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Non-Robbery-Related Occupational Homicides in the Retail Industry, 2003–2008

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Abstract

Background—The purpose of this study was to examine non-robbery-related occupational homicides in the retail industry from 2003 to 2008.

Methods—Data were abstracted from the Census of Fatal Occupational Injuries. Motive (robbery- or non-robbery-related) and workplace violence (WPV) typology (Type I–IV) were assigned using narrative text fields. Non-robbery-related homicide rates were calculated and compared among WPV types, demographic characteristics, and occupation.

Results—Twenty-eight percent of homicides that occurred in the retail industry were non-robbery-related. The leading event associated with non-robbery-related homicides was Type II (perpetrated by customers) (34%), followed by Type IV (perpetrated by personal relationship) (31%). The majority of homicides were due to arguments (50%). Security guards and workers in drinking establishments had the highest homicide rates per 100,000 workers (14.3 and 6.0, respectively).

Conclusions—Non-robbery-related homicides comprised a meaningful proportion of workplace homicides in the retail industry. Research is needed to develop strategies Periodicals, Inc.

Keywords

workplace violence; *de-escalation*; *robbery*; *security guards*; *arguments*

INTRODUCTION

Despite reductions in the incidence of workplace homicide, it still remains the leading cause of occupational fatality in the retail sector and the third leading cause of occupational

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[1]This research was conducted with restricted access to BLS data. The CFOI narrative is an unpublished text field used by BLS to verify coded data fields; narratives are only available with access to the CFOI research file. Since this is not a published field, presented numbers cannot be replicated by BLS and should not be considered official BLS statistics. The views expressed here do not necessarily reflect the views of the BLS

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fatality overall in the U.S. [Bureau of Labor Statistics (BLS), 2011, 2012a]. On average, about 700 workplace homicides occurred annually from 1992 to 2009, accounting for 11% of all fatal occupational injuries [BLS, 2012a]. From 1992 to 2001, the societal burden of workplace homicides on the U.S. economy was nearly $6.4 billion, and approximately 42% of these costs resulted from homicides in the retail sector [Hartley et al., 2005].

Approximately 60–80% of workplace homicides are robbery-related; thus, a considerable portion are not robbery-related [Moracco et al., 2000; Loomis et al., 2002; Schaffer et al., 2002; Gurka et al., 2009]. Because many homicides in the retail sector were associated with robbery, past research on prevention of workplace violence (WPV) in the retail sector has focused primarily on robbery-related events [Amandus et al., 1995, 1996, 1997; Casteel and Peek-Asa, 2002; Casteel et al., 2004; Schaffer et al., 2002; Peek-Asa et al., 2004]. Less is known about non-robbery-related events as only a few studies have published data on non-robbery-related homicides, which included events occurring in the retail sector, and they are limited to a single state or county [Moracco et al., 2000; Loomis et al., 2002; Schaffer et al., 2002; Gurka et al., 2009].

To develop strategies to reduce WPV, researchers have categorized WPV events into four types according to the relationship of the perpetrator with workplace or its employees: Type I (criminal intent-no prior relationship), Type II (customer/client), Type III (current or past employee), and Type IV (personal relationship) [Howard, 1996; Peek-Asa et al., 1997; IPRC, 2001]. Although non-robbery-related homicides have been examined by WPV typology specifically in a single state, no studies have focused on non-robbery-related homicides by WPV typology within specific industries nationwide [Gurka et al., 2009]. Thus, the purpose of this study was to categorize non-robbery-related homicides into the four WPV types using event data from the narrative text fields and to describe circumstances related to non-robbery-related homicides in the U.S. retail industry from 2003 through 2008.

METHODS

Data Sources

Workplace homicides in the retail industry were identified from 2003 through 2008 using the Census of Fatal Occupational Injuries (CFOI). The CFOI is a national surveillance system that collects data on fatal occupational injuries since 1992. In 2003, the occupation and industry coding classification systems were changed [BLS, 2003]. Thus, data for this study were obtained beginning in 2003. The CFOI defines death as work-related if an event or exposure results in fatal injury to a civilian, non-institutionalized person who was working on the employer's site or outside the workplace as a requirement of his or her job at the time of injury. Data are collected and compiled through a federal-state cooperative program including all 50 states and the District of Columbia using multiple sources, such as death certificates, workers' compensation reports, media reports, Occupational Safety and Health Administration investigation reports, medical examiner reports, and police reports. Cases are only included in the CFOI if at least two independent source documents indicate a work relationship [BLS, 2003].

