
Workplace Violence against Female Long-haul Truckers

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This article describes workplace violence issues experienced by long-haul female truckers in the US. Females comprise between six and ten per cent of long-haul truckers, and their numbers are growing. Data for this study were collected via a self-administered survey using a convenience sample of 51 female long-haul truck drivers at a major truck show. Forty-two per cent of women reported at least one type of workplace violence while working as a long-haul trucker. Sixty-seven per cent had feared for their personal safety while working during the previous year. Measures women take to ensure their safety at work included carrying a weapon, taking a self-defense class, and cautionary tactics regarding where they stopped to refuel and rest. Because women experience workplace violence differently than do men, different interventions need to be developed to ensure a healthy workforce.

Key Words: Workplace violence; domestic violence; women; long-haul truckers

Introduction

The purpose of this article is to describe workplace violence among long-haul female truck drivers in the US, based on a pilot study of 51 women truckers. An average of 20 workers are murdered each week in the US, and an estimated 18,000 workers per week are victims of non-fatal assault.² Almost two million workdays and millions of dollars are lost annually due to non-fatal assaults suffered at the workplace.³ Homicide is the leading cause of death among US women in the workplace and, depending on the geographic area, the first, second or third leading cause of death among all workers.⁴ Domestic violence often spills over into the workplace as well. Seventeen per cent of workplace homicides are perpetrated by an intimate partner.⁵ These statistics are reflective of the US workforce as a whole; however, a clearer understanding of the prevalence of workplace violence in individual professions, along with both profession-specific and gender-specific risk factors, is necessary to facilitate the development of comprehensive and effective approaches to address this significant, multifaceted issue. The purpose of this article is to discuss the types of violence as identified by the Iowa Report to the Nation on Workplace Violence,⁶ with a specific focus on types of workplace violence, perceptions of personal safety while on the job, and risk factors related to that violence in the long-haul trucking profession.

Review of literature

The number of women employed in traditionally male careers is increasing. The truck-driving industry in particular has seen the number of women increase dramatically during the past three decades. The US truck-driving industry employs nearly nine million workers. A significant subset (3.16 million) of these workers consists of long-haul truck drivers.⁷ The Bureau of Labor Statistics rated truck-driving as the third-largest growth occupation (tied with Registered Nurses), with a projected growth of 561,000 jobs from 2000 to 2010.⁸ The number of women truckers has increased

from an estimated 513 drivers in 1970⁹ to between 174,000 and 316,000 (six to ten per cent of all truckers) currently.¹⁰ The overall size of the transportation section of the economy, and projections for its growth, coupled with the non-traditional aspects of long-haul truckers' workplace environments and employment arrangements, underscores the importance of assessing this population in terms of workplace violence and of the specific risk factors associated with long-haul truck driving in women.

Violence in the workplace has gained increased attention as the awareness of its impact on workers and the workplace has grown. Workplace violence occurs on a continuum¹¹ and is defined as 'violent acts, including physical assaults and threats of assault, directed toward persons at work or on duty'.¹² Physical assault may range from slapping and hitting to the use of weapons, and usually results in injury or death. In addition to physical assault and threat of assault, harassment is also an act of violence at the worksite. Harassment is the creation of a hostile environment through unwelcome words, actions, and/or physical contacts that do not result in physical harm.¹³ Harassment may be expressed as racial, ethnic, or sexual prejudice, or may include an unreasonable number of unpleasant or dangerous assignments. Threats precede most episodes of physical assault.¹⁴

Approximately one million workers are assaulted each year in the US, comprising 15 per cent of all violent acts against US residents aged 12 and above.¹⁵ The National Crime Victimization Survey (NCVS), an annual, national, household-based survey, indicated that approximately 500,000 workers lose 1.75 million workdays annually and more than \$55 million in wages, not including annual leave and sick days, due to acts of workplace violence. In addition, one-sixth of all murders in the US are committed at the worksite.¹⁶

