Office of Occupational Medicine
and Medical Surveillance
U.S. Department of Energy

SURVEY OF WORKPLACE VIOLENCE IN DEPARTMENT OF ENERGY FACILITIES

Center for Human Reliability Studies
ORAU/ORISE

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The Center for Human Reliability Studies (CHRS) provides a vehicle for achieving quality-oriented program support for the Department of Energy through research and analysis, technical guidance, and operational support in all areas of human reliability relating to occupational medicine, facility safety, personnel security, and the Personnel Security Assurance Program. CHRS also conducts research on issues involving personnel reliability.

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INTRODUCTION

The incidence of violent acts committed in the workplace is increasing at an alarming rate. The U. S. Department of Justice (DOJ) reports that more than one million violent crimes occur in the workplace annually. In a 1994 survey, the DOJ declared the worksite the most likely place to become a victim of a violent crime (*Security Director's Digest*, August 1995). No workplace or profession is immune from such acts. According to an occupational study released by Northwestern National Life Insurance (1993), a strong relationship exists between job stress and workplace violence. This study also revealed that 36% of workers considered their jobs "highly stressful," which was more than twice the percentage in 1985. The National Institute for Occupational Safety and Health has called for immediate action to prevent workplace violence, which has become a serious public health hazard. The Labor Department supports this concern with research showing that workplace homicide is the number one cause of death for women and second for men (*Corporate Security Digest*, 1994; *The Lipman Report*, 1994; Gerson, 1993; Stuart, 1992). Castillo and Jenkins (1994), in reviewing industries and occupations at high risk for workplace homicides, concluded that homicides are an occupational health problem of significant proportions.

Employees across the country are facing the fear of losing their jobs due to massive reorganizations and downsizing, and this fear is a major source of additional workplace stress. Downsizing, once a problem that primarily concerned blue-collar workers, now poses a threat to employees at all levels of an organization. It also pervades many trades and industries. For example, IBM, which had a policy of lifetime employment, eliminated more than 100,000 jobs in the first four years of this decade (Smith, 1994).

There are generally three types of downsizing provisions: "surgical" reductions, across-the-board cuts, and voluntary retirements. While "surgical" reductions are often used in government-related work because of short-term fiscal funding, a decline in morale and productivity often results due to the spread of rumors and employee fears of being next. Across-the-board cuts, although they

concentrate on deleting positions and not people, can result in late or incomplete products or services as well as additional stress on remaining workers when the workload is not reduced along with the number of workers doing the tasks. Voluntary or "early" retirements are a favored option. In November 1993 alone, 800 scientists at both Lawrence Livermore and Los Alamos were expected to accepted the early retirement plan offered (Anderson, 1993).

With the government now addressing changing missions and new technologies, downsizing and reorganization are becoming more prominent, particularly in the nuclear defense industry. The historical need for mass weapons production has changed to dismantling these devices, and research scientists are now focusing on environmental cleanup rather than development of more weapons. Because of these changes and tightening budgets, job stability no longer exists in this arena. All levels of the Department of Energy (DOE) nuclear complex are being threatened with job loss and expanded duties for remaining employees. A psychologically troubled worker who believed that his employment was secure may be unable to cope with a reduction in force that leaves him unemployed. Five years after a reduction in force, workforce survivors still experience symptoms of stress, fatigue, decreased motivation, sadness, and depression, in addition to the extra workload (Noer, 1993; *OSHA Week*, 1993). These heightened stress levels are likely to result in increasing incidents of workplace violence in the DOE complex.

Medical/health care professionals are not immune to workplace violence, and occupational health care providers may be at special risk. Soloff (1987) stated, "Violence is endemic in the mental health treatment setting and constitutes a real if unacknowledged occupational hazard." The majority of health-related workplace violence studies have examined the risk to psychiatrists and other therapists (Bernstein, 1981, Lanza, 1983; Poster and Ryan, 1989; Ryan and Poster, 1989). Lipscomb and Love (1992) reported the high violence risk settings to be mental health care facilities, emergency departments, pediatric units, medical-surgical units, and long-term care facilities. They further concluded that few studies attempted to assess the financial burden from a violent incident or to gage the true emotional and professional costs borne by the victim. The issue is further compounded by the variety of definitions which are used when describing patient

violent incidents. These range from the feeling of being threatened (Jones, 1985; Lanza, 1988), to assaults (Aiken, 1984; Carmel and Hunter, 1989), property damage (Levy, 1976; Skodal and Karasu, 1978), and verbal assault (Greenfield et al. 1989; Morrison, 1989). In some instances even rape in the workplace has not been described as workplace violence and has not incurred the attention in the medical or occupational safety literature (Seligman et al., 1987). Clearly the health care environment is not immune to such violent acts. With the DOE's current downsizing, the occupational medical departments will be conducting an increasing number of termination medical evaluations which could be emotionally charged and could place the health care provider in a potentially volatile setting (Boxer, 1993).

