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TERMS AND ABBREVIATIONS

AIC	Akaike Information Criterion
APA	American Psychological Association
APHA	American Public Health Association
BLS	Bureau of Labor Statistics
FTE	Full time equivalent
ISSRC	Iowa Social Science Research Center
NCE	No cost extension
NCVS	National Crime Victimization Survey
NIOSH	National Institute for Occupational Safety and Health
NOIRS	National Occupational Injury Research Symposium
RDD	Random digit dial
SES	Socioeconomic status
SOII	Survey of Occupational Injury and Illnesses
UI	University of Iowa
WVU	West Virginia University
WINCATI	Windows Computer-assisted Telephone Interviewing

ABSTRACT

Principal Investigators: Kimberly Rauscher, ScD, MA, Associate Professor (Contact PI) and Carri Casteel, MPH, PhD, Associate Professor (Co-PI)

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Overview: Given their predominant employment in the high-risk retail and service industries, the lack of violence prevention programs in these industries, and the fact that they may be uniquely affected by workplace violence due to their ongoing development, young workers under age 25 are a vulnerable population at risk.

Method: To investigate workplace violence among this population we conducted a national telephone survey with a sample of 1,032 US working youth ages 14-24. Our goals were to estimate the prevalence of workplace violence victimization among young workers; to characterize employer-provided workplace violence prevention training received; to identify risk factors for workplace violence, and to describe the employment and educational consequences of victimization among young workers.

Results: Workplace violence is common among young workers ages 14 to 24, with over half of these workers reporting one or more instances of workplace violence over the prior 12-month period. Verbal abuse and sexual harassment were the two most prevalent forms reported. Customers and co-workers were the most frequent perpetrators. Females, emerging adults (ages 18-24), and gay/lesbian/bi-sexual youth were at greater risk of being victimized. We also found that young workers are exposed to a variety of workplace violence risk factors. The presence of these risk factors demonstrates the need for proper supervision and training. This study, however, found that many young people are working without a supervisor on site and many had not been trained in key workplace violence topics. When provided, training is usually given in the first week with the most common format being meetings/discussions. In terms of impacts, we found that few young victims reported significant impacts on their work life and fewer reported impacts on their school life. Injury was also not commonly reported in this population. Therefore, most cases of workplace violence will not be detected in occupational injury surveillance systems, which should be used with caution when assessing the true magnitude of the problem of workplace violence in the young worker population. Far more common were mental health impacts which included increased stress, anxiety, and insecurity.

Conclusions: Workplace violence is common among young workers yet some youth are at greater risk, thus, future research should be conducted to understand the causes of these differential risks. In the meantime, beyond establishing basic workplace violence programs and policies to protect all workers, employers need to ensure that any efforts they implement be understood by young employees. Ideally, employers who have a large number of young workers should consider providing age-appropriate training that is specifically targeted toward them. Our finding that sexual harassment is not unique to adults warrants action in the practice and policy arenas. Stakeholders need to ensure that any sexual harassment policy or legislation takes into account that workers of all ages are at risk and need to be protected. Practice professionals are also encouraged to redesign current adult-focused workplace violence and sexual harassment prevention programs, and/or develop new age-appropriate programs to help reach young workers. This is particularly needed to better protect our youngest, teenage workers.

SIGNIFICANT (KEY) FINDINGS

AIM 1: Estimate the prevalence of workplace violence victimization among young workers and characterize cases with regard to worker- (e.g., gender), employment- (e.g., occupation) and event-characteristics (e.g., injury, psychological harms).

They key findings relative to Aim 1 are as follows:
- the 12-month prevalence of workplace violence among young workers aged 14 to 24 years was 57% (n=584).
- verbal abuse (50%) and sexual harassment (22%) were the two most prevalent forms of workplace violence reported by youth ages 14 to 24, with customers (53%) being the most frequent perpetrators of workplace violence. These findings likely reflect the overrepresentation of youth in service occupations where fast-paced work and customer/client contact are central features of the job.
- women (66%) and emerging adults (ages 18-24) (61%) were more likely to be victimized compared to males (48%) and those in middle adolescents 14-17 (52%). Gender differences were anticipated and coincide with the literature on gender differences in adult workplace violence. These findings as well as age related differences will be explored further as we continue to analyze the data.
- gay/lesbian/bi-sexual youth (73%) were more likely to be victimized than their heterosexual counterparts (56%). This was an anticipated finding as we suspected that sexual minorities would be targets of workplace violence and bullying. We plan to explore this finding further as we continue to analyze the data.
- Just under one quarter of sexual harassment experienced by young workers occurred via electronic means such as texting, emailing, or posting on social media.
- injury (3.3%) was not typically associated with instances of workplace violence in this population.
- self-reported mental health impacts, post victimization, were reported by young workers ages 14 to 24. The most included: increased stress (41%); increased anxiety (39%); increased insecurity (26%); and decreased self-esteem/confidence (22%).

AIM 2: Identify risk factors for workplace violence victimization among young workers.

The key findings relative to Aim 2 are as follows:
- a significant proportion of young workers are in jobs where they have contact with the public, which is a major risk factor for workplace violence: 93% did so at least "sometimes" and 74% do so "always."
- Other common exposures included: working at a fast pace (85%); working after dark (77%); cash handling (50%); and working late at night (43%).
- The presence of these risks demonstrates the need for proper supervision of young workers yet our study found that only 43% of young workers said they at least "sometimes" work with no supervisor on site and 15% "always" work without a supervisor on site.

AIM 3: Characterize employer-provided workplace violence prevention and response training received by young workers.

The key findings relative to Aim 3 are as follows:
- employer provided training is not widespread across all key topics yet there are some areas where many young workers ages 14 to 24 are receiving training. These include: how to properly interact with customers (84%); how to report workplace violence (59%); how to use available emergency systems to get help (56%); de-escalating dangerous situations using verbal communication (52%); and how to deal with sexual harassment (45%).
- few (24%) young workers said they had received active shooter training.
- when provided, training is usually given in the first week (65%).
- the most common training formats include the following: meetings/discussions (74%); handouts (46%); videos (40%); and online courses (31%).
- few (29%) of victims of workplace violence said they used employer provided training during the event in which they were last victimized.

AIM 4: Describe the employment and educational consequences of workplace violence victimization among young workers and examine associations between these outcomes and worker and event characteristics.

They key findings relative to Aim 4 are as follows:
- few young victims of workplace violence reported suffering employment consequences and even fewer reported any educational consequences.
- the most common work life impacts included: victims quit or considered quitting (29%); they cared less about the job (27%); and they stopped trying to do their best (16%). The most common school life impacts included: victims' grades went down (5%); they skipped classes more often (4%); and they showed up late more often (3%).

TRANSLATION OF FINDINGS

At this early stage, there are no translation outcomes to report. However, as we continue to share our results with the scientific and practice communities, we anticipate they will have great value in informing future efforts to reduce workplace violence and improve workplace safety. Our results demonstrate that workplace violence is common among youth. Beyond establishing basic workplace violence programs and policies to protect all workers, our findings should urge employers to ensure that any workplace violence prevention program they implement be understood by young employees. Ideally, employers who have a large number of young workers should consider providing age-appropriate training that is specifically targeted toward youth. Our finding that sexual harassment is not unique to the adult worker population warrants action in both the practice and policy arenas. Our results should urge policy makers and legislators to ensure that any sexual harassment policy or legislation, takes into account that workers of all ages are at risk and need to be protected. The use of social media to sexually harass is another important finding of this study. Employers should be encouraged to implement policies regarding cell phone use at work to lessen instances of sex harassment via electronic means. These results should also encourage practice professionals to redesigned current adult focused sexual harassment prevention programs or develop new age-appropriate programs to help reach young workers. This is particularly needed to better protect our youngest, teenage workers. Our finding showing that gay and lesbian youth are at greater risk of workplace violence warrant further study. Researchers should develop investigations that attempt to confirm these findings and identify factors that lead to this increased risk. In the meantime, interventions that address issues unique to gay and lesbian young workers should be considered in light of our findings. Our finding that young victims of workplace violence suffer a variety of mental health impacts should also be further investigated. Researchers should attempt to confirm our initial results about the mental health impacts of workplace violence in a manner that can overcome the limitations of the cross-sectional, self-reported outcomes of the current study. In addition, further studies should investigate whether mental health effects are short lived or lead to longer term psychological impacts.

RESEARCH OUTCOMES/IMPACT

Potential Outcomes
This research has generated new knowledge in the area of workplace violence which can be used by researchers to develop new hypotheses and keep the research on young worker safety moving forward. At the same time, practitioners can take the early evidence provided by this study to develop or modify intervention strategies targeted to young workers as well as programs that address the impact of workplace violence on this vulnerable worker population. Suggestions for how our findings can be used by the research and practice communities are provided above.

Intermediate Outcomes
We have none to report at this time.

End Outcomes
We have none to report at this time.

SCIENTIFIC REPORT

Background

Workplace Violence Magnitude and Risk among Young Workers

Data from the National Crime Victimization Survey (NCVS) showed that in 2009, 572,000 non-fatal violent crimes occurred at work, including "rape/sexual assault, robbery, and aggravated and simple assault," among workers over age 15 [37]. While violence at work affects people of all ages, youth are at greater risk. Data from the Bureau of Labor Statistics' (BLS) Survey of Injury and Illness (SOII) show that in 2011, the rate of non-fatal injury due to intentional violence was 1.4/10,000 FTE for all workers (≥16yrs) yet the rate for 16- to 19-year-olds was 1.6/10,000 FTE, and the rate for 20- to 24-year-olds was 1.9/10,000 FTE [2]. With fatalities, the BLS's Census of Fatal Occupational Injury (CFOI) reports that 47% of all workplace homicides in 2011 occurred among workers under the age of 25 [3].

Limits to our Understanding of the Problem

Even the striking data presented above may represent an underestimate of workplace violence among youth given the limitations of the surveillance systems on which our understanding of this problem has historically been based. While some research exists on the topic of workplace violence among youth, the majority of what we know comes from occupational surveillance data. These data are vital, yet they suffer from challenges that limit our understanding of workplace violence in general, and among youth in particular. Most systems fail to capture forms of violence that do not reach a certain reporting threshold. As such, the data they generate underrepresent the magnitude of workplace violence. These systems are also limited as they tell us little about the psychological effects (i.e., anxiety) or the secondary consequences of workplace violence, such as negative impacts on employment and education. Another issue impacting the utility of surveillance data is underreporting [38-40] which is particularly relevant to workplace violence. Adult and young workers alike often view violence as part of their jobs and may not report such incidents [41, 42]. Even when workers are injured as a result of an attack, they may be less likely to report it unless the injury is severe [43]. With young workers in particular, workplace violence may go unreported due to fears of job loss as youth tend to view themselves as undervalued and easily replaced [44]. Conversely, youth who do not rely on the income from their jobs may simply quit rather than go through with reporting the incident. One final yet critically important challenge in using surveillance data to study workplace violence among youth has to do with case identification. Youth, particularly those who are still in school, are not often thought of as "workers" by adults, which presents a challenge to accurately capturing cases in certain surveillance systems. Studies, including one by Rauscher, reveal that young workers' occupation is often misclassified as "student" and industry as "high school" [27, 29, 45] and that this impacts the extent to which work-related incidents among youth are classified as such [26, 29].

Nature and Typology of Workplace Violence among Young Workers

Studies of workplace violence among youth in the US are scant. One of the only studies to focus on workplace violence broadly was a survey of high school students conducted by Rauscher in 2009. This study showed that one third of working youth experienced some form of workplace violence at least once in their lifetimes while working in a formal paying job [6]. Twenty five percent reported they had been verbally threatened, 10% had been physically attacked, and 10% were sexually harassed. Other studies of young workers in the US have looked specifically at the issue of sexual harassment at work. A sampling of these show that between 33 and 74 percent of young people have experienced sexual harassment at work [5, 46-48], and younger female workers, even teenagers, are more likely to experience sexual harassment at work than older women [5, 47]. With regard to typology, little data exist. In Rauscher's study (referenced above), customers were a common perpetrator of physical attacks (31%), verbal threats (55%) and sexual harassment (34%) [6]; yet coworkers and supervisors were also named as perpetrators [6]. This study, however, does not tell us whether youth are experiencing one time acts of violence or aggression, or patterns of attacks, intimidation, and harassment that constitute bullying by co-workers and supervisors. We suggest that the structure of youth employment may lend itself to youth-on-youth (i.e., worker-on-worker) workplace violence that may include bullying, as young people tend to be employed in businesses where the workforce is predominately made up of other young people and where supervisors are often the same age or only slightly older than the workers themselves [26]. We know very little about bullying at work among youth yet two studies show that hazing by co-workers,

interpersonal conflict between co-workers, and interpersonal conflict between workers and their supervisors all have significant effects on young victims' employment outcomes [4] and psychological well-being [4, 13] (described below). Given its potential to do a range of harms, youth's experiences with bullying at work is an area in need of study. Rauscher also found that youth experience workplace violence perpetrated by their romantic partners or acquaintances [6], a phenomenon which to this point, has only been studied among adult working women [49-54] including work by Gurka who found that 33% of all workplace femicides were perpetrated by acquaintances, 78% of whom were intimate partners of the victim [49]. Because there have been no large scale studies of workplace violence typology among youth, our understanding of both bullying and intimate partner violence at work among youth is limited [8, 55].