Worksites differ, and so do the types of workplace violence associated with them. Job characteristics associated with a higher risk of an employee becoming a victim of workplace violence include working night-time hours, low job satisfaction, greater job stress, and an increased likelihood of bringing a weapon to work.¹⁷ Researchers need to assist the various industries in identifying occupation-specific risk factors and in designing and developing appropriate interventions for preventing and/or mitigating the violence-producing effects of these factors. Both male and female truck drivers are at risk of violence in a workplace environment that changes daily as a result of the nature of their jobs. The transience of the job keeps drivers away from their families, friends, and other support systems for long periods of time; thus, their support networks are not easily accessible.¹⁸ Women face additional workplace environment issues. Organizational leadership that condones sexual harassment and sexually demeaning comments made by co-workers contribute to the increased odds of a woman being physically assaulted at work.¹⁹

Gender differences related to workplace violence need further assessment. Men are at greater risk of physical abuse in the workplace, whereas women are more likely to be targets of sexual harassment, rape, and stalking.²⁰ In a survey of 270 victims of co-worker violence (female, N = 86; male, N = 184), Tjaden and Thoennes²¹ found that 27 per cent of women were raped, 34 per cent were physically assaulted, 40 per cent were stalked, and eight per cent were threatened. In contrast, four per cent of men were raped, 79 per cent were physically assaulted, seven per cent were stalked, and 16 per cent were threatened. Women are more likely to be attacked by an intimate partner at work than are men,²² and they are more likely to die as a result of homicide at the workplace (39 per cent) than are men (15 per cent).²³

Although more men are murdered and physically assaulted at work than women, homicide is the number-one cause of death of women at the workplace. Women are less likely than men to be perpetrators of violence.²⁴ Tjaden and Thoennes²⁵ found that when the victim was female, 78 per cent of perpetrators were male; when the victim was male, 97 per cent of perpetrators were male. Female victims were more likely to lose time from work compared to male victims, and were also more likely to report the violence to the police, although only 27 per cent did so.

Verbal abuse, although not as obvious as physical assault, is experienced by both men and women, and can negatively affect a worker's sense of self and his/her effectiveness as an employee.²⁶ Because of its subtle nature, verbal abuse is difficult to assess; however, Baron and Neuman²⁷ found that among full-time employees (N = 178) verbal and passive forms of aggression occurred more frequently than physical or active forms of aggression.

Stress at work is a growing problem for female workers. Stress has been identified by as many as 60 per cent of female employees as their number-one problem at their place of employment.²⁸ Women in non-traditional occupational settings, such as heavy trucking, face additional health and safety risks, including sexual harassment and gender-based discrimination.²⁹

Violence and stress are two interrelated issues affecting the workforce. In-depth studies of these issues have not been conducted with long-haul truckers in general, or with women who are in non-traditional, male-dominated fields such as the long-haul trucking industry. Epidemiological data on violence and stress experienced by this under-studied population are needed to plan effective interventions to reduce occupational risks. Studies employing both qualitative and quantitative methods are needed to articulate risk and protective factors related to violence against workers.³⁰

Methods

Design

Data for this cross-sectional study were collected via a self-administered survey, using a convenience sample of 51 female long-haul truck drivers at a major truck show in the Northeastern US during 2002. A data collection booth was set up in the exhibition area of the truck show, where the participants completed a survey on health status, health behaviors, workplace violence, relationship violence, and demographic data. Two researchers were present to distribute the surveys and to answer participants' questions.

Prior to data collection, the University of Kentucky's Institutional Review Board approved the study and informed consent was received from each participant.

Sample

Fifty-one female long-haul truck drivers completed the survey. The women were recruited while attending the North America Truck Show in Boston, Massachusetts during May 2002. Inclusion criteria were that the women were long-haul truck drivers (away from home overnight) and that they spoke English. Women were invited to participate in the study if they responded 'yes' to the question 'Are you a long-haul truck driver?'

