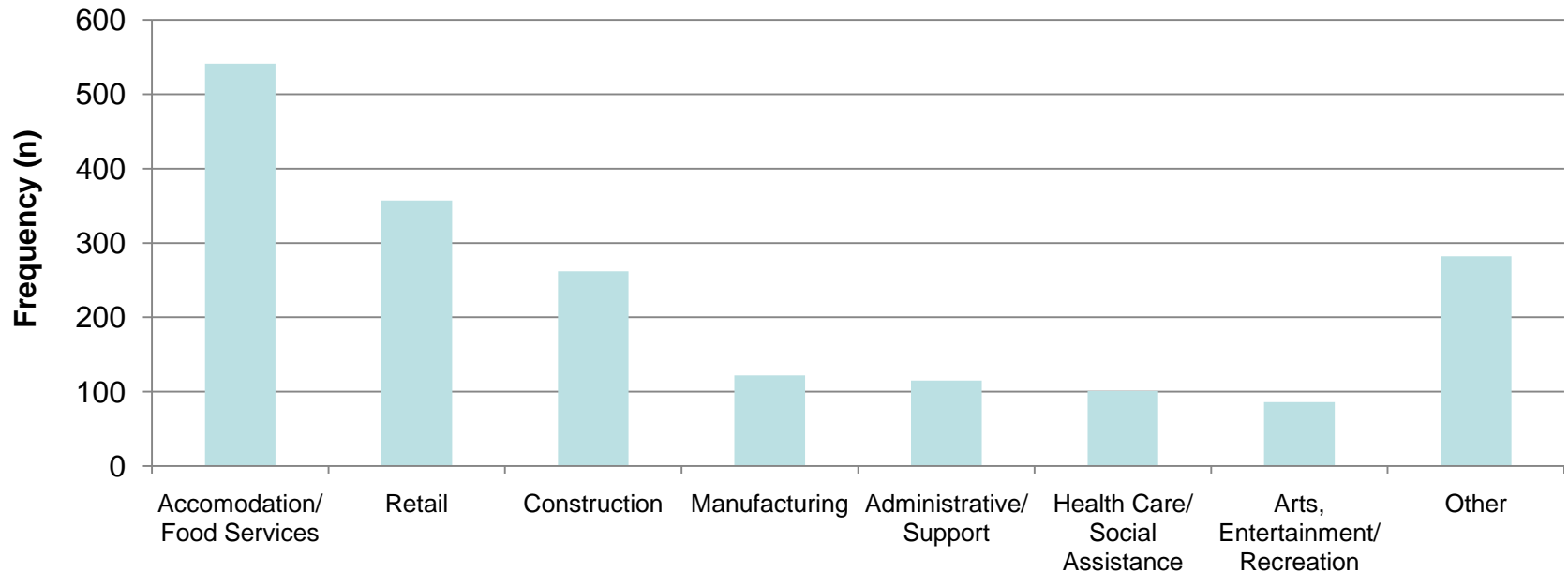
Results: Information on main job (1)