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Data on the estimated number of retail industry workers were obtained from the U.S. BLS Current Population Survey (CPS) [BLS, 2012b]. The CPS is a monthly household survey of 60,000 U.S. civilian, non-institutionalized residents aged 15 years and older. The CPS is jointly conducted by the U.S. Census Bureau and the BLS. It reports comprehensive national labor force estimates by employment status, demographic, occupation, industry, and other labor force characteristics. For this study, CPS data were restricted to workers aged 16 and older as the number of non-robbery-related homicides occurred among workers aged 15 and younger was negligible and does not meet BLS reporting requirements.

Variable Definitions

In the CFOI, the events are coded using the Occupational Injury and Illness Classification System [BLS, 1992]. For this study, event codes 6000 (assaults and violent acts, unspecified), 6100 (assaults and violent acts by person(s), unspecified), 6120 (hitting, kicking, beating), 6130 (shooting), 6150 (stabbing), and 6190 (assaults and violent acts by person(s), not elsewhere classified) were used to define workplace homicide. Industry groups were selected using the 2002 North American Industrial Classification System (NAICS) codes [OMB, 2002]. For this study, the retail industry was defined as NAICS codes 44 and 45 (retail stores) and 722 (food services and drinking establishments). The food services and drinking places industry was included in the retail industry because historically this was categorized with the retail sector under the Standard Industrial Classification system and this industry has been targeted to prevent robberies [NIOSH, 1993; Schaffer et al., 2002]. Also, workers in this industry are exposed to violence risks similar to retail sector workers due to factors such as, contact with the public, working late hours, and working alone or in small numbers [NIOSH, 1993]. In this study, occupations were classified using the 2000 Standard Occupational Classification system [OMB, 2000].

Motive and Type

The narrative text field was used to categorize each event as robbery- or non-robbery-related, based on the motive of the perpetrator. The narrative text of each workplace homicide was reviewed and independently coded by two coders. Non-robbery-related homicide cases were events in which robbery was known not to be the motive. Although the level of detail and quality of the data varied case by case, the majority of work-related homicides had sufficient information to categorize cases by motive. Table V displays the various non-robbery-related homicide circumstances. If the narrative text specifically mentioned that the motive of the homicide was unknown and that robbery was ruled out, the case was classified as non-robbery-related. Further, these non-robbery-related homicide cases were categorized into the four types of WPV according to the relationship of the perpetrator with the workplace or its employees. Table I provides characteristics of WPV types and a scenario for each type. Based on these characteristics and information in the narrative text, each case was categorized into an appropriate WPV type.

When two WPV categories were possible for an event, specific coding methods were followed. If a homicide was perpetrated by a person who was both an intimate partner and a coworker of the victim, it was classified as a Type III homicide because their coworker relationship brought them to the workplace. If a homicide was perpetrated by a person hired

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by an intimate partner, it was categorized as a Type IV homicide because the personal relationship influenced the homicide. During the coding process, if coders disagreed on the classification of the motive or WPV type, the authors discussed the circumstance of the homicide and determined the appropriate category for motive and WPV type. Finally, the narrative text of each non-robbery-related homicide was manually examined for accuracy of motive and WPV type as a final quality-control step.

