Assessment of Occupational Health and Safety Hazard Exposures Among Working College Students

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Introduction

- Employment plays an important part of college life in the United States due to its various benefits, but can also negatively impact the health and safety of working students.
- Adolescents and young adults have a higher rate of occupational diseases, injuries, and deaths than their adult counterparts in similar jobs.
- The hazard exposures of working college students in their workplaces are not yet fully explored and characterized.

Aims of the Study

- To identify the health and safety hazards in the workplace
- To characterize related occupational diseases and injuries, and
- To describe worker training and education provided by employers

Goal: To understand the unique characteristics of working college students and their hazard exposures for the development of occupational health and safety strategies that would target interventions for college-age workers

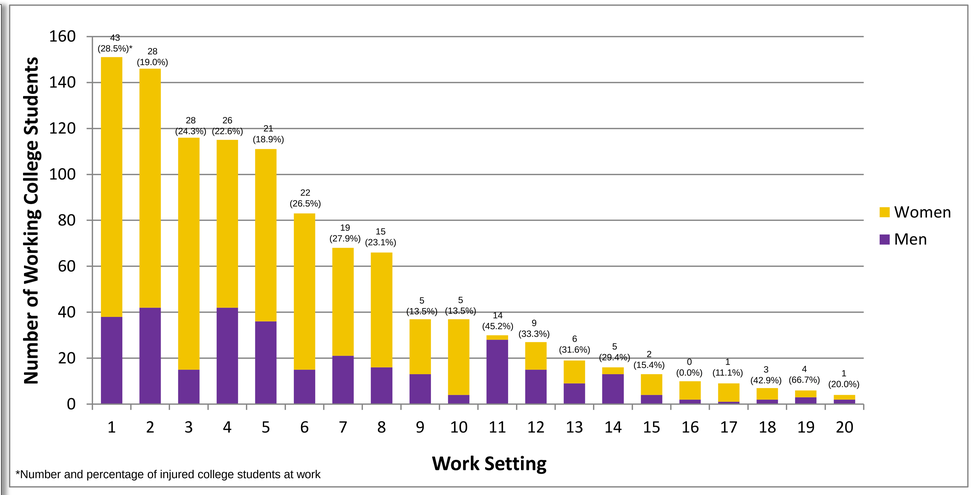
Methodology

- College students (n=1,147), ≥17 years old, were assessed via online surveys about work history, workplace exposure to hazards, occupational diseases and injuries, and workplace health and safety training activities.
- Pearson chi-square tests were used to describe gender differences ($p<0.05$).
- The individual effects of demographic, workplace and other predictor variables on injury occurrence were examined using simple logistic regression by calculating odds ratios (OR).
- The effect of several predictor variables on injury occurrence was determined using multivariate logistic regression by calculating adjusted odds ratios (AOR).

Results

Work Settings

1. Restaurant other than fast food
2. University/ School
3. Home
4. Others not Listed
5. Non-food store
6. Fast food restaurant
7. Grocery store
8. Hospital, clinic or nursing home
9. Swimming pool
10. Daycare center
11. Construction site
12. Factory
13. Farm
14. Lawn care
15. Park
16. Pharmacy
17. Movie theater
18. Hotel/Motel
19. Convenience store
20. Gas station



51% of participants were currently employed or had been employed while enrolled in college at the time of the survey.

Figure 1. College Student Work Settings by Gender and Job Injury

Workplace Hazards

1. Very loud continuous noise
2. Hot liquids, grease and hot surfaces
3. Extreme cold conditions
4. Dust, fumes, thick smoke or foul smelling odors
5. Needles, blood and other bodily fluids, body organs or medical waste
6. Flammable or explosive substances
7. Working outside in mosquito or tick-infested areas
8. Solvents, paint thinner or spray paint
9. Pesticides, herbicides and weed killers
10. Radiation