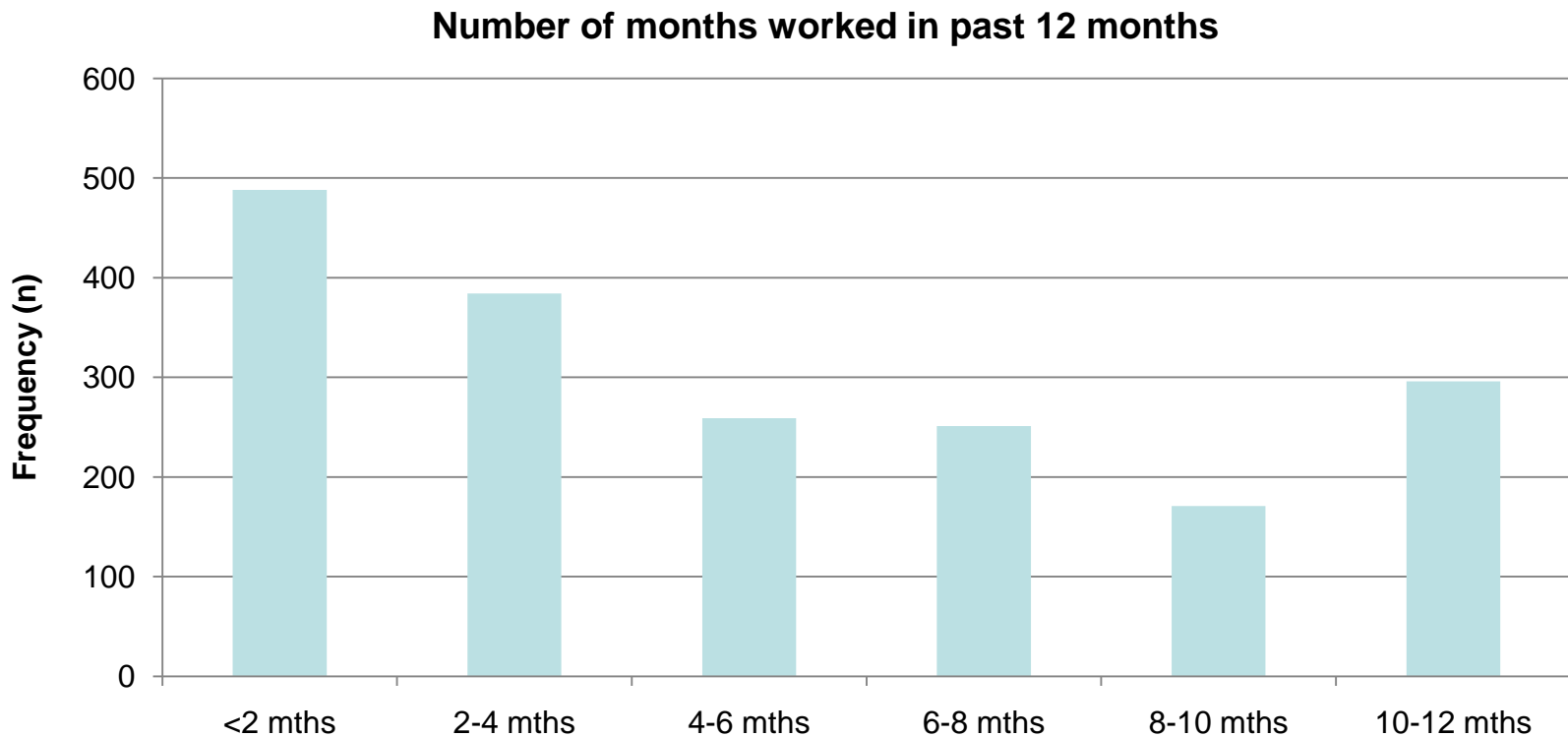
Results: Information on main job (2)