Circumstance

Further, non-robbery-related homicides were categorized as either arguments or other circumstances based on the information in the narrative text. Arguments included incidents that involved verbal conflicts over merchandise, money, employment, a personal relationship, breaking up a fight or argument, refusal of service, and denial of admission into establishments. Cases were included in the arguments category only if an argument was specifically mentioned in the narrative text as the cause of the homicide. All other incidents were grouped and listed into other circumstances. These include a worker killed by a personal relationship due to unknown circumstances (e.g., an employee was killed by her husband), coworker violence due to unknown circumstances (e.g., an employee was killed by a coworker), random firing, caught in a crossfire, maintaining order (e.g., an employee was shot performing a pat down search of a patron), act of revenge (e.g., an employee was fatally injured because of revenge over an earlier encounter with the victim), and disgruntled customer (e.g., an employee was killed by a disgruntled customer). In the other circumstances, arguments may have ensued in some incidents, but cases were categorized completely based on the information available in the narrative text (i.e., an argument may have occurred but was not documented).[1]

Statistical Analysis

Frequencies and percentages were calculated for select demographics, occupation, sub-industries within the retail industry, and event circumstances. Pearson Chi-square tests were conducted to test for differences between WPV typology and non-robbery-related characteristics. Non-robbery-related homicide rates per 100,000 workers were calculated as the number of non-robbery-related homicides divided by the estimated number of retail industry workers using annual employment data from the CPS. Rate ratios (RR) with 95% confidence intervals (CI) were calculated to compare rates among selected demographic characteristics. All analyses were conducted using SAS version 9.2.

The CFOI data provided to the National Institute for Occupational Safety and Health (NIOSH) by BLS do not have any personal identifying information. Thus, Institutional Review Board approval was not required.

The authors declare that that there is no conflict of interest including any financial, personal orother relationships regarding the material discussed in this study.

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RESULTS

From 2003 through 2008, 1,434 work-related homicides were reported in the retail industry. Of these, 835 (58%) were robbery-related, 332 (23%) were non-robbery-related, and 267 (19%) were of unknown motive.

Typology

Among non-robbery-related homicides, WPV typology was assigned to 300 cases, but type could not be determined for 32 cases due to insufficient information in the narrative text. Of these 300 cases, the majority of homicides were perpetrated by customers (Type II), followed by homicides perpetrated by a personal relation (Type IV) and homicides perpetrated by a current or former employee (Type III) (Table II). Most (69%) of the Type III homicides were perpetrated by a current employee, and more than half of Type IV events were committed by an intimate partner (53%). Of these Type IVevents, the majority of the victims were women (90%) (data not shown).

For male workers, Types II and III homicides were most frequent; however, among female workers, Type IV homicides were most frequent ($P < 0.0001$). Typology also varied by age ($P = 0.02$): Type II homicides were most frequent among workers aged 25–34 years; Type IV among those aged 16–24 years, 35–44 years, and 45–54 years; Type III among those 55 years and older. Typology also varied ($P < 0.0001$) by race, with Type IV most common among non-Hispanic whites, Type II among non-Hispanic blacks, and Type III among Hispanics (Table III).

Demographic Characteristics

The percentage and rate of non-robbery-related homicides also varied by victim gender, age, and race (Table III). Men had over two times the rate of non-robbery-related homicide as women. The rate of non-robbery-related homicide among those aged 25–34 and 35–44 years was approximately three times that of the 16- to 24-year-old age group. Non-Hispanic black and Hispanic workers had significantly higher homicide rates than non-Hispanic White workers.

Industry

Food services and drinking places (NAICS-722) had a higher percentage of non-robbery-related occupational homicides and a higher non-robbery-related fatality rate than retail stores (NAICS-44 and 45) (Table IV). The sub-industry, drinking places that serve alcoholic beverages, had the highest non-robbery-related homicide rate of all retail industries, followed distantly by gasoline stations and grocery stores. Among retail stores, Type IV homicides were most common followed by Type III homicides. Among restaurants and other food services, Type IV homicides were also the most common events, followed by Type II homicides. Among drinking places that serve alcoholic beverages, Type II homicides were the most common.

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Occupation

Security guards had the highest non-robbery-related occupational homicide rate, followed by supervisors of food preparation and serving workers and food service managers (Table IV). The majority of non-robbery-related homicides among security guards were perpetrated by customers (92%). Of these security guards, many of them were killed while working in drinking places that served alcohol (91%) (data not shown). Approximately one-third of non-robbery-related homicides occurred among retail sales workers and supervisors of retail sales workers and of these, over half were committed by perpetrators that had a personal relationship with the victim.