Sixty-eight per cent of the women drivers were between 30 and 50 years old (mean 40.3; SD = 10.6); 47 per cent were married; 38 per cent had children less than 18 years old; 56 per cent were high school or GED graduates, and 42 per cent had some college education. Most of the women in this sample were Caucasian (95.8 per cent), and reported their home as being in the Northeastern US (84.8 per cent). Almost half (49 per cent) of the women reported driving with a partner, and of these 83 per cent reported their driving partner was also their spouse/intimate partner.

Measures

The *Conflict Tactics Scale* (CTS)³¹ is an 18-item scale that measures the use of 'reasoning, verbal aggression and violence' tactics to settle differences between spouses and partners within the previous year. Responses are coded on a seven-point scale (0 to 6) to indicate the frequency with which each tactic is used. Three subscale scores are computed: reasoning (three-item, range 0 to

18), verbal aggression (six-item, range 0 to 6), and violence (eight-item, range 0 to 48).³² The violence subscale was reduced to five items due to lack of responses to the three most extreme violence tactics (beating up, threatening with knife/gun, using knife/gun). The violence subscale was also dichotomized to measure whether or not the woman or her partner had resorted to violence when dealing with conflict with each other in the previous year.

The *Perceived Stress Scale - 10* (PSS-10).³³ This ten-item scale was used to measure the degree to which the woman found situations in her life to be stressful. The PSS-10 is an adaptation of the original 14-item Perceived Stress Scale. The PSS-10 has been used extensively and has good reliability and validity.³⁴

The *Perception of Job Safety Questionnaire* (PJS) was developed by the research team. It measured the respondents' perceptions of safety on the job. Prior to use, the PJS, along with the other instruments, was reviewed and pilot-tested by female truck drivers for clarity and content validity.

Personal/socio-demographic data were collected to describe the health status (eg current health problems, medications, etc) and other characteristics of the female long-haul truck drivers.

Data analysis

The primary analysis strategy in addressing the purpose of the study was descriptive: means, standard deviations, and frequency distributions were used to summarize the survey results.

Results

Conflict Tactics Scale. Sixty-one per cent (N = 31) of the women completed this section, reporting tactics they and their husbands/partners used when dealing with conflict with each other. Coefficient alphas for each of the subscale scores for respondents and for their partners is shown in Table 1. Standardized subscale scores were calculated, and are shown in Table 2. There was no significant relationship between age and any of the subscale scores.

Table 1. Coefficient alpha for CTS subscales

	Respondent	Partner
Reasoning	0.52	0.47
Verbal aggression	0.70	0.80
Violence*	0.71	0.84

* 'Violence' subscale reduced to five items due to lack of response to three most extreme violence items.

Table 2. Standardized CTS subscale scores

	Respondent	Partner
Reasoning	44.2	37.4
Verbal aggression	20.7	26.0
Violence	2.9	3.8

Twenty-four per cent (N = 7) of the women reported resorting to some sort of violence, and 21 per cent (N = 6) reported that their partners had resorted to violence in conflict situations in the previous year.

Perceived Stress Scale. Coefficient alpha reliability for the PSS-10 was 0.84. With a possible range of 0–40, the mean score on the PSS-10 was 16.2 (SD = 6.5). This is significantly higher ($t = 2.61, p = 0.009$) than the mean for the 1406 females interviewed in a national probability sample of the general population (mean = 13.7, SD = 6.6).³⁵ Driving status (with or without a partner) was unrelated to PSS-10 score ($t = 1.21, p > |t| = 0.232$).

PJS Questionnaire. Forty-two per cent of the women reported at least one type of workplace violence while working as a long-haul trucker: 14 per cent assault, four per cent rape, ten per cent robbery, 35 per cent truck vandalized. The violent episodes reported by the women occurred while at work. Sixty-seven per cent had feared for their personal safety while working during the previous year. The perception of job safety was not affected by whether or not the woman trucker had a driving partner (chi-square = 0.386, $p = 0.534$).

When women responded to questions about measures that companies and the women took for their safety, we found that only 28 per cent of the companies provided sexual harassment training; 17 per cent provided violence prevention training; and 11 per cent had a policy for reporting violence or harassment. More than half of the companies provided delivery site security measures (60 per cent), but only half provided a violence protection policy.