Unique Vulnerabilities of Youth and the Consequences of Workplace Violence

Adolescence is a highly formative period in which youth are developing their identity, sense of competence, and self-esteem. Even into their early twenties, adolescents are still developing cognitively, emotionally, and psychologically [31] and as such, they have fewer internal resources to help them cope with the experience of violence [56, 57]. This means that adolescents may find workplace violence particularly traumatic and suffer its effects more greatly than older workers. Studies have shown that interpersonal conflict at work, including bullying, have mental health consequences for youth including depression and decreased self-esteem [4, 58] as well as nightmares and thoughts of suicide [13]. Young women who are sexually harassed at work face similar effects and are also at increased risk of anxiety and eating disorders [15, 16, 59]. In addition to psychological harms, there is evidence that experiencing workplace violence can negatively affect youth's education and employment. One study of youth found that interpersonal conflict at work was associated with lower job satisfaction, lower organizational commitment (e.g., personal connection to the organization), and turnover intentions (i.e., intent to quit) [4]. Lower job satisfaction is also associated with workplace sexual harassment among girls [5]. These effects, along with decreases in job performance [60, 61] and work withdrawal (e.g., absenteeism) [60, 62, 63], have also been found among adult workers [60, 63-69]. In the area of educational outcomes, the evidence is more sparse. We found one study on this topic. It showed high-school aged females experience greater school avoidance (e.g., skipping classes) and academic withdrawal (e.g., not paying attention in class) after experiencing sexual harassment at work [5]. Looking to the general violence literature, we see that youth exposed to school and community violence suffer similar negative effects including decreased academic performance [21, 22] and school attendance [21, 23, 24]. Although the mechanisms may differ somewhat, it is not unreasonable to expect that similar outcomes may happen to youth who suffer workplace violence, particularly forms that are severe or repeated such as bullying. The evidence in this area, however, is lacking.

Lack of Workplace Violence Training for Young Workers

Prevention and response training are critical for reducing workplace violence and are particularly necessary for young workers for several reasons. First, youth tend to work in businesses and under conditions which pose significant risks of workplace violence including: working in jobs where they handle cash or where cash is present [8, 70], working at night during hours when most robbery-related violence occurs [8, 11, 28, 71], working alone [8, 11, 72] and in jobs where they interact with customers/clients [8, 42, 73]. Young workers have little experience and tend to be unfamiliar with the hazards in their workplaces including the risks for workplace violence [26, 74]. Second, young people, particularly those in early and middle adolescence, are in a developmental stage where they are striving to gain competence and become more self-reliant. In the work setting, this often leads youth to try to prove themselves as reliable, dependable workers who do not complain or cause trouble [26, 75]. This results in young workers being reluctant to speak up when something is wrong at work or to ask for help [75]. While an adult may respond more proactively when confronted with dangerous working conditions or the threat of workplace violence, a young worker may retreat or, more often, try to handle the situation him/herself [76]. For all these reasons it is imperative that young people be trained in workplace violence prevention and what to do if a violent situation occurs, yet studies show that very few young people receive workplace violence training from their employer [8, 44, 70]. While this research has demonstrated that youth lack training in workplace violence prevention and response, it tells us little about the content, quality, or quantity of the training that *is* provided to young workers by their employers.

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Specific Aims

AIM 1: Estimate the prevalence of workplace violence victimization among young workers and characterize cases with regard to worker- (e.g., gender), employment- (e.g., occupation) and event-characteristics (e.g., injury, psychological harms).

AIM 2: Identify risk factors for workplace violence victimization among young workers.

AIM 3: Characterize employer-provided workplace violence prevention and response training received by young workers.

AIM 4: Describe the employment and educational consequences of workplace violence victimization among young workers and examine associations between these outcomes and worker and event characteristics.

Methodology

Study Design and Population
This study used a cross-sectional design to collect survey data via telephone interview from a national sample of 1,032 young workers living in the US. The survey data was collected at the University of Iowa by the Iowa Social Science Research Center (ISSRC). To be eligible, subjects had to be between the ages of 14 and 24 and have held a formal job (i.e., employed by a company that issues them a paycheck) in a civilian setting in the past 12 months. Babysitting, lawn mowing and similar jobs done for cash paid by a private individual were not considered "formal jobs", and subjects who held only these jobs during the 12-month referent period were not eligible for inclusion. We excluded these types of jobs because they are not included in official employment statistics and thus, their inclusion would limit our ability to generalize our findings to the US population of working youth and compare them with other workplace violence studies. We chose a referent period of 12 months to account for the varied seasonal patterns of work among the 14- to 18-year-olds in the study who may either work only in the summer months or only during the school year [7].

Questionnaire Development
Members of the study teams at WVU and UI worked together to develop the questionnaire using validated items and measures where possible. To supplement these with additional items of relevance, we conducted focus groups with a total of 31 students. Three were conducted with college students, two at West Virginia University (n=8 and n=5 for a total n=13) and one at the University of Iowa (n=8), and two were conducted with high school students, one in West Virginia (n=5) and one in Iowa (n=5). Each focus group consisted of approximately equal numbers of males and females.

Telephone Survey
The Iowa Social Science Research Center (ISSRC) was responsible for both pilot testing and administering the national survey. The ISSRC utilized random digit dial (RDD) and non-probability samples to identify subjects. We also employed regional quotas (using 9 US Census regions) to ensure we achieved national reach. Two samples of workers were targeted. The first included workers ages 14-17 years and the second included workers ages 18-24 years. Both age groups were called on household land lines and cell phones. Standard calling protocols were used to capitalize on the sample and optimize response rates. The University of Iowa IRB granted a waiver to bypass the formal parental consent needed for respondents under age 18. Interviewers used a Windows-based Computer Assisted Telephone Interviewing (WinCATI) system to conduct the survey. A maximum of eight attempts were made to connect with a respondent per phone number. Once reached, respondents were screened for age and whether they worked at a formal job in the past 12 months (as described above). If a respondent qualified for the 15-17 age group, parental consent and respondent assent were verbally obtained. If a respondent qualified for the 18-24 age group, they verbally provided their own consent. Prior to full administration, the ISSRC conducted a small-scale pilot of the instrument with 38 subjects. The pilot served to provide duration times and tested the WinCATI programming of the questionnaire.

During both the pilot testing and full survey administration, the ISSRC issued respondents $20 gift cards at interview completion.

Variables and Measures

AIM 1: Estimate the prevalence of workplace violence victimization among young workers and characterize cases with regard to worker- (e.g., gender), employment- (e.g., occupation) and event-characteristics (e.g., injury, psychological harms).

Worker Characteristics
Worker characteristics (collected on all respondents) included: age, race, gender identity, mother's education, father's education (as proxies for socioeconomic status) [78], visible disability, and sexual orientation. We also collected education variables including whether the repondent was currently attending school. If so, we asked their current grade and if they were attending school full- or part-time. If they were not currently in school, we collected the highest level achieved.

Employment Characteristics
To collect employment characteristics, respondents were first asked to state the number of jobs they held in the last 12 months (the referent period). If they had multiple jobs during this period (either concurrently or consecutively), the interviewer used a function in the WinCATI system to randomly select one job to serve as the referent job on which the remainder of the survey focused. We chose this approach over selecting the job held the longest during the referent period because the latter could exclude subjects who quit their jobs after a short period due to workplace violence. Referent job characteristics included: the job they held (e.g., cashier); type of business (e.g., convenience store)], job tenure (in months), weekly hours worked, and whether they were employed by a parent.

Workplace Violence Victimization
Victimization data were collected to estimate the prevalence of workplace violence victimization over the 12-month referent period. Following procedures similar to those used in the National Crime Victimization Survey (NCVS) [118], examples of each form of violence were offered by the interviewer to help standardize responses. Victimization was defined as experiencing any of the following five forms of violence: physical attacks ("This includes everything from being hit, kicked, tripped, pushed, grabbed, to being shot or stabbed."); verbal abuse ("This includes someone yelling at you, calling you names, being rude to you, or talking to you in any way that made you feel scared, nervous or upset."); threats ("This includes someone being physically or verbally aggressive toward you in a way that made you feel nervous or afraid you might be hurt. This could be someone using a weapon to scare you, saying they are going to hurt you, or attempting to hurt you in some way."); sexual harassment ("This includes, someone repeatedly pressuring you for a date or sex; making sexual jokes or gestures, unwanted flirting, sharing sexual pictures with you, or any other unwanted sexual behavior that made you uncomfortable."); and sexual assault ("Sexual assault is any sexual activity to which you did not agree. This includes completed or attempted sexual acts which can range from someone touching or grabbing you inappropriately to someone physically forcing you to have sex with them."). To estimate the prevalence of workplace violence during the referent period we first asked about victimization in the referent job and if they had none, we then asked about victimization in any of their other jobs in the past 12 months.

We also asked about bullying at work. For each form of violence reported, if a respondent said they were victimized "more than once" we then asked, "Do you feel any of the [form of violence] was being done to bully you meaning the person who was [form of violence] you was trying to intimidate you or gain power and control over you? In addition, we inquired about specific bullying behaviors by both supervisors and co-workers, in the last 12 months. Interviewers used the following language to ask about bullying: "I'm going to read a list of things that may be done repeatedly to bully people at work, meaning they are done to intimidate people or control them. Some of these things can be done using email, text or social media. Did any of your coworkers repeatedly: tease or make fun of you; spread rumors about you; put you down or belittled you; humiliate you in front of other people; excluded you from the group on purpose; pressure you to meet unrealistic work goals; give you the worst stuff to do at work; and criticize your work unfairly. Respondents were first asked if these

forms of bullying happened in the referent job, and if none did, we then asked if they happened during any other job they held in the prior 12 month period. The same procedures were used to ask about supervisor bullying however the items were different and included the following: pressure you to meet unrealistic work goals; give you the worst stuff to do at work; criticize your work unfairly; assign you tasks that were beyond your skill and abilities; schedule you unfairly; cut your hours unfairly; and force you to work overtime. As bullying can also include the other forms of violence we asked about (i.e., verbal abuse, physical attacks, threats, sexual harassment and assault), we also asked the following question any time a respondent reported multiple instances of these forms of violence: "Do you feel any of the [form of violence] were done to bully you, meaning the person was trying to intimidate you or gain power and control over you?"

Event Characteristics
A series of follow-up questions were asked to collect information on the characteristics of the last incident in which the subject experienced workplace violence. If subjects report experiencing one form of violence, these follow-up questions focused only on the *last event* during which they experienced that one form. However, when subjects reported experiencing more than one form of violence, the interviewer used the WinCATI system to randomly select one form of violence on which the follow-up questions focus. The interviewer instructed respondents to think only about the *last event* in which they experienced the selected form of violence when answering the follow-up questions. Employing a random selection process reduced reporting bias and allowed us to capture the full range of workplace violence youth experience.

Victim Demographics and Employment Characteristics – Demographics included respondents age at the time of the event, whether they were in school, and if so, what grade were they in at the time. Employment characteristics included the job type and industry in which respondents were working at the time.

Event Details - For the event in which the single form of violence, or the form chosen at random, was experienced, respondents were asked to describe the event in brief. This was followed by a series of closed-ended questions mean to collect various characteristics of event. These questions included: who were the perpetrators, time of day, where on the premises the event occurred (e.g., parking lot); whether the perpetrator used a weapon, and if so, the type of weapon; whether the perpetrator used electronic means (e.g., social media) and if so, what form(s); whether the victim confronted or resisted the perpetrator and how, and whether any employer provided training was used during the event.