Respondents by industry





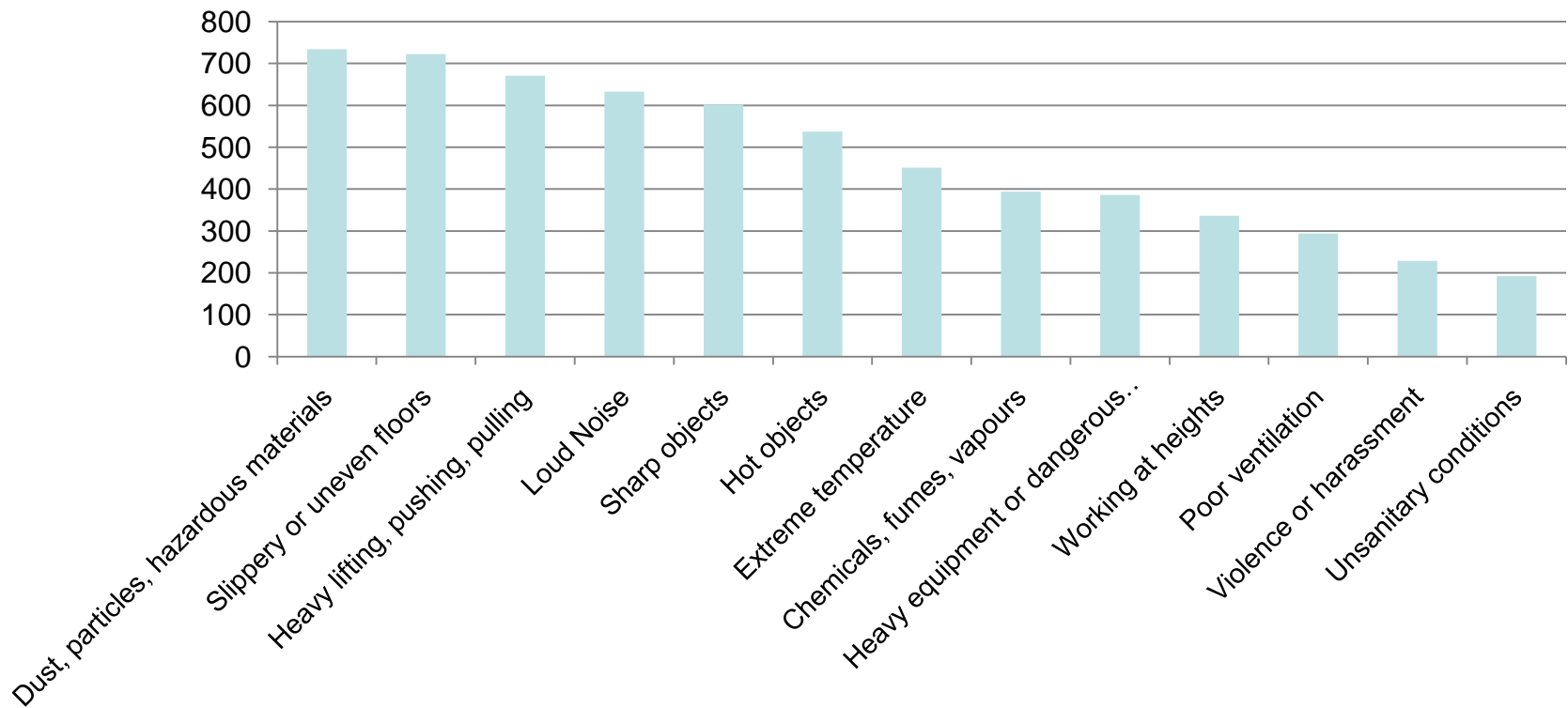
Results: Information on main job (3)





Results: Workplace hazards

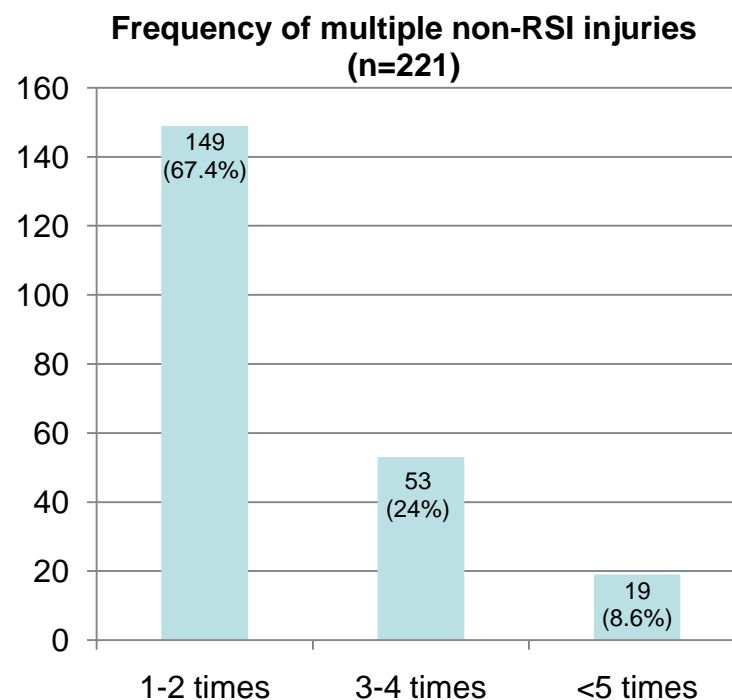
Frequency of unsafe working conditions encountered





Results: Work injury (1)