Women truckers reported taking security measures to provide for their own safety while on the job; carrying a weapon while on the job was the most frequently mentioned. Of the 16 women who carried a weapon, six reported carrying knives, and eight reported carrying 'other weapons'. Eighteen per cent of the women had taken self-defense classes, and 14 per cent reported carrying mace or some other spray in the truck. Women who reported having their safety threatened while driving (eg road rage, tail-gating) were more likely to report carrying a weapon while at work ($p = 0.04$).

Discussion

Violence is a public health problem in the United States that has reached epidemic magnitude. Long-haul truck drivers are at unique risk of violence due to the isolation of the job, the value of their cargo, the transportation hazards, and the close proximity of those who drive with a partner (whether intimate partner or company-assigned). This pilot study provides evidence that violence and the resultant fear for safety is an issue at the workplace for women long-haul truckers.

Though the *Conflict Tactics Scale* has been useful in the study of relationship violence, for this study it was less useful due to partners not completing the same survey, and there thus being no comparison data. The women who did complete the survey indicated that they were as likely to resort to some sort of violence as their partner. This survey did not provide data related to the identity of the perpetrator of acts of violence. Other research, however, has indicated that women are less likely than men to be the perpetrators of violence.³⁶ When women were the victims of abuse, 78 per cent of perpetrators were male; when men were the victims, 97 per cent of perpetrators were male. Employers should pay attention to verbal abuse at the worksite, as it is an important precursor to a violent episode. The CTS was not particularly useful with this sample of truckers because we surveyed women truckers only. The CTS is more suited to a couple survey, with both partners completing the survey and providing the researcher with comparison data related to aggression and violence within the relationship. If this tool is to be useful in future trucker studies, we recommend that it be administered to driving partners, both intimate and non-intimate, to determine the level of violence within relationships.

Perceived Stress Scale. Driving status (with or without a partner) was unrelated to PSS-10 score, thus indicating that driving partners do not mitigate stress. However, the high level of stress in female long-haul truck drivers, when compared with the general population, is an important finding that requires further study with a larger sample, and is included in the national study of long-haul truckers currently being conducted.

PJS Questionnaire. The PJS provided information about the types of violence the women had experienced, as well as the types of security measures which they provided for themselves or which their companies provided. This study provides evidence that most trucking companies do not implement measures to provide for the security of their drivers. Barriers to training need to be identified, and programs related to violence prevention need be developed to overcome these barriers.

Some women truckers do use some security measures, such as carrying a weapon at work, carrying mace or other spray, or taking self-defense classes. Further study needs to be undertaken to examine whether such security measures make a difference in the women's experience of violence. Further research into the differences in workplace violence for women and men also needs to be carried out, so that appropriate worksite interventions can be developed and implemented. In addition to the types of violence, it is important to understand who is most at risk of violence and under what circumstances it is likely to occur. For example, does a trucker's propensity for violence decrease with experience as a trucker?

This study is subject to the usual limitations of a cross-sectional design and to the limits and biases of self-report. The sample was self-selected at a trade show in the Northeastern US, and thus cannot be generalized to the US truck-driving population as a whole. When a partner was present the researchers attempted to distract him while the participant completed the survey. For questions about personal relationships, the women may not have been able to answer truthfully or completely when a partner was standing nearby.

Workplace violence places many workers at risk. Employees in the transportation industry are at higher risk than are those in most other occupations. As the number of women in the trucking industry, as well as the number of women in other male-dominated occupations, increases, health and safety professionals need to assess needs and develop appropriate interventions to ensure occupational safety. The purpose of this study was to examine issues of workplace violence among female drivers in the long-haul trucking industry. In addition, and perhaps in conjunction with the violence the women experience, they also experience stress at a significantly higher level than the general population of women in the US.

Long-haul female truckers are at high risk of workplace violence. This study provided the necessary data for a national study (currently in progress) to document the incidence and distribution of work-place violence among female *and* male long-haul truckers in the US. This information will be collected from a large national sample of both women and men truckers, to further delineate the violence experienced and the response from the industry to decrease violence at the worksite. This information should be useful in a variety of occupations that have similar worksite issues. Because women experience workplace violence differently than do men, different interventions need to be developed.