Reporting - Respondents were also asked if they reported the incident to anyone. If they did, the interviewer read the following list and asked the respondent to identify all of those to whom the event was reported: supervisor, co-worker, security, parents, someone at school, a medical professional, the police, a friend, or someone else (and who). Respondents will then be asked in an open-ended question what action was taken, if any, to address the problem by each person to whom they reported the incident.

Injury - For the event in which the single form of violence, or the form chosen at random, was experienced, the respondent was asked whether a traumatic injury was sustained ("During the incident, were you physically injured? This includes any physical harm you suffered from a cut or a bruise to a broken bone or gunshot wound."). If respondents answered yes, we then asked about the severity of the injury through the following questions: "Please tell me what kind of physical injuries you suffered;" "Did you receive medical treatment, beyond first aid, for your injuries?;" "Did your injuries cause you to miss one or more days of work or school?;" "Did your injuries cause you to limit your involvement in social or civic activities such as participation in sports, clubs, church activities, etc.?;" and if yes, "Please tell me what activities were impacted."

Mental Health Impacts - We asked whether respondents sustained various psychological harms as a result of the event. The types of harm examined were derived from the literature on psychological effects resulting from workplace violence [4, 13, 15, 16, 59, 73] and items in the NCVS [118]. Specifically, respondents were asked, "After this incident, did you experience increased levels of the following types of distress as a result of this experience?" The types included: stress; worry or anxiety; fear or insecurity; sadness or depression; decreased self-confidence or self-esteem; feeling distrustful of people; having thoughts of suicide; having nightmares or other sleep disturbances; self-injuring or cutting; changes in eating habits; or any other mental

health impacts (and what were they). We also asked, "After this incident, did you increase your drug or alcohol use to cope with how you were feeling?" If a respondent answered yes to any of these items, we then asked the following questions to determine the severity of the impact: "Did any of the emotional problems or distress you experienced cause you to seek help from a counselor, social worker, psychiatrist or other mental health professional?;" "Did these feelings cause you to miss one or more days of work or school?;" and "Did these feelings cause you to limit your involvement in social or civic activities such as participation in sports, clubs, church activities, etc.?"

AIM 2: Identify risk factors for workplace violence victimization among young workers.

We also collected respondents exposures to known risk factors for workplace violence that cross-cut occupation and industry. These factors (assembled by NIOSH [117]) included: contact with the public; cash handling; used vehicle to make deliveries; worked after dark, worked at a fast pace, feared crime could happen, alcohol served on site; worked totally alone; worked with no supervisor on site, and worked late at night/during early morning hours. We also collected data on supervisor and co-workers social support which we hypothesized could be protective factors. Supervisor support and co-worker support were measured using validated 4-item scales (Cronbach α=0.77, α=0.70, respectively) developed by Rauscher [42] using social support items from Karasek's Job Content Questionnaire [126].

AIM 3: Characterize employer-provided workplace violence prevention and response training received by young workers

We collected information on employer provided training on workplace violence prevention and response in the referent job. Topics included: how to handle a robbery, de-escalating a violence situation using verbal communication, preventing violence using physical contact, escaping violent situations, self-defense techniques, how to properly interact with coworkers, warning signs in co-workers, dealing with coworker arguments, how to properly interact with customers, warning signs in customers, using emergency systems for help, how to report workplace violence, how to deal with sexual harassment, and active shooter response. If trained in any of these topics, we asked at what point on the job was the training first received and how was it delivered (e.g., computer-based, role playing, meetings).

AIM 4: Describe the employment and educational consequences of workplace violence victimization among young workers and examine associations between these outcomes and worker and event characteristics

To capture employment and educational impacts, we used validated scales employed in the studies cited above and modified them for the purposes of our study. Use of the exact scales from these prior studies was not feasible due to differences in methodological approaches between those studies (in which outcomes were measured relative to one's current job and compared across workers with and without workplace violent experiences) and the one used in this study (in which collected post-event reactions by *only those subjects who experienced some form of workplace violence* in the referent job, which may not be the current job). Modifications to these scales were therefore necessary. All outcomes were measured in relation to the event in which the single form of violence, or the form chosen at random, was experienced. Thus, items were worded to capture respondents' feelings and behaviors after they experienced the violent event compared to their feelings and behaviors before the event.

Employment Impacts
The employment impacts we explored came mainly from the literature on the effects of workplace violence among adults and youth. We also drew additional items on educational consequences from the literature on school and neighborhood violence. The employment outcomes examined included: whether they did any of the following after the event: changed their schedule, cut back their hours, called in sick more often, or considered quitting or quit. Additionally, we asked, "After this incident, did you experience any of the following effects on your work?: the quality of your work went down, you cared less about the job after this happened to you, your productivity went down or you stopped trying your best in the job."

Educational Impacts

The educational outcomes examined included school attendance/avoidance academic withdrawal, and academic achievement. Specifically, we asked if respondents skipped classes more/less/as often, if they showed up late to class more/less/as often, if they quit or considered quitting school, if (and how) their grades were effected, and if they cared less/more/as much about doing well in school after the event.

Statistical Analysis

At present, some of the analyses we proposed have been finished but the majority of this work is ongoing.

AIM 1: Estimate the prevalence of workplace violence victimization among young workers and characterize cases with regard to worker- (e.g., gender), employment- (e.g., occupation) and event-characteristics (e.g., injury, psychological harms). Victimization prevalence was defined as the proportion of respondents who report being victimized at work or on duty in the 12-month referent period. We calculated this for overall prevalence and prevalence by each form of violence (e.g., verbal abuse). To characterize workplace violence cases, descriptive statistics were calculated for each categorical and continuous variable of interest. Variables included worker and employment characteristics, and event characteristics.

AIM 2: Identify risk factors for workplace violence victimization among young workers. These analyses are currently ongoing. We plan to use log-binomial regression to estimate odds ratios for the association between worker, employment and training characteristics and workplace violence victimization outcomes. In modeling situations where the prevalence of outcomes is high and violates the rare disease assumption, Cox regression will be used to obtain prevalence ratios in a manner described by Barros and previously implemented in a study of workplace injury to teens by Rauscher and Myers. Two workplace violence victimization outcomes will be examined: (1) whether the worker reported being victimized in the referent job (yes/no); and (2) whether the worker reported a psychological harm as a result of victimization (yes/no). We will be examining several exposure variables, including worker (e.g., gender), employment (e.g., type of business) and training (e.g., content of training) characteristics as determined in Aims 1 and 3. For this report, we used descriptive statistics to show the extent to which young workers were exposed to each individual risk factors.

AIM 3: Characterize employer-provided workplace violence prevention and response training received by young workers. Descriptive statistics were used to examine the extent and type of employer provided workplace violence prevention training. Future plans include creating a scoring system that counts the number of topics on which workers report being trained. This score, as well as the length of training variable, will be examined for normality prior to further analyses, and decisions will be made as to whether they will be categorized. Categorical variables will also be examined to determine if categories should be collapsed. We are also interested in examining whether distributions of the training characteristics vary by the worker's occupation and the type of business in which he/she was employed. The type of statistical tests used to conduct these analyses will take into consideration properties of the variables and their distributions such as: (1) whether variables are categorical or continuous, and (2) whether assumptions of normality hold for continuous variables. These analyses are ongoing.

AIM 4: Describe the employment and educational consequences of workplace violence victimization among young workers and examine associations between these outcomes and worker and event characteristics. Descriptive statistics were used to determine the extent to which respondents reported various impacts on their working lives and their schooling. Future analyses will use linear regression to examine associations between worker characteristics and event characteristics and the risk of these outcomes. Worker characteristics include gender, race/ethnicity and SES. Event characteristics include: whether an injury was sustained, and if so, injury severity; whether a psychological harm was sustained, and other details of the event. Final selection of covariates for the linear models will be examined using the change in estimate criterion and by examining model fit using the Akaike Information Criterion (AIC). The respondents' levels of co-worker support and supervisor support will be examined as potential modifying variables. We will conduct standard linear regression model diagnostics and goodness of fit tests to assure the assumptions of linear regression modeling are met [135].

Results

Below are the characteristics of our sample (n=1,032).

Geographic Distribution
The below map shows the geographic distribution of the sample.
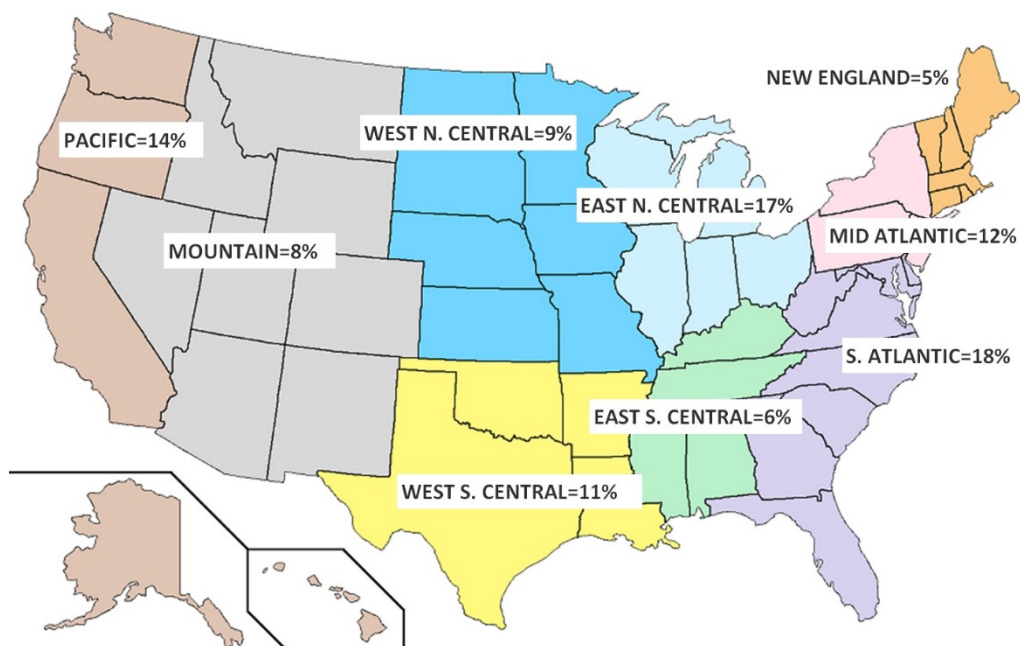
Demographic Characteristics

<u>Age</u>

```
     Age |      Freq.      Percent         Cum.
---------+-----------------------------------
      14 |         26         2.56         2.56
      15 |         66         6.50         9.06
      16 |        146        14.37        23.43
      17 |        262        25.79        49.21
      18 |        100         9.84        59.06
      19 |         95         9.35        68.41
      20 |         64         6.30        74.70
      21 |         76         7.48        82.19
      22 |         76         7.48        89.67
      23 |         58         5.71        95.37
      24 |         47         4.63       100.00
---------+-----------------------------------
   Total |     1,016*      100.00
```

```
 Variable |       Obs        Mean    Std. Dev.        Min         Max
----------+----------------------------------------------------------
      age |    1,016*    18.46358     2.631872         14          24
```

```
   Age 2 |
categories |      Freq.      Percent         Cum.
-----------+-----------------------------------
 1. 14-17 |       505+        48.93        48.93
 2. 18-24 |       527+        51.07       100.00
-----------+-----------------------------------
    Total |      1,032       100.00
```

*age was calculated using date of birth and interview date. Missing values indicate a date of birth was not provided.
+Age group was determined using screening questions.