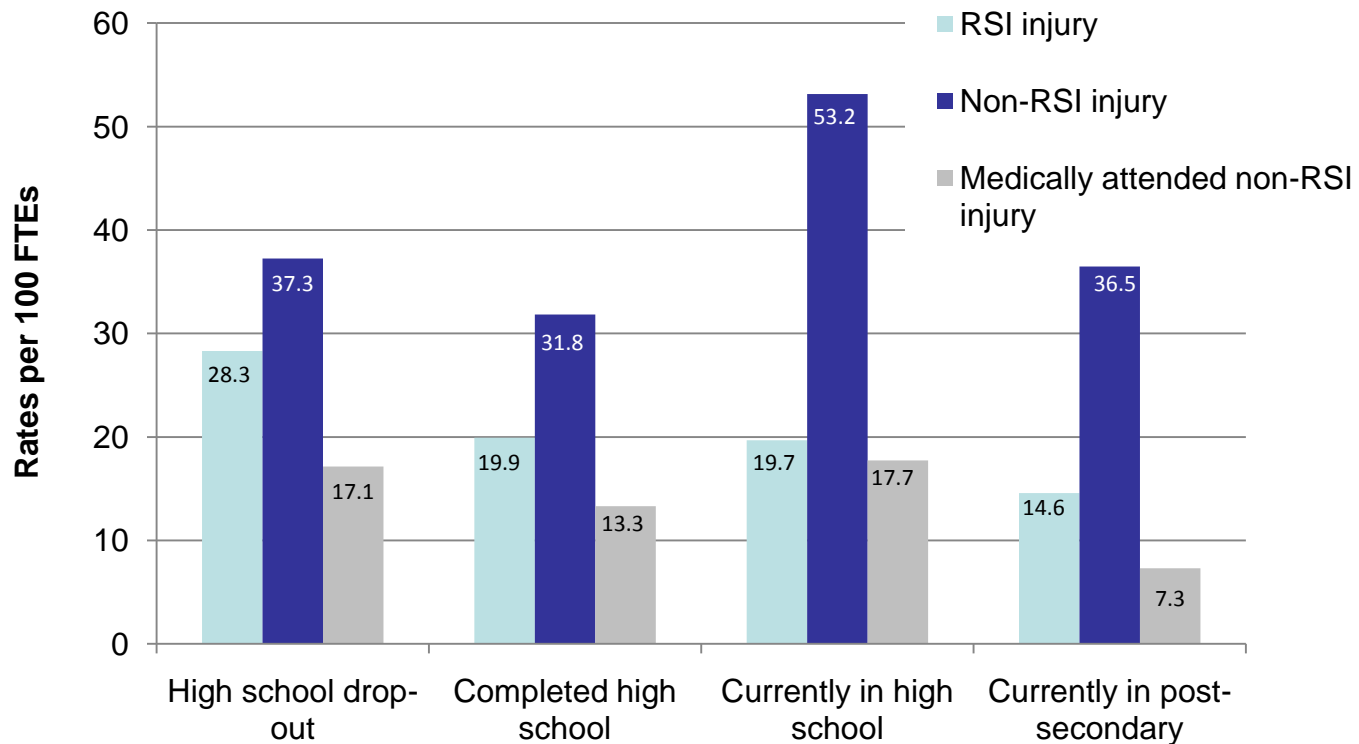
- 11.7% (n=221) of respondents experienced a work injury in the past 12 months (excluding repetitive strain injury)
- 4.3% (n=82) of respondents sustained a work injury that required medical attention (excluding RSI)
- 6.4% (n=120) of respondents sustained an injury due to repetitive strain while working at a job or business which was serious enough to limit their normal activities





Results: Work injury (2)