Circumstances

Over half of non-robbery-related homicides were associated with arguments (Table V). Among the arguments category, the highest percentage was unknown origin ("unknown argument" was mentioned in the CFOI narrative text), followed by incidents where a customer was asked to leave the establishment, an employee was breaking up a fight or argument, or a job-related argument had ensued. Among the other circumstances category, the highest percentage of non-robbery-related homicides was due to personal relationship, followed by coworker violence.

The majority of arguments occurred in drinking places that serve alcoholic beverages (n = 59, 39%) followed by retail stores (n = 54, 36%) and restaurants and other food services (n = 38, 25%). In regards to the type of event, the majority of homicides due to arguments were Type II events (n = 88, 58%), followed by Type III (n = 45, 30%), Type IV (n = 9, 6%), and Type I events (n = 9, 6%). Of the Type II events due to arguments, about half of the homicides occurred among security guards working in drinking places (n = 40) (data not shown).

DISCUSSION

This study indicates that 28% (332/1,167) of workplace homicides with a known motive occurring in the retail industry are unrelated to robbery. Furthermore, within the retail industry, non-robbery-related homicides vary by workplace typology, attributes of the victim, and characteristics of the event. These findings are consistent with previous studies [Moracco et al., 2000; Loomis et al., 2002; Schaffer et al., 2002; Gurka et al., 2009]. Also, similar to previous research, we found that arguments were the most common event during which non-robbery-related homicides occurred, with over half of homicides due to arguments that escalated into physical violence [Moracco et al., 2000]. Some of the other circumstances (being killed by a personal relation, being killed by a coworker, acts of revenge, and disgruntled customers) described in the narrative text fields were likely due to current or past conflicts as well. In addition, arguments also commonly ensue while maintaining order. It is likely that some of the homicides for which the events preceding the homicide were unknown also involved arguments; therefore, the proportion of non-robbery-related homicides due to arguments is likely even greater.

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In our study, not only was violence perpetrated by customers (Type II) the leading type of all non-robbery-related homicides, but it was also the most frequent type of event among non-robbery-related homicides due to arguments (58%). These argument-related Type II events account for about 86% (88/102) of all non-robbery-related Type II homicides. Workers in the retail industry interact daily with customers and are at risk of violent injury from customers due to arguments over delay or denial of service or conflict over merchandise. Current NIOSH recommendations to prevent homicides perpetrated by customers include maintaining adequate staffing to meet customer needs, employing skillful employees, and providing training in detecting violent behaviors as well as responding to conflicts [NIOSH, 2006].

Although the worker-on-worker (Type III) violence accounted for only one-fourth of all non-robbery-related homicides, the events due to arguments account for two-thirds of all non-robbery-related Type III homicides. Similar to previous studies, this study has also identified that current employees perpetrated the majority of non-robbery-related Type III homicides [Gurka et al., 2009] and job-related arguments are one of the main causes of non-robbery-related homicides [Moracco et al., 2000]. Specific NIOSH-recommended prevention strategies aimed at coworker violence include training on company WPV policies and procedures, strongly encouraging reporting of coworker violence to employers, and evaluating potential employees during the selection process through background checks and reference verification [NIOSH, 1996, 2006].

Arguments comprise a considerable portion of Types II and III violence. Although these arguments were not premeditated events and occurred due to conflicts over different circumstances, it is likely that Situational Crime Prevention or Crime Prevention through Environmental Design (CPTED) measures to reduce robbery-related homicides may also reduce non-robbery-related homicides by preventing arguments escalating into violent acts and by increasing the safety of employees due to the perpetrator's perceived risk of being witnessed. However, a few studies found that only the use of at least one security device, locking entrances to the work site, and workers being visible from the outside were associated with a reduction in non-robbery-related homicides; not all environmental and administrative characteristics of CPTED measures were particularly effective at reducing these homicides [Loomis et al., 2002; Gurka et al., 2012]. Although the question of whether CPTED designs that prevent robbery-related homicides also prevent non-robbery-related homicides has not been fully explored, studies suggest that additional preventive measures need to be designed, implemented, and evaluated to address these non-robbery-related homicides [Loomis et al., 2002; Gurka et al., 2012].