Gender

```
    Demographics: Gender |
              identity |     Freq.      Percent        Cum.
-----------------------+----------------------------------
              1. Male |      550        53.29        53.29
            2. Female |      472        45.74        99.03
   3. Transgender male |        2         0.19        99.22
 5. Gender non-conforming |    4         0.39        99.61
6. Another gender identity |    2         0.19        99.81
            9. REFUSED |        2         0.19       100.00
-----------------------+----------------------------------
                 Total |    1,032       100.00
```

Race

```
          Demographics:  Race |  Freq.      Percent        Cum.
-------------------------------+----------------------------------
1. American Indian/Native American |  17       1.65         1.65
       2.  Asian/Pacific Islander |    28       2.71         4.36
     3. Black/African American |      95       9.21        13.57
            4. White/Caucasian |     784      75.97        89.53
         5. Bi-/Multi-Racial |        64       6.20        95.74
                   6. Other |        27       2.62        98.35
     7. Don't know/remember |         7       0.68        99.03
              9. Refused |          10       0.97       100.00
-------------------------------+----------------------------------
                   Total |      1,032       100.00
```

Hispanic Ethnicity

```
      Hispanic/Latino |
           ethnicity |     Freq.      Percent        Cum.
---------------------+----------------------------------
             0. No |       888        86.05        86.05
            1. Yes |       140        13.57        99.61
7. Don't know/remember |     4         0.39       100.00
---------------------+----------------------------------
               Total |     1,032       100.00
```

Socioeconomic Status

```
    Demographics:  Mother's education |     Freq.      Percent        Cum.
---------------------------------------+----------------------------------
             1. HS diploma or less |       237        23.47        23.47
2.  Tech/CC degree or some 4yr college |   234        23.17        46.63
            3.  4yr college degree |       336        33.27        79.90
      4.  Some grad school or beyond |     203        20.10       100.00
---------------------------------------+----------------------------------
                         Total |       1,010*       100.00

    Demographics:  Father's education |     Freq.      Percent        Cum.
---------------------------------------+----------------------------------
             1. HS diploma or less |         7        50.00        50.00
2.  Tech/CC degree or some 4yr college |     5        35.71        85.71
            3.  4yr college degree |         2        14.29       100.00
---------------------------------------+----------------------------------
                         Total |         14**       100.00
```

*22 respondents either did not know their mother/have a female guardian, refused to answer, or did not remember their mother's education.
**8 respondents either did not know their father/have a male guardian, refused to answer, or did not remember their father's education.
Note: we only asked about father's education if we did not collect an answer about mother's education.

Sexual Orientation

```
Demographics:  Sexual |
        orientation |     Freq.      Percent        Cum.
---------------------+---------------------------------
        1. Straight |       932        90.31       90.31
      2. Homosexual |        24         2.33       92.64
        3. Bisexual |        56         5.43       98.06
           4. Other |         9         0.87       98.93
7. Don't know/remember |       6         0.58       99.52
         9. Refused |         5         0.48      100.00
---------------------+---------------------------------
              Total |     1,032       100.00
```

Disability

```
Demographics:  Visible |
         disability |     Freq.      Percent        Cum.
---------------------+---------------------------------
             0. No |       996        96.51       96.51
            1. Yes |        34         3.29       99.81
7. Don't know/remember |       1         0.10       99.90
         9. Refused |         1         0.10      100.00
---------------------+---------------------------------
              Total |     1,032       100.00
```

Education

```
Demographics:  Student |
  at time of interview |     Freq.      Percent        Cum.
---------------------+---------------------------------
             0. No |       208        20.16       20.16
            1. Yes |       823        79.75       99.90
         9. Refused |         1         0.10      100.00
---------------------+---------------------------------
              Total |     1,032       100.00
```

```
Demographics:  School |
             level |     Freq.      Percent        Cum.
---------------------+---------------------------------
1. High/middle school |       510        61.97       61.97
         2. Tech/CC |        90        10.94       72.90
     3. 4yr college |       194        23.57       96.48
     4. Grad school |        24         2.92       99.39
          5. Other |         5         0.61      100.00
---------------------+---------------------------------
              Total |       823       100.00
```

```
Demographics:  HS |
             grade |     Freq.      Percent        Cum.
---------------------+---------------------------------
   1. 8th/9th grade |        39         7.66        7.66
     2. 10th grade |        69        13.56       21.22
     3. 11th grade |       188        36.94       58.15
     4. 12th grade |       213        41.85      100.00
---------------------+---------------------------------
              Total |       509       100.00
```

```
Demographics:  College |
             grade |     Freq.      Percent        Cum.
---------------------+---------------------------------
     1.  Freshman |        57        29.53       29.53
    2.  Sophomore |        42        21.76       51.30
       3.  Junior |        43        22.28       73.58
       4.  Senior |        51        26.42      100.00
---------------------+---------------------------------
              Total |       193       100.00
```

```
 Demographics: FT/PT |
    College students |
              only |      Freq.      Percent         Cum.
---------------------+---------------------------------
    1.  Full-time |       256        83.66        83.66
    2.  Part-time |        50        16.34       100.00
---------------------+---------------------------------
           Total |       306       100.00
```

```
    Demographics:  Highest level of |
             Education achieved |      Freq.      Percent         Cum.
----------------------------------------+---------------------------------
           1. HS diploma or less |        90        43.90        43.90
2.   Tech/CC degree or some 4yr college |        55        26.83        70.73
            3.   4yr college degree |        55        26.83        97.56
      4.   Some grad school or beyond |         5         2.44       100.00
----------------------------------------+---------------------------------
                        Total |       205       100.00
```

Employment Characteristics

Number of jobs held in prior 12 months

```
 Work history: |
Number of jobs |
  held in past |
    12 months |      Freq.      Percent         Cum.
---------------+---------------------------------
           1 |       609        59.01        59.01
           2 |       311        30.14        89.15
           3 |        90         8.72        97.87
           4 |        22         2.13       100.00
---------------+---------------------------------
        Total |     1,032       100.00
```

Referent Job

This variable is being coded.

Referent Industry

This variable is being coded.

Job Tenure
The tabulation of job tenure is lengthy and coding is ongoing, therefore we opted not to include these results at this point.

Weekly Hours Worked
The below raw data show how many hours respondents worked per week in the referent job at the time of the interview.
```
     Risk |
  factors: |
   Weekly |
   hours |      Freq.      Percent         Cum.
------------+---------------------------------
        1 |        1         0.10         0.10
        2 |        6         0.58         0.68
        3 |        7         0.68         1.36
        4 |        9         0.87         2.24
        5 |       17         1.65         3.89
        6 |       18         1.75         5.64
        7 |       20         1.94         7.58
        8 |       37         3.60        11.18
```

```
          9 |          6        0.58       11.76
         10 |         55        5.34       17.10
         11 |          3        0.29       17.40
         12 |         50        4.86       22.25
         13 |          5        0.49       22.74
         14 |         10        0.97       23.71
         15 |         87        8.45       32.17
         16 |         24        2.33       34.50
         17 |          9        0.87       35.37
         18 |         13        1.26       36.64
         19 |          4        0.39       37.03
         20 |        126       12.24       49.27
         21 |          6        0.58       49.85
         22 |          7        0.68       50.53
         24 |         14        1.36       51.90
         25 |         77        7.48       59.38
         26 |          2        0.19       59.57
         27 |          2        0.19       59.77
         28 |          9        0.87       60.64
         29 |          2        0.19       60.84
         30 |         94        9.14       69.97
         32 |         17        1.65       71.62
         33 |          2        0.19       71.82
         34 |          3        0.29       72.11
         35 |         47        4.57       76.68
         36 |         12        1.17       77.84
         37 |          1        0.10       77.94
         38 |          7        0.68       78.62
         40 |        137       13.31       91.93
         41 |          1        0.10       92.03
         42 |          4        0.39       92.42
         43 |          3        0.29       92.71
         45 |         21        2.04       94.75
         46 |          2        0.19       94.95
         47 |          1        0.10       95.04
         50 |         19        1.85       96.89
         55 |          6        0.58       97.47
         60 |         12        1.17       98.64
         65 |          4        0.39       99.03
         70 |          3        0.29       99.32
         75 |          1        0.10       99.42
         80 |          1        0.10       99.51
         84 |          2        0.19       99.71
         90 |          1        0.10       99.81
         98 |          1        0.10       99.90
        140 |          1        0.10      100.00
------------+-------------------------------
      Total |      1,029      100.00
```

Worked for their Parents

```
   Referent job:  Risk |
    factors:  Parents' |
            business |      Freq.      Percent        Cum.
---------------------+-------------------------------
            0. No |        994        96.32       96.32
           1. Yes |         37         3.59       99.90
7. Don't know/remember |      1         0.10      100.00
---------------------+-------------------------------
            Total |      1,032      100.00
```

AIM 1: Estimate the prevalence of workplace violence victimization among young workers and characterize cases with regard to worker- (e.g., gender), employment- (e.g., occupation) and event-characteristics (e.g., injured, location of event, perpetrator)

Prevalence

Workplace Violence Victimization

The overall 12-month prevalence of workplace violence (all types) was 57% (n=584). This figure does not include instances of the additional bullying behaviors (see below).

Workplace Violence Victimization by Form

The 12-month prevalence of workplace violence by form of violence is as follows: verbal abuse = 50% (n=516); sexual harassment = 22% (n=223); threats = 15% (n=150); physical attacks = 7% (n=67); and sexual assault = 5% (n=54).

Demographic Differences

Women (66%, p=<0.001) and emerging adults (ages 18-24, p=0.006) (61%) were more likely to be victimized compared to males (48%) and those in middle adolescents 14-17 (52%). In addition, gay/lesbian/bi-sexual youth (73%, p=0.003) were more likely to be victimized than their heterosexual counterparts (56%). No significant differences were found by race (p=0.555) or Hispanic ethnicity (p=0.074).

Bullying

The data below show how many victims of each form of violence, believed the violence was being done to bully them. This information was only collected for respondents who reported a form of violence had happened to them multiple times in the referent period.

Workplace Violence Done to Bully

```
      Sex harassment: |
Multi:  Meant to bully |      Freq.      Percent        Cum.
---------------------+------------------------------------
               0. No |        97        78.86        78.86
              1. Yes |        22        17.89        96.75
7. Don't know/remember |       4         3.25       100.00
---------------------+------------------------------------
               Total |       123       100.00


 Verbal abuse:  Multi: |
      Meant to bully |      Freq.      Percent        Cum.
---------------------+------------------------------------
               0. No |       133        41.30        41.30
              1. Yes |       180        55.90        97.20
7. Don't know/remember |       9         2.80       100.00
---------------------+------------------------------------
               Total |       322       100.00


    Threats:  Multi: |
      Meant to bully |      Freq.      Percent        Cum.
---------------------+------------------------------------
               0. No |        17        26.15        26.15
              1. Yes |        45        69.23        95.38
7. Don't know/remember |       3         4.62       100.00
---------------------+------------------------------------
               Total |        65       100.00
```

```
          Sexual assault: |
Multi:  Meant to bully |       Freq.      Percent        Cum.
--------------------+-------------------------------------
            0. No |           9        64.29        64.29
            1. Yes |          5        35.71       100.00
--------------------+-------------------------------------
            Total |          14       100.00

        Physical attack: |
Multi:  Meant to bully |       Freq.      Percent        Cum.
--------------------+-------------------------------------
            0. No |          14        48.28        48.28
            1. Yes |         15        51.72       100.00
--------------------+-------------------------------------
            Total |          29       100.00
```

Additional Bullying Behaviors

The below data show the 12-month prevalence of additional bullying behaviors perpetrated by supervisors and co-workers, separately.

```
  Co-work bully:  ANY |
      type in ANY job |
            (no/yes) |       Freq.      Percent        Cum.
--------------------+-------------------------------------
            0. No |         576        56.42        56.42
            1. Yes |        445        43.58       100.00
--------------------+-------------------------------------
            Total |       1,021       100.00

Super bully:  ANY type |
  in ANY job (no/yes) |       Freq.      Percent        Cum.
--------------------+-------------------------------------
            0. No |         601        58.75        58.75
            1. Yes |        422        41.25       100.00
--------------------+-------------------------------------
            Total |       1,023       100.00
```

The proportions of respondents who reported experiencing each co-worker bullying behavior are as follows:

Your co-workers…
give you the worst things to do = 22.1% (n=228)
criticize your work unfairly = 19.2% (n=198)
put you down or belittle you = 17.6% (n=182)
tease or make fun of you = 15.4% (n=159)
humiliate you in front of others = 11% (n=114)
spread rumors about you = 10.3 (n=106)
exclude you from the group = 9.5% (n=98)

The proportions of respondents who reported experiencing each supervisor bullying behavior are as follows:

Your supervisor…
puts pressure on you = 19.3% (n=166)
schedules you unfairly = 18.3% (n=189)
cuts your hours unfairly = 15.6% (n=161)
gives you the worst stuff to do = 15.2% (n=157)
criticize your work unfairly = 14.7% (n=152)
forces you to work overtime = 13.9% (n=143)
assigns tasks that are beyond your ability = 11.4% (n=118)

<u>Social Media Used</u>

The 12-month prevalence of workplace violence performed via social media (e.g., facebook, snapchat) was 16.6%. This includes only the forms of workplace violence we investigated that could be performed via social media (*sexual harassment and threats).* The 12-month prevalence of sexual harassment via social media was 22% and the 12-month prevalence of threats via social media was 8.7%.