Doctors, nurses, and other health care professionals need to be equipped to deal with the potential threat of violence within their environment and the aftermath of workplace violence incidents (internal and external to their environment). It is also crucial that they be prepared to help detect potential perpetrators. Medical personnel detailed to DOE facilities should have an in-depth understanding of workplace violence because the consequences of an act of violence in a nuclear facility may be far more serious than in other occupational settings. The health care provider working in the DOE's Occupational Medical Program may be at special risk due to referrals for termination examinations, fitness for duty referrals, and for evaluation of troubled employees. The occupational health professionals may well have to deal with the lingering effects of past violent incidents on employees (Wolf, 1994), which may also have various litigation consequences (Goldman, 1994).

STUDY DESIGN

In order to evaluate the occurrence of workplace violence incidents within the DOE complex, the DOE Office of Occupational Medicine and Medical Surveillance instituted a preliminary study to investigate the scope and magnitude of this problem. The first phase of this evaluation was the development and analysis of a questionnaire regarding occurrences of violence in the workplace. This questionnaire was developed by the Center for Human Reliability Studies (CHRS) and sent to human resource and medical personnel throughout the DOE complex who had access to documented incidents of workplace violence that had occurred. Information collected on each of these incidents included the following:

type of incident
location (on- or off-site)
category of perpetrator (employee, spouse, self)
job classification of perpetrator
category of target of violence
method of violence
alcohol/drug related
consequences of incident to perpetrator
gender of perpetrator
age of perpetrator

Using information obtained from the first survey, a second questionnaire was developed specifically addressing concerns of health care providers with regards to potential violent incidents at contractor occupational medical facilities. Questions on this survey were directed at collecting information on physical and verbal abuse of health care providers by patients and on policies and procedures concerning workplace violence. This second survey was sent to medical directors at DOE facilities throughout the country for distribution to their staffs.

RESULTS

The first survey yielded data on 74 incidents of workplace violence occurring at 25 different DOE facilities. Nearly 30% (21) of the incidents involved weapons. These included 11 with guns, two with knives, two with cyanide, two with books, and one each with a pipebomb, a hammer, an electric screwdriver, and an axe handle. Figure 1 shows incidents by type and location. It reveals that although most incidents took place on-site, several serious events, murder and suicide, occurred off-site. Investigating violent episodes by type and gender, Figure 2 shows that the vast majority were carried out by males. Only four (5%) of the incidents, one murder, one stalking, and two verbal threats, were committed by women. Because age was unknown for nearly 23% of the perpetrators, the age distribution shown in Figure 3 is subject to uncertainty. Few incidents were committed by those known to be under age 30 or over age 50. Figure 4 reveals that there was little difference in the number of violent incidents carried out by white collar and blue collar workers. Figures 5 and 6 show that employees are by far the most common perpetrators and targets of workplace violence. Figure 7 reports that 80% of the incidents are not linked to substance abuse. Counseling of the perpetrator was the most common consequence (39%), as revealed in Figure 8. However, 18% of the perpetrators either resigned or were terminated as a result of an incident and another 33% were either arrested or disciplined. Tables 1 through 8 correspond to Figures 1 through 8 and present exact numeric distributions of the data.

Data collected from the Occupational Medicine Workplace Violence Survey revealed that 39% of the facilities had some type of written corporate policies and procedures regarding violence in the workplace, while 13% of the occupational medical programs had such policies and procedures regarding dealing with violent or potentially violent individuals. Twenty-five percent of the health care professionals responding believed that workplace violence was a problem in the DOE facilities in which they were employed. However, when queried about personal safety as an occupational health care provider, fewer than 20% were at least somewhat concerned, as shown in Figure 9. Figure 10 shows that over one-third of the respondents had experienced personal incidents of patients verbal abuse toward them, with 5% undergoing such episodes at least once

a month. None, however, had ever been physically assaulted by a patient. Table 9 and Table 10 present the numerical distributions corresponding to Figure 9 and Figure 10.