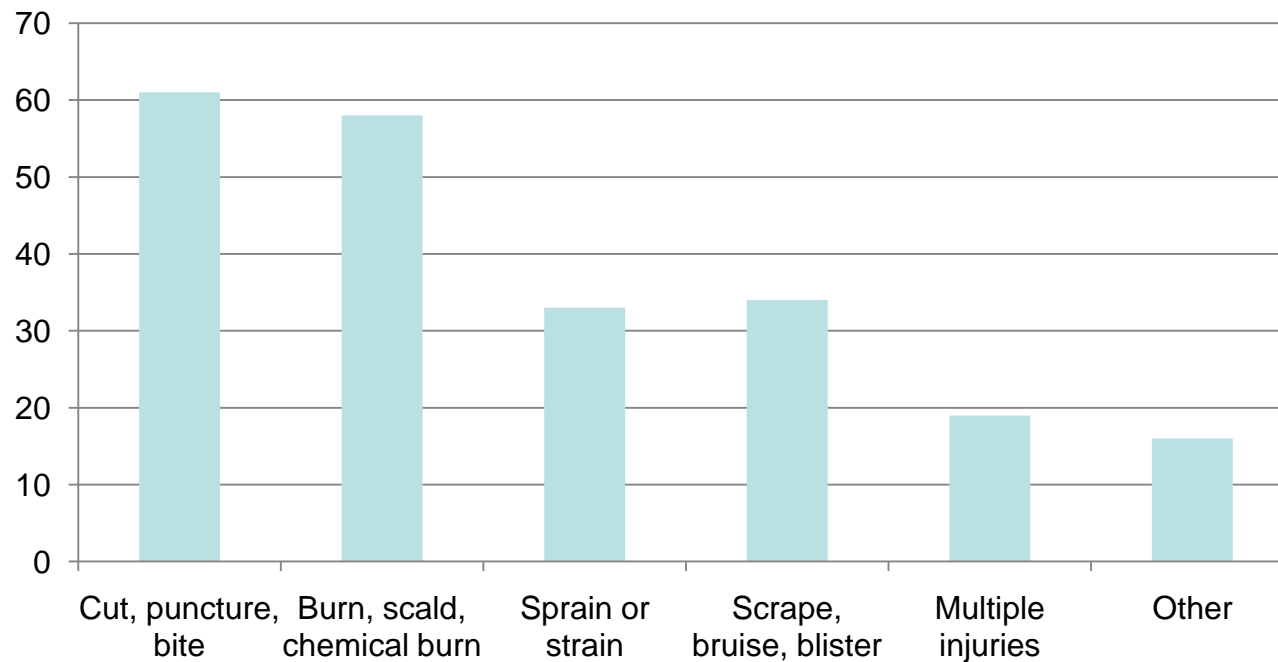
**Injury rates per 100 full time equivalents (FTE) by educational status
(for all work injuries, n=285)**





Results: Work injury (3)

Frequency of non-RSI injury types (n=221)





Results: Work injury – Regression Analysis (1)

Regression analysis included following factors:

- Gender
- Age
- Education
- Region
- Industry
- Full time equivalent (FTE)
- More than one job
- Permanent vs. non-permanent job
- Received safety training

Main outcome:

- Non-repetitive strain injury at work in the last 12 months
 - Survey asked respondents “Not counting repetitive strain injuries, in the past 12 months, were you injured?”
 - Survey asked respondents “What type of activity were you doing when you were injured?” with an option for “working at a job or business.”



Results: Work injury – Regression Analysis (2)