Event Characteristics

There were 584 instances of workplace violence reported in the 12-month study period. Below are the characteristics of the most recent events reported by respondents.

<u>Victim Characteristics (at time of last event)</u>

Event: Age	Freq.	Percent	Cum.
14	13	2.23	2.23
15	39	6.68	8.90
16	132	22.60	31.51
17	114	19.52	51.03
18	69	11.82	62.84
19	44	7.53	70.38
20	39	6.68	77.05
21	44	7.53	84.59
22	40	6.85	91.44
23	33	5.65	97.09
24	17	2.91	100.00
Total	584	100.00	

Event: Student status	Freq.	Percent	Cum.
0. No	122	20.89	20.89
1. Yes	461	78.94	99.83
7. Don't know/remember	1	0.17	100.00
Total	584	100.00	

Event: School grade (9 categories)	Freq.	Percent	Cum.
1. 9th grade	21	4.58	4.58
2. 10th grade	71	15.47	20.04
3. 11th grade	111	24.18	44.23
4. 12th grade	98	21.35	65.58
5. Freshman in college	49	10.68	76.25
. Sophomore in college	39	8.50	84.75
7. Junior in college	33	7.19	91.9
8. Senior in college	28	6.10	98.04
9. In graduate school	9	1.96	100.00
Total	459*	100.00	

*data missing for 2 respondents.

<u>Employment Characteristics (at time of last incident)</u>

Job Type

The tabulation of job type is lengthy and coding is ongoing, therefore we opted not to include these results at this point.

Industry

The tabulation of industry is lengthy and coding is ongoing, therefore we opted not to include these results at this point.

Event Details

Perpetrators

```
      Event:  Perp(s):  |
      SUPERVISOR   (not  |
  mutually exclusive)  |       Freq.      Percent         Cum.
---------------------+---------------------------------
             0. No  |        467        79.97        79.97
            1. Yes  |        114        19.52        99.49
7. Don't know/remember  |          1         0.17        99.66
         9. Refused  |          2         0.34       100.00
---------------------+---------------------------------
             Total  |        584       100.00
```

```
      Event:  Perp(s):  |
      CO-WORKER (not  |
  mutually exclusive)  |       Freq.      Percent         Cum.
---------------------+---------------------------------
             0. No  |        382        65.41        65.41
            1. Yes  |        197        33.73        99.14
7. Don't know/remember  |          3         0.51        99.66
         9. Refused  |          2         0.34       100.00
---------------------+---------------------------------
             Total  |        584       100.00
```

```
      Event:  Perp(s):  |
      CUSTOMER   (not  |
  mutually exclusive)  |       Freq.      Percent         Cum.
---------------------+---------------------------------
             0. No  |        275        47.09        47.09
            1. Yes  |        307        52.57        99.66
         9. Refused  |          2         0.34       100.00
---------------------+---------------------------------
             Total  |        584       100.00
```

```
      Event:  Perp(s):  |
INTIMATE PARTNER  (not  |
  mutually exclusive)  |       Freq.      Percent         Cum.
---------------------+---------------------------------
             0. No  |        569        97.43        97.43
            1. Yes  |         13         2.23        99.66
         9. Refused  |          2         0.34       100.00
---------------------+---------------------------------
             Total  |        584       100.00
```

```
 Event:  Perp(s):  OTHER  |
  (no/yes) (not mutually  |
          exclusive)  |       Freq.      Percent         Cum.
---------------------+---------------------------------
             0. No  |        556        95.21        95.21
  1. One other person  |         21         3.60        98.80
2. Multiple other people  |          4         0.68        99.49
 7. Don't know/remember  |          1         0.17        99.66
         9. Refused  |          2         0.34       100.00
---------------------+---------------------------------
             Total  |        584       100.00
```

Time of Day

```
     Event: |
Time of day |       Freq.      Percent        Cum.
------------+------------------------------------
     010000 |          2         0.36         0.36
     013000 |          1         0.18         0.55
     020000 |          1         0.18         0.73
     030000 |          1         0.18         0.91
     040000 |          1         0.18         1.09
     050000 |          2         0.36         1.45
     053000 |          1         0.18         1.64
     060000 |          3         0.55         2.18
     070000 |          1         0.18         2.36
     080000 |         11         2.00         4.36
     083000 |          2         0.36         4.73
     090000 |          6         1.09         5.82
     091300 |          1         0.18         6.00
     091500 |          1         0.18         6.18
     093000 |          2         0.36         6.55
     094000 |          1         0.18         6.73
     100000 |         21         3.82        10.55
     103000 |          2         0.36        10.91
     104000 |          1         0.18        11.09
     110000 |         17         3.09        14.18
     113000 |          7         1.27        15.45
     114500 |          2         0.36        15.82
     115900 |          1         0.18        16.00
     120000 |          7         1.27        17.27
     121200 |          1         0.18        17.45
     130000 |         57        10.36        27.82
     133000 |          8         1.45        29.27
     140000 |         38         6.91        36.18
     143000 |          2         0.36        36.55
     150000 |         49         8.91        45.45
     153000 |          2         0.36        45.82
     160000 |         25         4.55        50.36
     162000 |          1         0.18        50.55
     162600 |          1         0.18        50.73
     163000 |          8         1.45        52.18
     164500 |          1         0.18        52.36
     170000 |         38         6.91        59.27
     173000 |         11         2.00        61.27
     180000 |         54         9.82        71.09
     181500 |          1         0.18        71.27
     183000 |          9         1.64        72.91
     184500 |          1         0.18        73.09
     190000 |         37         6.73        79.82
     193000 |         10         1.82        81.64
     200000 |         40         7.27        88.91
     201500 |          1         0.18        89.09
     203000 |          1         0.18        89.27
     210000 |         15         2.73        92.00
     213000 |          6         1.09        93.09
     214500 |          2         0.36        93.45
     220000 |         21         3.82        97.27
     223000 |          5         0.91        98.18
     224500 |          1         0.18        98.36
     230000 |          5         0.91        99.27
     233000 |          3         0.55        99.82
     235900 |          1         0.18       100.00
------------+------------------------------------
      Total |        550       100.00
```

23

Location

The tabulation of location is lengthy and coding is ongoing, therefore did not include these results at this point.
Weapons Used

The data below show how many respondents reported the perpetrator used a weapon and what type(s).

```
      Event:  Weapons: |
              No/yes |      Freq.       Percent         Cum.
---------------------+---------------------------------
             0. No  |       572         97.95         97.95
             1. Yes |        11          1.88         99.83
7. Don't know/remember |      1          0.17        100.00
---------------------+---------------------------------
             Total  |       584        100.00
```

```
                  Event:  Weapons: 1st |      Freq.        Percent         Cum.
-----------------------------------+---------------------------------
                          2 by 4 |         1          9.09          9.09
                             Gun |         1          9.09         18.18
            Gun: long rifle (AR-15) |       1          9.09         27.27
                   Kitchen knife |         1          9.09         36.36
                           Knife |         2         18.18         54.55
Knife. Could've had more, but they on.. |   1     9.09         63.64
                        Scissors |         1          9.09         72.73
                  Shampoo bottle |         1          9.09         81.82
         Spoon and pointed it at me |        1          9.09         90.91
                           Taser |         1          9.09        100.00
-----------------------------------+---------------------------------
                           Total |        11        100.00
```

```
          Event:  Weapons: 2nd |      Freq.       Percent         Cum.
-------------------------------+---------------------------------
                       Clamps |         1         25.00         25.00
                        Knife |         1         25.00         50.00
                         Pipe |         1         25.00         75.00
Shank made out of a popsicle stick |    1         25.00        100.00
-------------------------------+---------------------------------
                        Total |         4        100.00
```

```
  Event:  Weapons: 3rd |      Freq.       Percent         Cum.
-----------------------+---------------------------------
Gun, but never drew it |         1         50.00         50.00
              Hammers |          1         50.00        100.00
-----------------------+---------------------------------
                Total |          2        100.00
```

Resistance

The data below show whether respondents did anything to resist and if so, did they feel their actions helped the situation or made it worse.

```
   Event:  Resistance: |
             No/Yes |      Freq.       Percent         Cum.
---------------------+---------------------------------
            0. No  |        333         57.02         57.02
            1. Yes |        249         42.64         99.66
7. Don't know/remember |       2          0.34        100.00
---------------------+---------------------------------
            Total  |        584        100.00
```

```
   Event:  Resistance: |
 Helped or made worse |        Freq.        Percent         Cum.
----------------------+---------------------------------------
            1. Helped |          157          63.05         63.05
       2. Made it worse |         55          22.09         85.14
  7. Don't know/remember |        36          14.46         99.60
            9. Refused |            1           0.40        100.00
----------------------+---------------------------------------
                Total |          249         100.00
```

The tabulation of what respondents did to resist is lengthy and coding is ongoing, therefore we opted not to include these results at this point.

Training Used

The data below show how many respondents reported they used some kind of employer provided training during the last event in which they were victimized.

```
Event: Training was used |
              (no/yes) |        Freq.        Percent         Cum.
----------------------+---------------------------------------
                0. No |          405          69.35         69.35
               1. Yes |          170          29.11         98.46
  7. Don't know/remember |         8           1.37         99.83
            9. Refused |            1           0.17        100.00
----------------------+---------------------------------------
                Total |          584         100.00
```

The tabulation of the specific training used is lengthy and coding is ongoing, therefore we opted not to include these results at this point.

Reporting

The data below show how many respondents reported the last event during which they were victimized, to whom they reported the event, and the actions taken by each person to whom they reported the event.

```
   Event:  Reporting: |
                No/Yes |        Freq.        Percent         Cum.
----------------------+---------------------------------------
                0. No |          143          24.49         24.49
               1. Yes |          438          75.00         99.49
  7. Don't know/remember |         3           0.51        100.00
----------------------+---------------------------------------
                Total |          584         100.00


   Event:  Reporting: |
        Told supervisor |        Freq.        Percent         Cum.
----------------------+---------------------------------------
                0. No |          136          31.05         31.05
               1. Yes |          302          68.95        100.00
----------------------+---------------------------------------
                Total |          438         100.00


   Event:  Reporting: |
       Told co-worker(s) |       Freq.        Percent         Cum.
----------------------+---------------------------------------
                0. No |           97          22.15         22.15
               1. Yes |          340          77.63         99.77
  7. Don't know/remember |         1           0.23        100.00
----------------------+---------------------------------------
                Total |          438         100.00
```

```
      Event:  Reporting: |
         Told security |       Freq.       Percent          Cum.
----------------------+---------------------------------
               0. No |        408         93.15         93.15
              1. Yes |         27          6.16         99.32
7. Don't know/remember |          2          0.46         99.77
           9. Refused |          1          0.23        100.00
----------------------+---------------------------------
                Total |        438        100.00


      Event:  Reporting: |
        Told parent(s) |       Freq.       Percent          Cum.
----------------------+---------------------------------
               0. No |        180         41.10         41.10
              1. Yes |        251         57.31         98.40
7. Don't know/remember |          7          1.60        100.00
----------------------+---------------------------------
                Total |        438        100.00


      Event:  Reporting: |
Told someone at school |       Freq.       Percent          Cum.
----------------------+---------------------------------
               0. No |        404         92.24         92.24
              1. Yes |         34          7.76        100.00
----------------------+---------------------------------
                Total |        438        100.00


      Event:  Reporting: |
         Told medical |
         professional |       Freq.       Percent          Cum.
----------------------+---------------------------------
               0. No |        415         94.75         94.75
              1. Yes |         23          5.25        100.00
----------------------+---------------------------------
                Total |        438        100.00


      Event:  Reporting: |
       Told the police |       Freq.       Percent          Cum.
----------------------+---------------------------------
               0. No |        418         95.43         95.43
              1. Yes |         20          4.57        100.00
----------------------+---------------------------------
                Total |        438        100.00


      Event:  Reporting: |
         Told friend(s) |       Freq.       Percent          Cum.
----------------------+---------------------------------
               0. No |        139         31.74         31.74
              1. Yes |        297         67.81         99.54
7. Don't know/remember |          2          0.46        100.00
----------------------+---------------------------------
                Total |        438        100.00


      Event:  Reporting: |
    Told other (no/yes) |       Freq.       Percent          Cum.
----------------------+---------------------------------
               0. No |        382         87.21         87.21
              1. Yes |         55         12.56         99.77
7. Don't know/remember |          1          0.23        100.00
----------------------+---------------------------------
                Total |        438        100.00
```

The tabulations of actions taken by each person to whom the event was reported are lengthy and coding is ongoing, therefore we opted not to include these results at this point.