Results of an internal survey of workplace violence at one of the national labs indicate three physical altercations requiring medical attention and increased security occurred during 1995. Also, seven verbal threats occurred requiring intervention up to and including placing the subject on investigative leave and counseling. Subsequent to the distribution of reduction in force notices at this facility additional aggressive behavior and verbal threats were noted, again requiring increased security and counseling.[1]

[1]Personal communication from Todd Conklin.

DISCUSSION

Facilities employing approximately 96,000 workers responded to these initial voluntary surveys resulting in a response rate of 28% for the questionnaire that collected information on documented incidents from human resource and medical personnel and a response rate of 62% for the second survey, which was sent specifically to the occupational medical directors. Even though the database for this study was somewhat limited, provisional conclusions can be drawn since it is likely that the responding facilities were representative. However, to obtain conclusive results DOE leadership must be resolute in supporting a thorough inquiry based on data from all DOE nuclear facilities.

The findings of this preliminary study reveal a clear need for an increase in workplace violence awareness. Anfuso (1994) supports additional action such as hotlines and awareness training. Of utmost importance is an upgrade in security to prevent employees from bringing firearms into nuclear facilities. Thirty-six percent (4) of the incidents involving guns were on-site. Although this number is small, the degree of danger is so great that this potential hazard should be addressed without delay. Intervention programs dealing with the signs of troubled workers and referral procedures should be targeted to labor, management, and technical males under age 50. Males under age 30 should be included among those targeted for this intervention program because it is likely that the rate of violent incidents perpetrated by this group is much higher than the number of incidents suggests.

An unexpected finding of this preliminary investigation is the lack of evidence for substance abuse being a major contributor to workplace violence in the DOE complex. This tentative conclusion should be examined critically in a follow-up study based on more complete data since it is not in agreement with the results of related studies (Baron, 1993, Cook and Moore, 1993, Boxer, 1993).

Written policies and procedures for dealing with violent episodes and their aftermath should be adopted at all DOE facilities. Having written policies and procedures in place will ensure that

appropriate action is taken during and immediately after a violent incident, which should help to reduce the damaging long-term impact in the workplace. Special training should be provided for occupational health care professionals in personal safety and in identifying potential perpetrators among patients seen during periodic physical examinations and other occupational medical treatments. Anglin, Kyriacou, and Hutson (1994) in evaluating emergency medicine residents' perspectives on violence concluded that personal safety should be a part of the emergency medicine residency curriculum.

CONCLUSION

Clearly these data show that DOE nuclear facilities are experiencing various types of workplace violence incidents that appear to be increasing in frequency and magnitude. Even these limited data document a significant number of violent incidents that include assaults and murder (off-site) and reveal security breaches that include guns in the workplace. Younger male employees in all types of jobs are most likely to react to workplace or personal stresses in a violent manner while on the job. This violence may be exhibited in a wide variety of ways in the workplace from shouting to attacking a coworker with an electric screwdriver or even a gun.

It is evident from the variation in the completeness and consistency of the data available for this initial study that guidelines are needed regarding what information should be collected and how access to this documentation should be made available. DOE should require that all incidents of workplace violence in the nuclear complex be reported in standard format to a central location within 30 days of occurrence. This will ensure that accurate and complete data are available for further, more definitive study. In addition, these data could prove to be valuable in case of future litigation.

In the judgment of a quarter of the DOE occupational health care survey respondents, workplace violence is a problem at their facility. With additional stress to workers resulting from threatened or actual job loss and additional duties for remaining workers, this problem is likely to become more severe unless action is taken to counteract these pressures. Violent incidents must be thoroughly documented to provide both accurate data for determining the current level of workplace violence in DOE facilities and information that may be vital in litigation. Other pressing needs are programs for increased awareness and the institution of preliminary measures to lower the number and lessen the severity of violent incidents.

A definitive evaluation of the issue of violence in the DOE nuclear complex will require a firm commitment by appropriate DOE authority in a time of diminishing resources. However, the

consequences of failing to clarify the magnitude of this problem and take steps to lessen further incidents may be serious. We propose a follow-up study with a mandatory response questionnaire evolved from the two original data collection instruments. This questionnaire would contain additional questions to more accurately capture and classify occurrences of violent events during specific time periods. Data derived from the proposed research will (1) accurately assess the level of incidents at DOE sites, (2) evaluate whether substance abuse was a causative element, (3) highlight potential causative factors, (4) outline training needs, and (5) indicate the need for a DOE-wide workplace violence policy. After a comprehensive and systematic study of workplace violence throughout the DOE nuclear complex is completed, appropriate choices can be made for practical interventions to reduce the number and violence level of these incidents.