Current NIOSH recommendations for Types II and III violence and CPTED measures may be helpful in preventing non-robbery-related homicides, including some argument-related incidents. However, prevention of arguments in the retail industry is particularly challenging because the nature of the work involves daily interaction between and among coworkers and customers and has the potential for verbal conflict. Also, risk for intentional violent injury may increase when dealing with large numbers of customers, especially in drinking establishments. In our study, we found that security guards working in drinking places were at increased risk of homicide perpetrated by customers, especially during arguments.

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Security guards are at a high risk of verbal confrontation with customers and these confrontations may escalate into physical violence because of security guards' responsibilities, such as collecting cover charges, preventing access by minors, and maintaining order among patrons [Wiatrowski, 2012]. Police officers, or similarly trained officers, may work part-time as security guards and have specialized training [Wiatrowski, 2012], but some security guards working in drinking places, for example, are untrained and it is likely that they may lack the ability to use verbal de-escalation techniques to negotiate or control aggressive patrons [Hobbs et al., 2002]. Thus, one possible prevention effort that the retail industry could consider adapting and implementing is training workers how to de-escalate arguments between and among coworkers and customers.

De-escalation training techniques for verbal aggression have been developed and implemented in health care settings to control agitated patients and visitors and among public employees to control aggressive customers and coworkers [Anderson and Clarke, 1996; Richmond et al., 2011; VA, 2011; KEAP, 2012]. This training includes identifying aggression warning signals, calming down agitated persons, reframing the sentence when a person does not understand, avoiding arguing and threatening language, getting additional assistance, being courteous to each other, empathizing with the other person, and explaining the process and procedures in plain terms. Although the retail environment is different, the information and techniques would universally aid in controlling aggression from escalating into violence in the retail industry [Anderson and Clarke, 1996; Richmond et al., 2011; KEAP, 2012].

In our study, over half of non-robbery-related homicides among women were perpetrated by an intimate partner (Type IV). This is consistent with other studies that also report an elevated risk for violence perpetrated by intimate partners [Moracco et al., 2000; Hewitt et al., 2002; Tiesman et al., 2012]. Though the same de-escalation and conflict resolution techniques may be effective at mitigating some of the WPV perpetrated by intimate partners, additional measures are likely necessary to reduce Intimate Partner Violence (IPV) in the workplace. Currently recommended practices that address IPV in the workplace include raising IPV awareness, providing employee training and education on domestic violence, encouraging employees to disclose IPV events to management, providing support to victims, and enforcing policies addressing domestic violence [Randel and Wells, 2003]. Other recommended strategies such as restricting access and using security devices in the workplace, may also be effective in preventing homicides perpetrated by intimate partners because perpetrators of IPV have increased knowledge of the workplace [NIOSH, 1996, 2006].

Strengths and Limitations

Our study provides a description of non-robbery-related occupational homicides in the retail industry in the United States using CFOI data—a well-established, national surveillance program that provides a comprehensive, accurate, verifiable, and timely count of fatal occupational injuries. Also, to our knowledge, this is the first study to document non-robbery-related homicides in the U.S. retail industry by WPV typology. Although CFOI is a comprehensive system, this study does have limitations. Using the narrative text, the WPV

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typology could not be assigned to 32 non-robbery-related homicides, and motive could not be determined for 267 homicides due to insufficient information regarding these events. Thus, the effect of these homicides with unknown type and motive on the proportions reported in this research is unknown. In addition, despite a systematic approach in classifying motive and WPV typology, misclassification may be possible as the quality and comprehensiveness of the narrative text field is not consistent for all cases. Although we presented the findings for the overall retail industry, we also presented in Table IV the findings by sub-industry within the retail industry and by WPV typology and in the text some additional findings by sub-industry. Nevertheless, the data could not be presented by stratification of every characteristic by sub-industry within the retail industry and WPV typology due to the data that do not meet BLS reporting requirements.