Notes

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- 2 National Institute of Occupational Safety and Health (2001a) *National Occupational Research Agenda: Update 2001*. DHSS (NIOSH) publication No. 2001-147. Washington, DC: US Department of Health and Human Services, Public Health Services, Centers for Disease Control, National Institute for Occupational Safety and Health.
- 3 National Institute of Occupational Safety and Health (1996) *Violence in the Workplace: Risk Factors and Prevention Strategies*. Current Intelligence Bulletin No. 57. DHSS (NIOSH) publication No. 96-100. Washington, DC: US Department of Health and Human Services, Public Health Services, Centers for Disease Control, National Institute for Occupational Safety and Health.
- 4 Simonowitz, J.A., Rigdon, J.E. and Mannings, J. (1997) Workplace Violence: Prevention Efforts by the Occupational Health Nurse. *Journal of the American Association of Occupational Health Nurses*. Vol. 45, No. 6, pp 305–15.
- 5 National Institute of Occupational Safety and Health (2001b) *Women's Safety and Health Issues at Work*. DHSS (NIOSH) Publication No. 2001-123. Washington, DC: US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute of Occupational Safety and Health.
- 6 Loveless, L. (ed.) (2001) *Workplace Violence: A Report to the Nation*. Iowa City, IA: Injury Prevention Research Center, University of Iowa. At <http://www.public-health.uiowa.edu/IPRC/NATION.PDF>.
- 7 United States Bureau of Labor Statistics (2001) *Occupational Statistics*. Washington, DC: BLS.
- 8 Eisenberg, D. (2002) The Coming Job Boom. The HelpWanted Ads May Look Thin, But Thanks to Aging Baby Boomers, That's About to Change. *Time*. Vol. 159, No. 18. At <http://web.lexis-nexis.com>.
- 9 Lembright, M.F. and Riemer, J.W. (1982) Women Truckers' Problems and the Impact of Sponsorship. *Work and Occupations*. Vol. 9, No. 4, pp 457–74.
- 10 American Trucking Association (1999) *Women's Information Pack*. At www.trucking.org/infocenter/infopacks/women.html; Renner, D.A. (1998) Cross-country Truck Drivers: A Vulnerable Population. *Nursing Outlook*. Vol. 46, No. 4, pp 164–8.
- 11 Wilkinson, C.W. (2001) Violence Prevention at Work: A Business Perspective. *American Journal of Preventative Medicine*. Vol. 20, No. 2, pp 155–60.
- 12 National Institute of Occupational Safety and Health (1996) op cit, p 1.
- 13 Warshaw, L.J. and Messite, J. (1996) Workplace Violence: Preventative and Interventive Strategies. *Journal of Occupational and Environmental Medicine*. Vol. 38, No. 10, pp 993–1006.
- 14 Wilkinson, op cit.
- 15 National Institute of Occupational Safety and Health (2001a and 2001b) op cit.
- 16 Warshaw and Messite, op cit.
- 17 Budd, J.W. and Arvey, R.D. (1996) Correlates and Consequences of Workplace Violence. *Journal of Occupational Health Psychology*. Vol. 1, No. 2, pp 197–210.
- 18 Renner, op cit.
- 19 Sadler, A.G., Booth, B.M., Cook, B.L., Torner, J.C. and Doebbeling, B.N. (2001) The Military Environment: Risk Factors for Women's Non-fatal Assaults. *Journal of Occupational and Environmental Medicine*. Vol. 43, No. 4, pp 325–34.