RECOMMENDATIONS

Based on the results of this preliminary study we make the following recommendations:

(1) Establish a Central Reporting System. Clearly define what constitutes an incident of workplace violence. Require that all such incidents be reported to a central location within 30 days of occurrence. Provide a standard form (preferably electronic) to report incidents and require that all fields be completed, including fields for collecting information on substance abuse.

(2) Provide standard DOE-wide Workplace Violence Training. While core information should be provided to the entire workforce, specific aspects should be emphasized for selected groups. Training targeted at young males, for example, should feature outlets for stress reduction. Females should be provided with information on personal safety in the workplace. Supervisors should learn to recognize signs of potential problems among their direct reports. Health care providers should be prepared to identify potential perpetrators among their patients, especially during periodic examinations.

(3) Initiate a DOE-wide Workplace Violence Policy. Approximately one-third to one-half of the DOE facilities have written policies and procedures regarding violence in the workplace. A team of persons experienced in implementing these existing policies could, in a timely manner, compose the initial draft of a DOE-wide policy.

(4) Thoroughly evaluate the issue of workplace violence in DOE nuclear facilities. Conduct a comprehensive, structured assessment based on carefully collected data. Use the results of the assessment to select appropriate, practical interventions for reducing the level of violence in the workplace.

(5) Investigate the repercussions of violence in DOE facilities. Information should be collected on psychological and other repercussions of past incidents of workplace violence between victims and their coworkers. This information should include objective data such as annual number of sick days before and after the incident occurred.

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APPENDIX

TABLES AND FIGURES

WORKPLACE VIOLENCE SURVEY

TABLE 1: Incidents by Type and Location

TYPE OF INCIDENT	NUMBER ON SITE	NUMBER OFF SITE
Verbal Threat	24	4
Verbal Assault	3	0
Physical Assault	9	6
Vandalism	2	3
Suicide	1	4
Suicide Threat	1	0
Temper Explosion	4	0
Murder	0	4
Possession of Firearms	2	0
Threat (Weapon Present)	4	0
Bomb Threat	1	0
Homicidal Intentions	1	0
Stalking	0	1

Based on data from February 1995 survey.

WORKPLACE VIOLENCE SURVEY

Table 2: Number of Incidents by Type and Gender

TYPE OF INCIDENT	MALE PERPETRATOR	FEMALE PERPETRATOR	UNKNOWN
Verbal Threat	20	2	6
Verbal Assault	2	0	1
Physical Assault	13	0	2
Vandalism	4	0	1
Suicide	5	0	0
Suicide Threat	1	0	0
Temper Explosion	4	0	0
Murder	3	1	0
Possession of Firearms	2	0	0
Threat (Weapon Present)	2	0	2
Bomb Threat	1	0	0
Homicidal Intentions	1	0	0
Stalking	0	1	0

Based on data from February 1995 survey.

WORKPLACE VIOLENCE SURVEY

Table 3: Age of Perpetrator

AGE GROUP	NUMBER OF PERPETRATORS
Under 30 Years	6
30's	27
40's	16
50's	6
60's	2
Age Unknown	17

Based on data from February 1995 survey.

WORKPLACE VIOLENCE SURVEY

Table 4: Job Classification of Perpetrator

TYPE OF JOB	NUMBER OF PERPETRATORS
White Collar	28
Blue Collar	31
Unknown	15

Based on data from February 1995 survey.

WORKPLACE VIOLENCE SURVEY

Table 5: Category of Perpetrator

PERPETRATOR CATEGORY	NUMBER OF INCIDENTS
Employee	60
Spouse/Companion	7
Self	6
Unknown/NA	1

Based on data from February 1995 survey.

WORKPLACE VIOLENCE SURVEY

Table 6: Category of Target

TARGET CATEGORY	NUMBER OF INCIDENTS
Employee	53
Spouse/Companion	10
Self	6
Unknown/NA	5

Based on data from February 1995 survey.

WORKPLACE VIOLENCE SURVEY

Table 7: Alcohol/Drug Related Incidents

ALCOHOL/DRUG RELATED?	NUMBER OF INCIDENTS
Yes	10
Possibly	4
No	54
Unknown	6

Based on data from February 1995 survey.