Injury and severity

The data below show how many respondents reported they were injured during the last event when they were victimized, the type of injury sustained, and the severity of the injury.

```
       Injured:  No/Yes |      Freq.      Percent          Cum.
---------------------+---------------------------------
               0. No |        564        96.58         96.58
              1. Yes |         19         3.25         99.83
7. Don't know/remember |          1         0.17        100.00
---------------------+---------------------------------
               Total |        584       100.00
```

```
                      Injured:  Type |     Freq.      Percent          Cum.
-----------------------------------+---------------------------------
  A black eye, bleeding from the mouth |          1         5.26          5.26
           A bruise on each of my hips |          1         5.26         10.53
                   A bruise on my arm |          1         5.26         15.79
                    A couple bruises. |          1         5.26         21.05
                             Bruises |          1         5.26         26.32
           Couple cuts and a bruise |          1         5.26         31.58
                   Cuts and bruises |          1         5.26         36.84
          Cuts down my arm and triceps |          1         5.26         42.11
            I cut part of my thumb off. |          1         5.26         47.37
                     I got a bruise. |          1         5.26         52.63
 I got a small cut on my arm, but that.. |          1         5.26         57.89
 I had a hurt wrist and having to go f.. |          1         5.26         63.16
                 I just had a scratch |          1         5.26         68.42
                       Just a bruise |          1         5.26         73.68
                        Just bruises |          1         5.26         78.95
No lasting injuries, but the guy grab.. |          1         5.26         84.21
She fractured my eye socket, she cut .. |          1         5.26         89.47
So… like we work fast on the weekends.. |          1         5.26         94.74
[I] developed a rash. [It kept the re.. |          1         5.26        100.00
-----------------------------------+---------------------------------
                             Total |         19       100.00
```

```
 Injured:    Severity: |
    Required medical |
          attention |     Freq.      Percent          Cum.
---------------------+---------------------------------
               0. No |         17        89.47         89.47
              1. Yes |          2        10.53        100.00
---------------------+---------------------------------
               Total |         19       100.00
 Injured:    Severity: |
    Missed ≥1 days |
       work/school |     Freq.      Percent          Cum.
---------------------+---------------------------------
               0. No |         17        89.47         89.47
              1. Yes |          2        10.53        100.00
---------------------+---------------------------------
               Total |         19       100.00
```

```
 Injured:    Severity: |
       Social/civic |
   activities limited |
          (no/yes) |     Freq.      Percent          Cum.
---------------------+---------------------------------
               0. No |         18        94.74         94.74
              1. Yes |          1         5.26        100.00
---------------------+---------------------------------
               Total |         19       100.00
```

Mental Health Impacts

The data below show the mental health impacts experienced by respondents after they were last victimized and the severity of these impacts.

```
Mental health:  Stress |
            increased |      Freq.       Percent         Cum.
----------------------+----------------------------------------
               0. No  |        345         59.08         59.08
               1. Yes |        238         40.75         99.83
7. Don't know/remember |          1          0.17        100.00
----------------------+----------------------------------------
                Total |        584        100.00


       Mental health: |
    Anxiety increased |      Freq.       Percent         Cum.
----------------------+----------------------------------------
               0. No  |        357         61.13         61.13
               1. Yes |        226         38.70         99.83
7. Don't know/remember |          1          0.17        100.00
----------------------+----------------------------------------
                Total |        584        100.00


       Mental health: |
  Insecurity increased |      Freq.       Percent         Cum.
----------------------+----------------------------------------
               0. No  |        432         73.97         73.97
               1. Yes |        152         26.03        100.00
----------------------+----------------------------------------
                Total |        584        100.00


       Mental health: |
  Depression increased |      Freq.       Percent         Cum.
----------------------+----------------------------------------
               0. No  |        515         88.18         88.18
               1. Yes |         68         11.64         99.83
7. Don't know/remember |          1          0.17        100.00
----------------------+----------------------------------------
                Total |        584        100.00


       Mental health: |
 Confidence/self-esteem |
            decreased |      Freq.       Percent         Cum.
----------------------+----------------------------------------
               0. No  |        457         78.25         78.25
               1. Yes |        127         21.75        100.00
----------------------+----------------------------------------
                Total |        584        100.00
       Mental health: |
    Distrust of people |
            increased |      Freq.       Percent         Cum.
----------------------+----------------------------------------
               0. No  |        462         79.11         79.11
               1. Yes |        122         20.89        100.00
----------------------+----------------------------------------
                Total |        584        100.00


       Mental health: |
 Thoughts of suicide up|      Freq.       Percent         Cum.
----------------------+----------------------------------------
               0. No  |        576         98.63         98.63
               1. Yes |          6          1.03         99.66
7. Don't know/remember |          1          0.17         99.83
          9. Refused  |          1          0.17        100.00
----------------------+----------------------------------------
                Total |        584        100.00
```

```
    Mental health:  Sleep |
   problems/nightmares |
             increased |      Freq.     Percent        Cum.
----------------------+----------------------------------
                0. No |        557       95.38       95.38
               1. Yes |         27        4.62      100.00
----------------------+----------------------------------
                Total |        584      100.00


       Mental health: |
  Self-injuring/cutting |
             increased |      Freq.     Percent        Cum.
----------------------+----------------------------------
                0. No |        579       99.14       99.14
               1. Yes |          5        0.86      100.00
----------------------+----------------------------------
                Total |        584      100.00


 Mental health:  Eating |
        habits changed |      Freq.     Percent        Cum.
----------------------+----------------------------------
                0. No |        556       95.21       95.21
               1. Yes |         27        4.62       99.83
7. Don't know/remember |          1        0.17      100.00
----------------------+----------------------------------
                Total |        584      100.00


       Mental health: |
        Alcohol/drug use |
             increased |      Freq.     Percent        Cum.
----------------------+----------------------------------
                0. No |        564       96.58       96.58
               1. Yes |         20        3.42      100.00
----------------------+----------------------------------
                Total |        584      100.00


 Mental health:  Other |
              problems |
       occured(no/yes) |      Freq.     Percent        Cum.
----------------------+----------------------------------
                0. No |        554       94.86       94.86
               1. Yes |         30        5.14      100.00
----------------------+----------------------------------
                Total |        584      100.00


       Mental health: |
     Severity:  Sought |
    psychological help |      Freq.     Percent        Cum.
----------------------+----------------------------------
                0. No |        337       94.40       94.40
               1. Yes |         20        5.60      100.00
----------------------+----------------------------------
                Total |        357      100.00


       Mental health: |
  Severity:  Missed ≥1 |
       days work/school |      Freq.     Percent        Cum.
----------------------+----------------------------------
                0. No |        327       91.60       91.60
               1. Yes |         29        8.12       99.72
7. Don't know/remember |          1        0.28      100.00
----------------------+----------------------------------
                Total |        357      100.00
```

AIM 2: Identify risk factors for workplace violence victimization among young workers.

The data below show the frequency with which respondents reported being exposed to each risk factor.

Risk Factor Exposures

```
    Referent job:  Risk |
      factors:  Worked |
       Late at night |       Freq.       Percent          Cum.
---------------------+----------------------------------------
          0. Never |        584         56.59         56.59
       1. Sometimes |        332         32.17         88.76
          2. Always |        115         11.14         99.90
7. Don't know/remember |       1          0.10        100.00
---------------------+----------------------------------------
              Total |      1,032        100.00
```

```
    Referent job:  Risk |
        factors:  No |
   supervisor on site |       Freq.       Percent          Cum.
---------------------+----------------------------------------
          0. Never |        586         56.78         56.78
       1. Sometimes |        292         28.29         85.08
          2. Always |        153         14.83         99.90
         9. Refused |          1          0.10        100.00
---------------------+----------------------------------------
              Total |      1,032        100.00
```

```
    Referent job:  Risk |
      factors:  Worked |
       totally alone |       Freq.       Percent          Cum.
---------------------+----------------------------------------
          0. Never |        814         78.88         78.88
       1. Sometimes |        171         16.57         95.45
          2. Always |         47          4.55        100.00
---------------------+----------------------------------------
              Total |      1,032        100.00
```

```
    Referent job:  Risk |
      factors:  Public |
           contact |       Freq.       Percent          Cum.
---------------------+----------------------------------------
          0. Never |         73          7.07          7.07
       1. Sometimes |        195         18.90         25.97
          2. Always |        764         74.03        100.00
---------------------+----------------------------------------
              Total |      1,032        100.00
    Referent job:  Risk |
      factors:  Cash |
           handling |       Freq.       Percent          Cum.
---------------------+----------------------------------------
          0. Never |        520         50.39         50.39
       1. Sometimes |        163         15.79         66.18
          2. Always |        348         33.72         99.90
         9. Refused |          1          0.10        100.00
---------------------+----------------------------------------
              Total |      1,032        100.00
```

```
    Referent job:  Risk |
    factors:  Vehicle to |
      make deliveries |       Freq.       Percent          Cum.
---------------------+----------------------------------------
          0. Never |        924         89.53         89.53
       1. Sometimes |         73          7.07         96.61
          2. Always |         34          3.29         99.90
7. Don't know/remember |       1          0.10        100.00
---------------------+----------------------------------------
              Total |      1,032        100.00
```

```
       Referent job:  Risk |
          factors:  Worked |
              after dark |      Freq.      Percent        Cum.
---------------------+----------------------------------
              0. Never |       240        23.26        23.26
          1. Sometimes |       497        48.16        71.41
            2. Always |       295        28.59       100.00
---------------------+----------------------------------
               Total |     1,032       100.00


       Referent job:  Risk |
          factors:  Worked |
            at fast pace |      Freq.      Percent        Cum.
---------------------+----------------------------------
              0. Never |       157        15.21        15.21
          1. Sometimes |       532        51.55        66.76
            2. Always |       342        33.14        99.90
7. Don't know/remember |         1         0.10       100.00
---------------------+----------------------------------
               Total |     1,032       100.00


       Referent job:  Risk |
      factors:  Feared crime |      Freq.      Percent        Cum.
---------------------+----------------------------------
              0. Never |       815        78.97        78.97
          1. Sometimes |       193        18.70        97.67
            2. Always |        23         2.23        99.90
7. Don't know/remember |         1         0.10       100.00
---------------------+----------------------------------
               Total |     1,032       100.00


       Referent job:  Risk |
          factors:  Alcohol |
            served on site |      Freq.      Percent        Cum.
---------------------+----------------------------------
               0. No |       860        83.33        83.33
               1. Yes |       170        16.47        99.81
7. Don't know/remember |         2         0.19       100.00
---------------------+----------------------------------
               Total |     1,032       100.00
```

Protective Factor Exposures

Below are descriptive statistics on supervisor support and co-worker support, which we view as potential protective factors. Scales of support using these measures are forthcoming.