CONCLUSIONS

Nearly 30% of work-related homicides with a known motive in the retail industry were not robbery-related, and these homicides occurred in a variety of contexts. Also, the majority of homicides were preceded by an argument. Security guards, especially those working in drinking places, had a high risk of non-robbery-related homicide. While WPV prevention strategies focused on robbery-related violence have been evaluated, strategies for preventing non-robbery-related homicides have been examined to a much lesser extent. Therefore, a better understanding of circumstances surrounding these non-robbery-related events in the retail industry, especially in drinking establishments, is needed to inform the development and evaluation of prevention strategies specifically to prevent these types of events. Given that non-robbery-related homicides due to arguments were most common, future research should focus on prevention strategies and de-escalation techniques related to arguments.

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TABLE I

Types of Workplace Violence and Their Characteristics

WPV type	Characteristics	Scenario
Type I (no prior relationship)	The perpetrator had no prior relationship with an employee or the workplace	In this study, the motive of the crime is non-robbery-related for this type. Specific examples include randomly fired upon by drive-through shootings or employees caught in a crossfire
Type II (customer or client)	The perpetrator had a legitimate relationship with an employee or the workplace and committed a violent act during a business transaction or while receiving a service	A patron is asked to leave the business establishment due to his unruly behavior. An argument ensues between an employee and the patron. The event escalates and the patron intentionally kills the employee
Type III (current or past employee)	The perpetrator was a current or past employee of the business	A manager disciplines an employee for poor work performance and terminates him. The employee becomes angry and shoots the manager
Type IV (personal relationship)	The perpetrator had a personal relationship with an employee. Perpetrators could include friends, acquaintances, family members, or intimate partners of the victim	An employee leaves from a restaurant at the end of her shift. Aware her working situation, her estranged husband waits in the parking lot and fatally wounds the employee

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TABLE II

Non-Robbery-Related Workplace Homicide Victims in the Retail Industry by WPV Typology, CFOI, 2003–2008*

WPV type	Non-robbery-related homicides, n (%)
I-No prior relationship	34 (11)
II-Customer or clients	102 (34)
III-Employee of the workplace	72 (24)
Current employee or contractor	50 (18)
Former employee or contractor	22 (7)
IV-Personal relationship with an employee	92 (31)
Intimate partner	49 (16)
Family member, friend, or acquaintance	43 (15)
Total	300 (100)

Note: Fatal injury totals were generated by the authors with restricted access to CFOI microdata.

* Homicides with unknown WPV type(n = 32) were removed.

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TABLE III

Demographic Characteristics of Non-Robbery-Related Workplace Homicide Victims in the Retail Industry by WPV Typology, CFOI, 2003–2008

	Type I (no prior relationship), n (%)	Type II (customer or client), n (%)	Type III (current or past employee), n (%)	Type IV (personal relationship), n (%)	Total non-robbery-related homicides, n (%)	Rate per 100,000 workers[a]	Rate ratio (±CI)[b]	*P*-Value[c]
Gender								<0.0001
Male	27 (13)	93 (44)	56 (26)	37 (17)	213 (71)	0.33	**2.5 (1.9–3.2)**	
Female	7 (8)	9 (10)	16 (18)	55 (63)	87 (29)	0.13	1	
Age group								0.0190
16–24 years	9 (19)	13 (28)	11 (23)	14 (30)	47 (16)	0.12	1	
25–34 years	__[d]	41 (46)	27 (30)	—	90 (30)	0.33	**2.8 (1.8–3.7)**	
35–44 years	10 (12)	28 (33)	15 (18)	31 (37)	84 (28)	0.34	**2.8 (1.8–3.8)**	
45–54 years	5 (11)	13 (30)	9 (20)	17 (39)	44 (15)	0.20	**1.7 (1.0–2.4)**	
55 years and older	—	7 (26)	10 (37)	—	27 (9)	0.15	1.3 (0.7–1.8)	
Race								<0.0001
White, non-Hispanic	18 (13)	33 (24)	36 (26)	53 (38)	140 (47)	0.15	1	
Black, non-Hispanic	—	46 (58)	—	18 (23)	79 (26)	0.61	**4.1 (2.9–5.2)**	
Hispanic	6 (12)	14 (27)	21 (41)	10 (20)	51 (17)	0.26	**1.7 (1.2–2.3)**	
Other/Unknown	—	9 (30)	—	11 (37)	30 (10)	0.38	**2.5 (1.5–3.5)**	
Total	34 (100)	102 (100)	72 (100)	92 (100)	300 (100)	0.23	—	

Note: Fatal injury totals and rates were generated by the authors with restricted access to CFOI microdata.