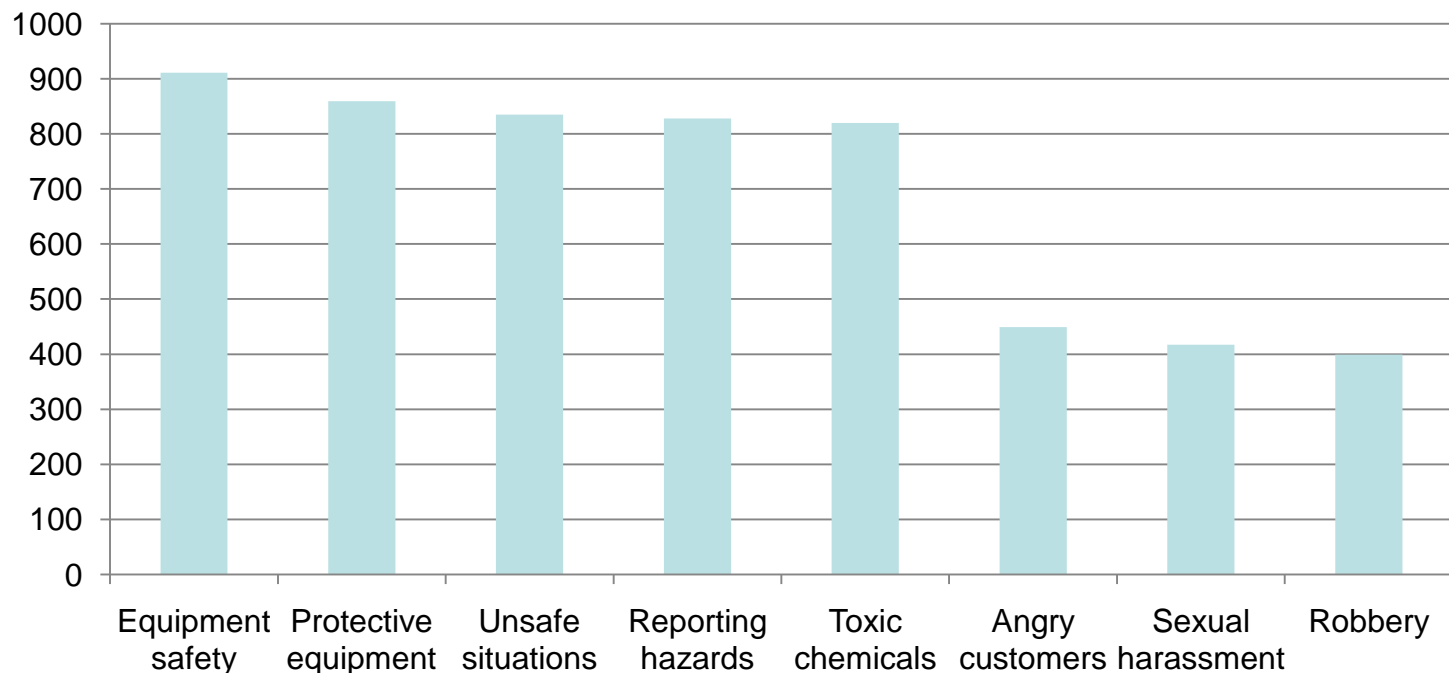
Odds ratios for various demographics and non-RSI injury rate		
	OR	95% CI
Gender		
Female	<i>ref</i>	
Male	1.712	(1.33 -- 2.21)
Age		
16 – 18	<i>ref</i>	
19 – 21	0.990	(0.74 -- 1.33)
22 – 24	0.886	(0.62 -- 1.27)
Work type		
Non-permanent	<i>ref</i>	
Permanent	1.360	(1.07 -- 1.74)
Number of jobs		
Worked at one job	<i>ref</i>	
Worked at more than 1 job	1.579	(1.24 -- 2.01)
Full time equivalent (FTE)		
Non-full time equivalency	<i>ref</i>	
Full time equivalency	1.523	(1.01 -- 2.30)



Results: Safety Training (1)

- 66% of respondents had received some kind of safety training while working in the past 12 months