<u>Supervisor Support</u>

```
         Referent job: |
    Supervisor:  Hostile |
            toward you |      Freq.      Percent        Cum.
---------------------+----------------------------------
 1.   Strongly disagree |       625        60.56        60.56
           2. Disagree |       272        26.36        86.92
              3. Agree |        98         9.50        96.41
      4. Strongly agree |        29         2.81        99.22
7. Don't know/remember |         3         0.29        99.52
            9. Refused |         5         0.48       100.00
---------------------+----------------------------------
               Total |     1,032       100.00
```

```
              Referent job: |
         Supervisor:  Paid |
       attention to what you |
                      said |      Freq.      Percent          Cum.
    ---------------------+---------------------------------
    1.  Strongly disagree |         32         3.10          3.10
           2. Disagree |         62         6.01          9.11
              3. Agree |        394        38.18         47.29
       4. Strongly agree |        539        52.23         99.52
    7. Don't know/remember |          2         0.19         99.71
           9. Refused |          3         0.29        100.00
    ---------------------+---------------------------------
                 Total |      1,032        100.00


              Referent job: |
         Supervisor:  Helpful |
        in getting the job |
                      done |      Freq.      Percent          Cum.
    ---------------------+---------------------------------
    1.  Strongly disagree |         43         4.17          4.17
           2. Disagree |         96         9.30         13.47
              3. Agree |        407        39.44         52.91
       4. Strongly agree |        480        46.51         99.42
    7. Don't know/remember |          3         0.29         99.71
           9. Refused |          3         0.29        100.00
    ---------------------+---------------------------------
                 Total |      1,032        100.00


              Referent job: |
       Supervisor:  Concerned |
           about workers' |
               well-being |      Freq.      Percent          Cum.
    ---------------------+---------------------------------
    1.  Strongly disagree |         22         2.13          2.13
           2. Disagree |         75         7.27          9.40
              3. Agree |        287        27.81         37.21
       4. Strongly agree |        639        61.92         99.13
    7. Don't know/remember |          5         0.48         99.61
           9. Refused |          4         0.39        100.00
    ---------------------+---------------------------------
                 Total |      1,032        100.00
```

Co-worker Support

```
              Referent job: |
        Coworkers:  Hostile |
              toward you |      Freq.      Percent          Cum.
    ---------------------+---------------------------------
    1.  Strongly disagree |        562        54.46         54.46
           2. Disagree |        318        30.81         85.27
              3. Agree |        116        11.24         96.51
       4. Strongly agree |         30         2.91         99.42
    7. Don't know/remember |          3         0.29         99.71
           9. Refused |          3         0.29        100.00
    ---------------------+---------------------------------
                 Total |      1,032        100.00
```

```
            Referent job: |
  Coworkers:  Friendly |
         toward you |     Freq.     Percent        Cum.
---------------------+---------------------------------
 1.  Strongly disagree |        3        0.29        0.29
        2. Disagree |       36        3.49        3.78
           3. Agree |      392       37.98       41.76
   4. Strongly agree |      594       57.56       99.32
7. Don't know/remember |        4        0.39       99.71
         9. Refused |        3        0.29      100.00
---------------------+---------------------------------
             Total |    1,032      100.00

            Referent job: |
  Coworkers:  Encouraged |
           teamwork |     Freq.     Percent        Cum.
---------------------+---------------------------------
 1.  Strongly disagree |       29        2.81        2.81
        2. Disagree |      110       10.66       13.47
           3. Agree |      442       42.83       56.30
   4. Strongly agree |      439       42.54       98.84
7. Don't know/remember |        8        0.78       99.61
         9. Refused |        4        0.39      100.00
---------------------+---------------------------------
             Total |    1,032      100.00

            Referent job: |
  Coworkers:  Helpful in |
  getting the job done |     Freq.     Percent        Cum.
---------------------+---------------------------------
 1.  Strongly disagree |       18        1.74        1.74
        2. Disagree |       82        7.95        9.69
           3. Agree |      458       44.38       54.07
   4. Strongly agree |      465       45.06       99.13
7. Don't know/remember |        5        0.48       99.61
         9. Refused |        4        0.39      100.00
---------------------+---------------------------------
             Total |    1,032      100.00
```

AIM 3: Characterize employer-provided workplace violence prevention and response training received by young workers.

Training Topics

The data below show the topics on which respondents reported having received employer-provided training.

```
            Referent job: |
 Training:  Handling a |
            robbery |     Freq.     Percent        Cum.
---------------------+---------------------------------
              0. No |      736       71.32       71.32
             1. Yes |      289       28.00       99.32
7. Don't know/remember |        6        0.58       99.90
         9. Refused |        1        0.10      100.00
---------------------+---------------------------------
             Total |    1,032      100.00

           Training: |
  De-escalating using |
        verbal comm |     Freq.     Percent        Cum.
---------------------+---------------------------------
              0. No |      480       46.51       46.51
             1. Yes |      534       51.74       98.26
7. Don't know/remember |       17        1.65       99.90
         9. Refused |        1        0.10      100.00
---------------------+---------------------------------
             Total |    1,032      100.00
```

```
            Referent job: |
        Training:  Dealing |
           with coworker |
              arguments |    Freq.      Percent       Cum.
---------------------+-----------------------------------
               0. No |      609        59.01        59.01
              1. Yes |      409        39.63        98.64
7. Don't know/remember |       12         1.16        99.81
           9. Refused |        2         0.19       100.00
---------------------+-----------------------------------
               Total |    1,032       100.00


            Referent job: |
        Training:  Emergency |
        sys for assistance |    Freq.      Percent       Cum.
---------------------+-----------------------------------
               0. No |      449        43.51        43.51
              1. Yes |      573        55.52        99.03
7. Don't know/remember |        9         0.87        99.90
           9. Refused |        1         0.10       100.00
---------------------+-----------------------------------
               Total |    1,032       100.00


            Referent job: |
        Training:  Escaping |
        violent situations |    Freq.      Percent       Cum.
---------------------+-----------------------------------
               0. No |      666        64.53        64.53
              1. Yes |      354        34.30        98.84
7. Don't know/remember |       10         0.97        99.81
           9. Refused |        2         0.19       100.00
---------------------+-----------------------------------
               Total |    1,032       100.00


            Referent job: |
              Training: |
           Self-defense |
             techniques |    Freq.      Percent       Cum.
---------------------+-----------------------------------
               0. No |      912        88.37        88.37
              1. Yes |      118        11.43        99.81
7. Don't know/remember |        1         0.10        99.90
           9. Refused |        1         0.10       100.00
---------------------+-----------------------------------
               Total |    1,032       100.00


            Referent job: |
        Training:  How to |
             report WPV |    Freq.      Percent       Cum.
---------------------+-----------------------------------
               0. No |      406        39.34        39.34
              1. Yes |      612        59.30        98.64
7. Don't know/remember |       13         1.26        99.90
           9. Refused |        1         0.10       100.00
---------------------+-----------------------------------
               Total |    1,032       100.00


            Referent job: |
        Training:  Deal with |
        sexual harassment |    Freq.      Percent       Cum.
---------------------+-----------------------------------
               0. No |      561        54.36        54.36
              1. Yes |      461        44.67        99.03
7. Don't know/remember |        9         0.87        99.90
           9. Refused |        1         0.10       100.00
---------------------+-----------------------------------
               Total |    1,032       100.00
```

```
           Referent job: |
       Training:   Active |
       shooter response |      Freq.       Percent         Cum.
---------------------+---------------------------------------
             0. No |        784          75.97         75.97
            1. Yes |        240          23.26         99.22
7. Don't know/remember |        7           0.68         99.90
         9. Refused |          1           0.10        100.00
---------------------+---------------------------------------
             Total |       1,032        100.00


           Referent job: |
       Training:   Prevent |
using physical contact |      Freq.       Percent         Cum.
---------------------+---------------------------------------
             0. No |        945          91.57         91.57
            1. Yes |         80           7.75         99.32
7. Don't know/remember |        6           0.58         99.90
         9. Refused |          1           0.10        100.00
---------------------+---------------------------------------
             Total |       1,032        100.00


           Referent job: |
   Training:   Interacting |
     with customers |      Freq.       Percent         Cum.
---------------------+---------------------------------------
             0. No |        160          15.50         15.50
            1. Yes |        868          84.11         99.61
7. Don't know/remember |        3           0.29         99.90
         9. Refused |          1           0.10        100.00
---------------------+---------------------------------------
             Total |       1,032        100.00


           Referent job: |
   Training:   Interacting |
     with coworkers |      Freq.       Percent         Cum.
---------------------+---------------------------------------
             0. No |        233          22.58         22.58
            1. Yes |        795          77.03         99.61
7. Don't know/remember |        2           0.19         99.81
         9. Refused |          2           0.19        100.00
---------------------+---------------------------------------
             Total |       1,032        100.00


           Referent job: |
       Training:   Warning |
     signs in coworkers |      Freq.       Percent         Cum.
---------------------+---------------------------------------
             0. No |        689          66.76         66.76
            1. Yes |        323          31.30         98.06
7. Don't know/remember |       18           1.74         99.81
         9. Refused |          2           0.19        100.00
---------------------+---------------------------------------
             Total |       1,032        100.00


           Referent job: |
       Training:   Warning |
     signs in customers |      Freq.       Percent         Cum.
---------------------+---------------------------------------
             0. No |        607          58.82         58.82
            1. Yes |        408          39.53         98.35
7. Don't know/remember |       16           1.55         99.90
         9. Refused |          1           0.10        100.00
---------------------+---------------------------------------
             Total |       1,032        100.00
```

```
       Referent job: |
Training:  Other topic |
             (no/yes) |      Freq.      Percent         Cum.
----------------------+----------------------------------------
              0. No |        946        91.67        91.67
             1. Yes |         62         6.01        97.67
7. Don't know/remember |       23         2.23        99.90
          9. Refused |          1         0.10       100.00
----------------------+----------------------------------------
                Total |      1,032       100.00
```

When Training Received

The below data show when training was received, among those reporting receipt of training on any of the topics listed above.

```
    Referent job:  Training: |
        When first trained |      Freq.      Percent         Cum.
---------------------------+----------------------------------------
            1. First week |        634        65.29        65.29
    2. After crime occurred |       11         1.13        66.43
3. After other violent event |       31         3.19        69.62
              4. Other time |      188        19.36        88.98
     7. Don't know/remember |      104        10.71        99.69
                9. Refused |          3         0.31       100.00
---------------------------+----------------------------------------
                     Total |        971       100.00
```

Training Formats

The below data show the formats used to train respondents, among those reporting receipt of training on any of the topics listed above.

```
        Referent job: |
   Training:  Format: |
        Online course |      Freq.      Percent         Cum.
----------------------+----------------------------------------
              0. No |        664        68.38        68.38
             1. Yes |        297        30.59        98.97
7. Don't know/remember |       10         1.03       100.00
----------------------+----------------------------------------
                Total |        971       100.00


        Referent job: |
   Training:  Format: |
                Video |      Freq.      Percent         Cum.
----------------------+----------------------------------------
              0. No |        571        58.81        58.81
             1. Yes |        386        39.75        98.56
7. Don't know/remember |       14         1.44       100.00
----------------------+----------------------------------------
                Total |        971       100.00


        Referent job: |
   Training:  Format: |
             Handouts |      Freq.      Percent         Cum.
----------------------+----------------------------------------
              0. No |        507        52.21        52.21
             1. Yes |        449        46.24        98.46
7. Don't know/remember |       15         1.54       100.00
----------------------+----------------------------------------
                Total |        971       100.00
```

```
           Referent job: |
       Training:  Format: |
  Meetings/discussions |        Freq.      Percent        Cum.
---------------------+-----------------------------------
              0. No |          253        26.06        26.06
             1. Yes |          714        73.53        99.59
7. Don't know/remember |          4         0.41       100.00
---------------------+-----------------------------------
               Total |          971       100.00

           Referent job: |
       Training:  Format: |
        Role playing |        Freq.      Percent        Cum.
---------------------+-----------------------------------
              0. No |          792        81.57        81.57
             1. Yes |          176        18.13        99.69
7. Don't know/remember |          2         0.21        99.90
          9. Refused |            1         0.10       100.00
---------------------+-----------------------------------
               Total |          971       100.00

           Referent job: |
       Training:  Format: |
        Other (no/yes) |        Freq.      Percent        Cum.
---------------------+-----------------------------------
              0. No |          883        90.94        90.94
             1. Yes |           75         7.72        98.66
7. Don't know/remember |         13         1.34       100.00
---------------------+-----------------------------------
               Total |          971       100.00
```

AIM 4: Describe the employment and educational consequences of workplace violence victimization among young workers and examine associations between these outcomes and worker and event characteristics.