[a] Rate is based on total number of non-robbery-related homicides (n = 332) which includes 32 unknown WPV type.

[b] Bold face type denotes statistical significance of rate ratios.

[c] Chi-square test statistical significance level at the $\alpha = 0.05$ for differences in the distributions to the types.

[d] Dashed cells represent either no data or data do not meet BLS reporting criteria.

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TABLE IV

Non-Robbery-Related Workplace Homicide Victims by Industry, Occupation, and WPV Typology, CFOI, 2003–2008

	Type I (No prior relationship), n (%)	Type II (customer or client), n (%)	Type III (current or past employee), n (%)	Type IV (personal relationship), n (%)	Total non-robbery-related homicides, n (%)	Rate per 100,000 workers[a]
Industry						
Retail stores (NAICS-44 and 45)	23 (18)	22 (17)	34 (27)	47 (37)	126 (42)	0.15
Grocery store	—[b]	—	10 (30)	12 (36)	33 (11)	0.23
Gasoline stations	—	—	—	9 (56)	16 (5)	0.71
Motor vehicle and parts dealers	—	5 (33)	5 (33)	—	15 (5)	0.15
All other	13 (21)	8 (13)	—	—	62 (21)	0.18
Food services and drinking places (NAICS-722)	11 (6)	80 (46)	38 (22)	45 (26)	174 (58)	0.40
Restaurants and other food services	—	14 (18)	—	38 (48)	80 (27)	0.22
Drinking places (alcoholic beverages)	—	66 (70)	—	7 (7)	94 (31)	6.00
Occupation						
Security guards	—	49 (92)	—	—	53 (18)	14.30
Retail sales workers	12 (24)	10 (20)	12 (24)	17 (33)	51 (17)	0.17
Supervisors of retail sales workers	7 (15)	12 (26)	8 (17)	41 (21)	46 (15)	0.26
Bartenders, waiters, and waitresses	—	9 (27)	—	17 (51)	33 (11)	0.21
Supervisors of food preparation and serving workers	—	—	11 (39)	12 (43)	28 (9)	0.72
Food service managers	—	—	6 (25)	8 (33)	24 (8)	0.52
Cooks	—	—	11 (58)	—	19 (6)	0.16
All other	8 (17)	8 (17)	17 (37)	13 (28)	46 (15)	0.10
Total	34 (11)	102 (34)	72 (24)	92 (31)	300 (100)	0.23

Note: Fatal injury totals and rates were generated by the authors with restricted access to CFOI microdata.

[a] Rate is based on the total number of non-robbery-related homicides (n=332) which includes 32 unknown WPV type.

[b] Dashed cells represent either no data or data do not meet BLS reporting criteria.

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TABLE V

Non-Robbery-Related Workplace Homicide Victims in the Retail Industry by Circumstance, CFOI, 2003–2008

Circumstance	Non-robbery-related homicides, n (%)
Arguments	151 (50)
Unknown arguments	47 (16)
Asked to leave the business establishment	24 (8)
Breaking up a fight/argument	18 (6)
Job related (work hours, employee had been fired from job)	13 (4)
Access denied into the establishment	9 (3)
Over personal relation	8 (3)
Over sale of merchandise	8 (3)
Escorting some unruly patrons	7 (2)
Refused service	5 (2)
Arguments other	12 (4)
Other circumstances	149 (50)
Killed by a personal relation, unknown circumstances[a]	71 (24)
Killed by a coworker, unknown circumstances	21 (7)
Maintaining order	9 (3)
Act of revenge	7 (2)
Caught in a crossfire	6 (2)
Random firing	6 (2)
Disgruntled customer	5 (2)
Unknown[b]	6 (2)
Other	18 (6)
Total	300 (100)

Note: Fatal injury totals were generated by the authors with restricted access to CFOI microdata.

[a] Includes violence from intimate partner, family member, or known person.

[b] Robbery was ruled out.