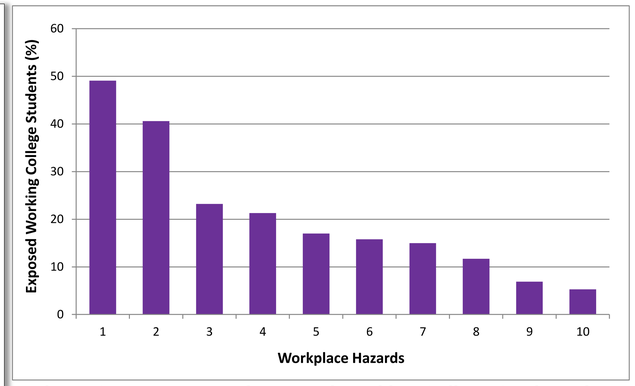


Figure 2. Percentage of Exposed Working College Students by Workplace Hazard

Diseases or Adverse Effects

1. Sun burn
2. Mosquito and tick bites
3. Asthma
4. Dermatitis, eczema and other skin problems
5. Other
6. Respiratory illness aside from asthma
7. Chemical poisoning

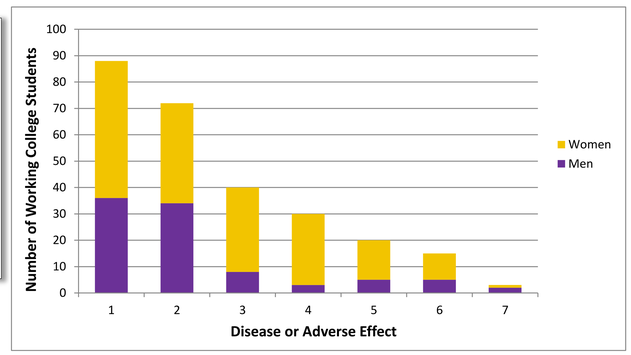


Figure 3. Diseases or Adverse Effects Caused or Aggravated by Workplace Hazards Among Working College Students by Gender

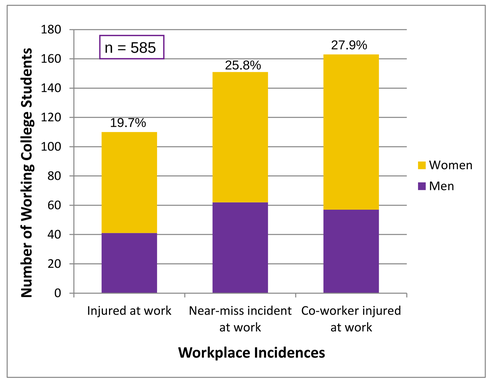


Figure 4. Workplace Incidences of College Students by Gender

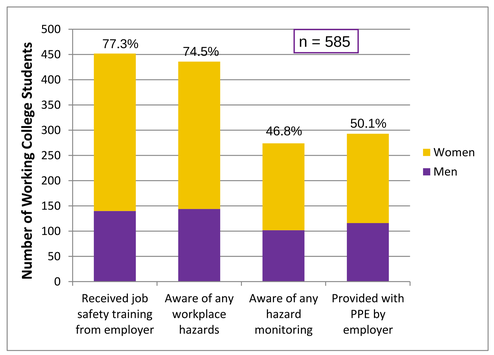


Figure 5. Workplace Health and Safety Activities Among College Students

Results (cont'd)

- 20% of working students had experienced an injury at work; some were severe enough to limit their normal activities for more than three days (30%) or require medical attention (44%).
- Males had a higher prevalence of injuries (χ^2=3.962, p=0.047) and near-misses (χ^2=12.919, p=0.000) at work than females, likely attributed to gender differences in work tasks (Figure 4).
- Job safety training was received by most (77.3%) students but was not significantly related to injury occurrence (χ^2=3.380, p=0.066).
- 79.4% of working students reported using personal protective equipment (PPE) on the job, 56.7% of whom were women. Differences in PPE usage between genders are statistically significant (χ^2=5.49, p=0.02).

Conclusions

- Improving the awareness of college students on workplace health and safety may positively influence workplace behaviors and practices.
- Reduction of workplace injuries and illnesses among working college students may be achieved by implementing occupational health and safety (OHS) strategies including:

✓ Developing workplace training designed for young workers
✓ Providing adequate PPE by employers
✓ Incorporation of OHS in the college curriculum
✓ Promotion of OHS by university and college student health services
✓ Improving awareness of online resources on OHS among college students, employers and educators

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