Employment Impacts

The data below show how being a victim of workplace violence affected respondents work life.

```
         Work life:  Changing schedule |     Freq.      Percent        Cum.
-----------------------------------------+-------------------------------
      1. You asked to change schedule |       45         7.71         7.71
   2. You considered changing schedule |       55         9.42        17.12
3. You never considered changing shedul |     478        81.85        98.97
              7. Don't know/remember |         4         0.68        99.66
                        9. Refused |         2         0.34       100.00
-----------------------------------------+-------------------------------
                             Total |       584       100.00

         Work life:  Cutting back hours |     Freq.      Percent        Cum.
-----------------------------------------+-------------------------------
             1. You cut back hours |        30         5.14         5.14
   2. You considered cutting back hours |      50         8.56        13.70
3. You never considered cutting back ho |     502        85.96        99.66
              7. Don't know/remember |         1         0.17        99.83
                        9. Refused |         1         0.17       100.00
-----------------------------------------+-------------------------------
                             Total |       584       100.00
```

```
Work life:  Calling in |
             sick |      Freq.      Percent        Cum.
---------------------+---------------------------------
    1. Just as often |        549        94.01        94.01
       2. More often |         31         5.31        99.32
7. Don't know/remember |          3         0.51        99.83
           9. Refused |          1         0.17       100.00
---------------------+---------------------------------
               Total |        584       100.00


        Work life:  Quitting |     Freq.      Percent        Cum.
--------------------------------+---------------------------------
                   1. You quit |        54         9.25         9.25
      2. You considered quitting |       118        20.21        29.45
3. You never considered quitting |       410        70.21        99.66
         7. Don't know/remember |         2         0.34       100.00
--------------------------------+---------------------------------
                         Total |       584       100.00


Work life:  Quality of |
      work went down |      Freq.      Percent        Cum.
---------------------+---------------------------------
              0. No |        513        87.84        87.84
             1. Yes |         66        11.30        99.14
7. Don't know/remember |          4         0.68        99.83
           9. Refused |          1         0.17       100.00
---------------------+---------------------------------
               Total |        584       100.00


Work life:  Cared less |
         about job |      Freq.      Percent        Cum.
---------------------+---------------------------------
              0. No |        427        73.12        73.12
             1. Yes |        156        26.71        99.83
           9. Refused |          1         0.17       100.00
---------------------+---------------------------------
               Total |        584       100.00


         Work life: |
Productivity went down |      Freq.      Percent        Cum.
---------------------+---------------------------------
              0. No |        508        86.99        86.99
             1. Yes |         74        12.67        99.66
7. Don't know/remember |          1         0.17        99.83
           9. Refused |          1         0.17       100.00
---------------------+---------------------------------
               Total |        584       100.00


  Work life:  Stopped |
trying to do best work |      Freq.      Percent        Cum.
---------------------+---------------------------------
              0. No |        487        83.39        83.39
             1. Yes |         96        16.44        99.83
           9. Refused |          1         0.17       100.00
---------------------+---------------------------------
               Total |        584       100.00


  Work life:  Other |
  Impacts(no/yes) |      Freq.      Percent        Cum.
---------------------+---------------------------------
              0. No |        546        93.49        93.49
             1. Yes |         37         6.34        99.83
7. Don't know/remember |          1         0.17       100.00
---------------------+---------------------------------
               Total |        584       100.00
```

Educational Impacts

The data below show how being a victim of workplace violence affected respondents school life. These data include only respondents who were students when they were last victimized.

```
School life:  Skipping |
             classes |       Freq.       Percent          Cum.
---------------------+---------------------------------------------
          1.Less often |         51         11.06         11.06
        2. Just as often |        391         84.82         95.88
3. Somewhat more often |          9          1.95         97.83
       4. Far more often |          7          1.52         99.35
7. Don't know/remember |          2          0.43         99.78
             9. Refused |          1          0.22        100.00
---------------------+---------------------------------------------
               Total |        461        100.00


School life:  Being |
      late for classes |       Freq.       Percent          Cum.
---------------------+---------------------------------------------
          1.Less often |         49         10.63         10.63
        2. Just as often |        393         85.25         95.88
3. Somewhat more often |         11          2.39         98.26
       4. Far more often |          4          0.87         99.13
7. Don't know/remember |          3          0.65         99.78
             9. Refused |          1          0.22        100.00
---------------------+---------------------------------------------
               Total |        461        100.00


          School life:  Quitting |      Freq.      Percent         Cum.
---------------------------------+---------------------------------------------
      2. You considered quitting |          5         1.08         1.08
3. You never considered quitting |        455        98.70        99.78
           7. Don't know/remember |          1         0.22       100.00
---------------------------------+---------------------------------------------
                         Total |        461       100.00


School life:  How |
     grades affected |       Freq.       Percent          Cum.
---------------------+---------------------------------------------
         1. Down a lot |          4          0.87          0.87
      2. Down a little |         17          3.70          4.57
       3. Not affected |        428         93.04         97.61
        4. Up a little |          9          1.96         99.57
           5. Up a lot |          2          0.43        100.00
---------------------+---------------------------------------------
               Total |        460        100.00


School life:  Caring |
    about doing well |       Freq.       Percent          Cum.
---------------------+---------------------------------------------
         1. Cared less |          6          1.31          1.31
         2. No change |        421         91.92         93.23
        3. Cared More |         31          6.77        100.00
---------------------+---------------------------------------------
               Total |        458        100.00


School life:  Other |
             (no/yes) |       Freq.       Percent          Cum.
---------------------+---------------------------------------------
               0. No |        456         98.92         98.92
               1. Yes |          5          1.08        100.00
---------------------+---------------------------------------------
               Total |        461        100.00
```

Discussion/Conclusions

Below are the main conclusions from this study, by aim, followed by a summary of the key take away messages.

AIM 1: Estimate the prevalence of workplace violence victimization among young workers and characterize cases with regard to worker- (e.g., gender), employment- (e.g., occupation) and event-characteristics (e.g., injury, psychological harms).
Workplace violence is common among young workers ages 14 to 24 with a 12-month prevalence of 57% (n=584). Verbal abuse (50%) and sexual harassment (22%) were the two most prevalent forms of workplace violence reported by youth ages 14 to 24. Just under one quarter of sexual harassment experienced by young workers occurred via electronic means such as texting, emailing, or posting on social media.   Overall, customers (53%) were the most frequent perpetrators of workplace violence. These findings likely reflect the overrepresentation of youth in service occupations where fast-paced work and customer/client contact are central features of the job. Further, women (66%) and emerging adults (ages 18-24) (61%) were more likely to be victimized compared to males (48%) and those in middle adolescence 14-17 (52%). Gender differences were anticipated and coincide with the literature on gender differences in adult workplace violence. These findings as well as age related differences will be explored further as we continue to analyze the data. Another key demographic difference was that gay/lesbian/bi-sexual youth (73%) were more likely to be victimized than their heterosexual counterparts (56%). This was an anticipated finding as we suspected that sexual minorities would be targets of workplace violence and bullying. We plan to explore this finding further as we continue to analyze the data. Finally, injury (3.3%) was not commonly associated with instances of workplace violence in this population. Therefore, most cases of workplace violence will not be detected in traditional occupational injury surveillance systems. Such surveillance systems should be used with caution when attempting to assess the true magnitude of the problem of workplace violence in the US young worker population. A more common problem was self-reported mental health impacts, post victimization, which included: increased stress (41%); increased anxiety (39%); increased insecurity (26%); and decreased self-esteem/confidence (22%).

AIM 2: Identify risk factors for workplace violence victimization among young workers.
Young workers are exposed to a variety of workplace violence risk factors. A significant proportion of young workers are in jobs where they have contact with the public, which is a major risk factor for workplace violence: 93% did so at least "sometimes" and 74% do so "always." Other common exposures included: working at a fast pace (85%); working after dark (77%); cash handling (50%); and working late at night (43%). The presence of these risks demonstrates the need for proper supervision of young workers yet our study found that only 43% of young workers said they at least "sometimes" work with no supervisor on site and 15% "always" work without a supervisor on site.

AIM 3: Characterize employer-provided workplace violence prevention and response training received by young workers.
Employer provided training is not widespread across all key topics yet there are some areas where many young workers ages 14 to 24 are receiving training. These include: how to properly interact with customers (84%); how to report workplace violence (59%); how to use available emergency systems to get help (56%); de-escalating dangerous situations using verbal communication (52%); and how to deal with sexual harassment (45%). When provided, training is usually given in the first week (65%). The most common training formats include meetings/discussions (74%); handouts (46%); videos (40%); and online courses (31%).

AIM 4: Describe the employment and educational consequences of workplace violence victimization among young workers and examine associations between these outcomes and worker and event characteristics.
Young victims of workplace violence do not report significant impacts on their work or school lives. Few young victims reported suffering employment consequences and even fewer reported any educational consequences. The most common work life impacts included: victims quit or considered quitting (29%); they cared less about the job (27%); and they stopped trying to do their best (16%) while the most common school life impacts

included: victims' grades went down (5%); they skipped classes more often (4%); and they showed up late more often (3%).

Summary
Our results demonstrate that workplace violence is common among youth. Beyond establishing basic workplace violence programs and policies to protect all workers, our findings should urge employers to ensure that any workplace violence prevention program they implement be understood by young employees. Ideally, employers who have a large number of young workers should consider providing age-appropriate training that is specifically targeted toward youth. Our finding that sexual harassment is not unique to the adult worker population warrants action in both the practice and policy arenas. Our results should urge policy makers and legislators to ensure that any sexual harassment policy or legislation, takes into account that workers of all ages are at risk and need to be protected. The use of social media to sexually harass is another important finding of this study. Employers should be encouraged to implement policies regarding cell phone use at work to lessen instances of sex harassment via electronic means. These results should also encourage practice professionals to redesigned current adult focused sexual harassment prevention programs or develop new age-appropriate programs to help reach young workers. This is particularly needed to better protect our youngest, teenage workers. Our finding showing that gay and lesbian youth are at greater risk of workplace violence warrant further study. Researchers should develop investigations that attempt to confirm these findings and identify factors that lead to this increased risk. In the meantime, interventions that address issues unique to gay and lesbian young workers should be considered in light of our findings. Our finding that young victims of workplace violence suffer a variety of mental health impacts should also be further investigated. Researchers should attempt to confirm our initial results about the mental health impacts of workplace violence in a manner that can overcome the limitations of the cross-sectional, self-reported outcomes of the current study. In addition, further studies should investigate whether mental health effects are short lived or lead to longer term psychological impacts.

Publications

While multiple publications are in preparation, we currently have one publication that is under review in a peer-reviewed journal. This manuscript It was submitted for inclusion in a special volume of the Journal of Safety Research highlighting select work presented at NIOSH's 2018 NOIRS conference held in Morgantown, WV. The paper was led by a West Virginia University School of Public Health Doctoral student, under the mentorship of Dr. Rauscher (PI).

The citation is as follows: **Brown B, Myers D, Casteel C, and Rauscher K. (*revise and resubmit*). Young Workers Uncategorized: Comparing the Workplace Violence Experiences of High School and College-aged Workers. Journal of Safety Research.**

In addition to this paper, results from this study have been presented at multiple scientific conferences. These are as follows:

1. Rauscher KJ, Brown B*, Myers DJ, Casteel C, Peek-Asa C. (2019). Young Victims of Sexual Harassment at Work: Results from a National Telephone Survey. *American Public Health Association (APHA) Annual Meeting*, Philadelphia, PA.

2. Rauscher KJ, Casteel C, Myers D, and Peek-Asa, C. (2019). Workplace Violence Against Youth: Characteristics and Consequences. 13th International Conference on Work, Stress and Health. *American Psychological Association (APA).* Philadelphia, PA.

3. Rauscher, KJ, Casteel, C., Myers. (2018). Workplace Violence against Young Workers. *National Occupational Injury Research Symposium (NOIRS),* Morgantown, WV.

4. Brown, B, Myers, D, Casteel, C, Branch, C, and Rauscher, KJ. (2018). Understanding Differences in the Workplace Violence Experiences of Teens and Young Adults. *National Occupational Injury Research Symposium (NOIRS)*, Morgantown, WV.

5. Brown B, Myers DJ, Casteel C, Branch, C, and Rauscher KJ. (2017). Workplace Violence Among Young Workers: Exploring Differences in the Experiences of High School and College Students. *American Public Health Association (APHA) Annual Meeting,* Atlanta, GA.

INCLUSION OF WOMEN AND MINORITIES

This information is included in the attached PHS Inclusion Enrollment Report.

INCLUSION OF CHILDREN.

Children under the age of 21 were included in this study. This study was relevant for conditions affecting children as it explicitly focused on the working conditions related to workplace violence among workers ages 24 and younger.

CUMMULATIVE ENROLMENT REPORT

This information is provided in the attached PHS Inclusion Enrollment Report.