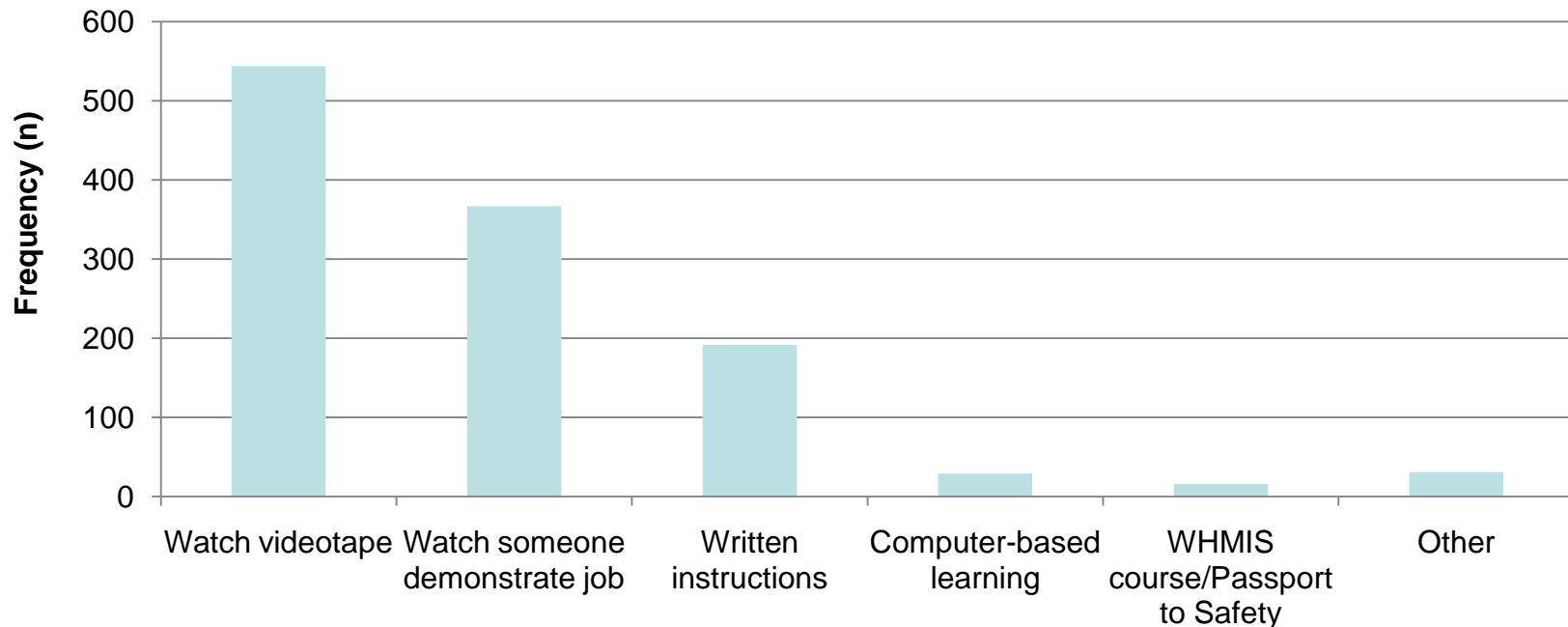
Frequency of different safety training topics received





Results: Safety training (2)

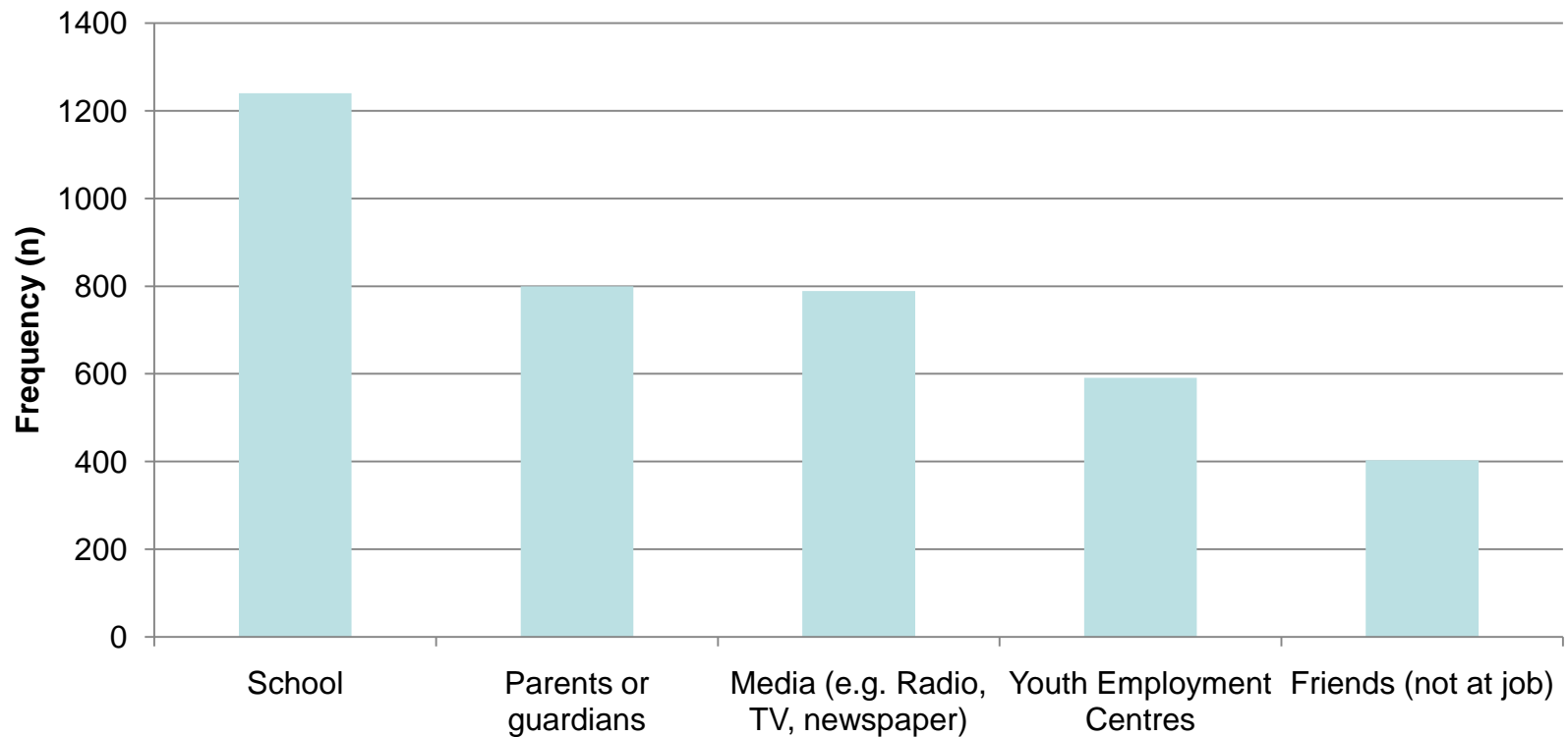
How was most of your safety training done?