- 20 Leiter, M.P., Frizzell, C., Harvie, P. and Churchill, L. (2001) Abusive Interactions and Burnout: Examining Occupation, Gender, and the Meaning Role of Community. *Psychology and Health*. Vol. 16, No. 5, pp 547–63.
- 21 Tjaden, P.G. and Thoennes, N. (2001) Coworker Violence and Gender: Findings from the National Violence Against Women Survey. *American Journal of Preventative Medicine*. Vol. 20, No. 2, pp 85–9.
- 22 Women’s Bureau, United States Department of Labor (1996) *Domestic Violence: A Workplace Issue*. Facts on Working Women No. 96-3, Washington, DC: Department of Labor; Craven, D. (1997) *Sex Differences in Violent Victimization – 1994*. Washington, DC: Office of Justice Programs, US Department of Justice.
- 23 Toscano, G. and Jack, T. (1996) Occupational Injury Fatalities – 1994. *Statistical Bulletin of the Metropolitan Insurance Company*. Vol. 77, No. 2, pp 12–22.
- 24 McFarlane, J., Malecha, A., Gist, J., Schultz, P., Willson, O. and Fredland, N. (2000) Indicators of Intimate Partner Violence in Women’s Employment: Implications for Workplace Action. *Journal of the American Association of Occupational Health Nurses*. Vol. 48, No. 5, pp 215–20; Tjaden, P.G. and Thoennes, N. (2000) *Full Report of the Prevalence, Incidence, and Consequences of Violence Against Women: Findings from the National Violence Against Women Survey*. Washington, DC: Office of Justice Programs, National Institute of Justice, US Department of Justice; Tjaden and Thoennes (2001) op cit.
- 25 Tjaden and Thoennes (2000) op cit; Tjaden and Thoennes (2001) op cit.
- 26 Keashly, L. (1998) Emotional Abuse in the Workplace: Conceptual and Empirical Issues. *Journal of Emotional Abuse*. Vol. 1, No. 1, pp 85–117; Keashly, L., Trott, V. and MacLean, L.M. (1994) Abusive Behavior in the Workplace: A Preliminary Investigation. *Violence and Victims*. Vol. 9, No. 4, pp 341–57.
- 27 Baron, R.A. and Neuman, J.H. (1996) Workplace Violence and Workplace Aggression: Evidence on Their Relative Frequency and Potential Causes. *Aggressive Behavior*. Vol. 22, No. 3, pp 161–73.
- 28 Swanson, N.G., Piotrkowski, C.S., Keita, G.P. and Becker, A.B. (1997) Occupational Stress and Women’s Health. In Gallant, S.J., Keita, G.P. and Royak-Schaler, R. (eds) *Health Care for Women: Psychological, Social, and Behavioral Influences*. Washington, DC: American Psychological Association.
- 29 National Institute of Occupational Safety and Health (2001b) op cit; Reed, D.B. and Cronin, J.S. (2003) Health on the Road: Issues Faced by Female Truck Drivers. *Journal of the American Association of Occupational Health Nurses*. Vol. 51, No. 5, pp 120–5.
- 30 Runyan, C.W. (2001) Moving Forward with Research on the Prevention of Violence Against Workers. *American Journal of Preventative Medicine*. Vol. 20, No. 2, pp 169–72.
- 31 Strauss, M.A. (1979) Measuring Intrafamily Conflict and Violence: The Conflict Tactics (CT) Scales. *Journal of Marriage and Family*. Vol. 41, No. 1, pp 75–88.
- 32 Strauss, op cit; Soeken, K., McFarlane, J., Parker, B. and Lominack, M.C. (1998) *The Abuse Assessment Screen*. In Campbell, J.C. (ed.) *Empowering Survivors of Abuse*. Thousand Oaks, CA: Sage.
- 33 Cohen, S., Kamrck, T. and Mermelstein, R. (1983) A Global Measure of Perceived Stress. *Journal of Health and Social Behavior*. Vol. 24, No. 4, pp 385–96.
- 34 Cohen, S. and Williamson, G. (1988) Perceived Stress in a Probability Sample of the United States. In Spaceapan, S. and Oskamp, S. (eds) *The Social Psychology of Health*. Newbury Park, CA: Sage.
- 35 Cohen and Williamson, op cit.
- 36 McFarlane, op cit; Tjaden and Thoennes (2000) op cit; Tjaden and Thoennes (2001) op cit.