Results: Safety training (3)

Source of safety information outside of work







Results: Safety Knowledge (1)

1. Your health and safety training should take place before you start the job.


- **True/False**


 = 28 (98.5%)

 = 1858 (1.5%)

2. An employee has the right to participate in workplace health and safety.


- **True/False**


 = 43 (97.7%)

 = 1843 (2.3%)

3. Every employee needs training on how to respond in an emergency situation.

- **True/False**

 = 66 (96.5%)

 = 1820 (3.5%)



Results: Safety Knowledge (2)

1. If you see a health and safety hazard you should:

- a) Tell your boss
- b) Report it to your safety rep
- c) Tell your union rep
- d) Only a) and c)
- e) **All of the above**



= 1253 (49.5%)



= 633 (50.5%)

2. Employers have a duty to control workplace hazards by:

- a) Eliminating the hazard
- b) Putting up barriers between you and hazard
- c) Providing you with safety equipment
- d) **All of the above**



= 1527 (76.5%)



= 359 (23.5%)

3. Which of the following is your employer's responsibility?

- a) Training you properly in safe use of chemicals & equipment
- b) Maintaining a safe work environment
- c) Taking action to correct unsafe conditions immediately
- d) Only a) and b)
- e) **All of the above**



= 1542 (77.7%)



= 344 (22.3%)



Summary

Youth using employment centers:

- Hold jobs in a variety of industries
- Report work injuries at a higher rate than adults
- Who have been injured report cuts and burns most often
- Are exposed to many unsafe workplaces
- Do not always receive training, and when they do it is often a videotape
- Know some safety facts and laws, but appear to have difficulty with situations where multiple responsibilities or factors are involved



Recommendations

- Employers should place a priority on reducing unsafe work conditions such as trip/fall hazards, dust/air particles and heavy lifting.
- Employers should improve orientation and training in ways that maximize information and skill acquisition/retention of health and safety.
- Further integration of youth employment centres into Ontario OHS system should be considered, especially with regards to initiatives directed at young workers.
- Even though school-based and social marketing efforts have successfully disseminated some basic OHS knowledge to many vulnerable young workers, efforts to strengthen workplace-specific training are needed.
- Additional information on vulnerable young workers is required to tailor interventions appropriate for this group.



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