WORKPLACE VIOLENCE SURVEY

Table 8: Consequences of Incident on Perpetrator

CONSEQUENCE	NUMBER OF OCCURRENCES
Disciplined	19
Arrested	5
Terminated	11
Resigned	2
Counseled	29
Other	5
None/NA	3

Based on data from February 1995 survey.

OCCUPATIONAL MEDICINE WORKPLACE VIOLENCE SURVEY

Table 9: Concern of Personal Safety

LEVEL OF CONCERN	NUMBER OF CARE PROVIDERS
No/NA	33
Slightly	20
Somewhat	10
Yes	2

Based on data from March 1995 survey.

OCCUPATIONAL MEDICINE WORKPLACE VIOLENCE SURVEY

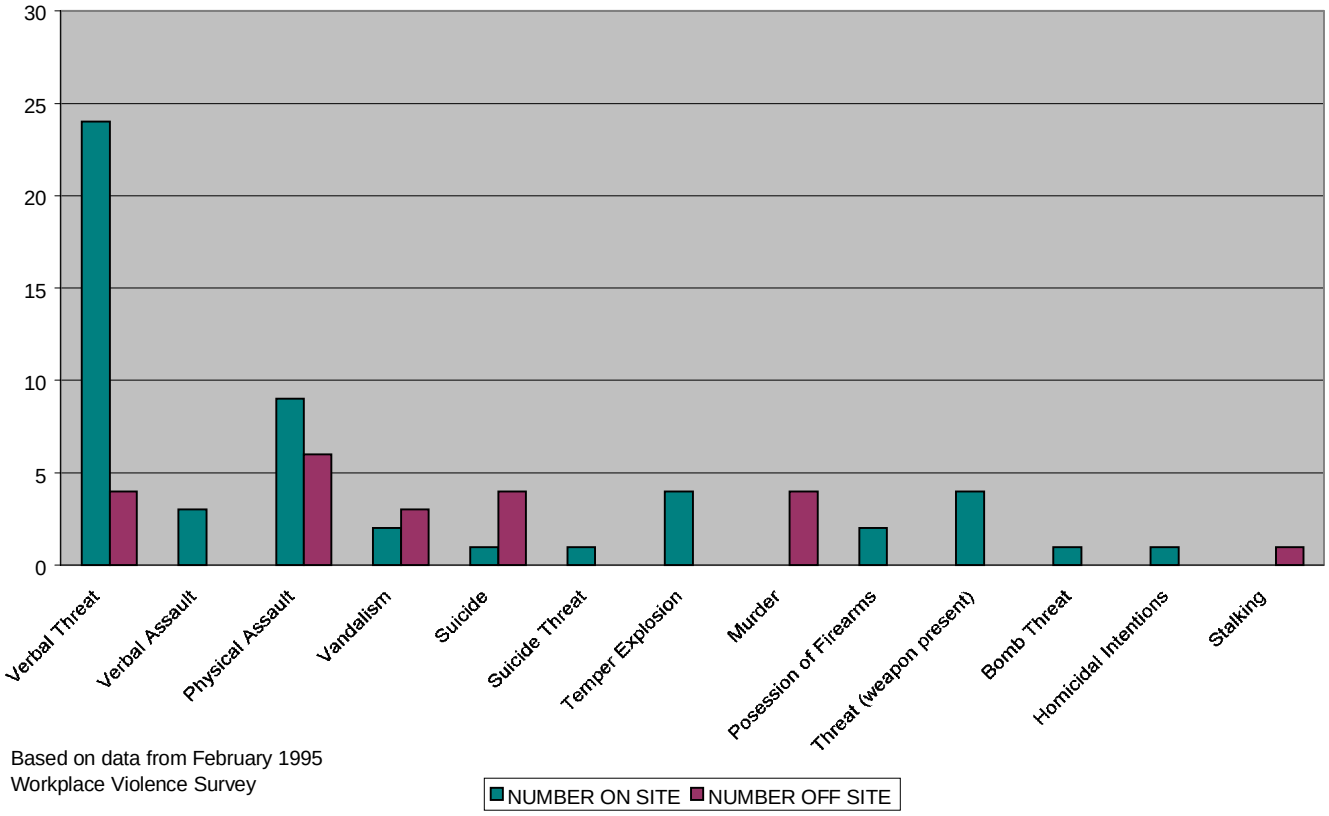
Table 10: Verbal Abuse of Care Providers

FREQUENCY	NUMBER OF CARE PROVIDERS
Never	42
Rarely	19
Monthly	2
Weekly	1

Based on data from March 1995 survey.

Figure 1

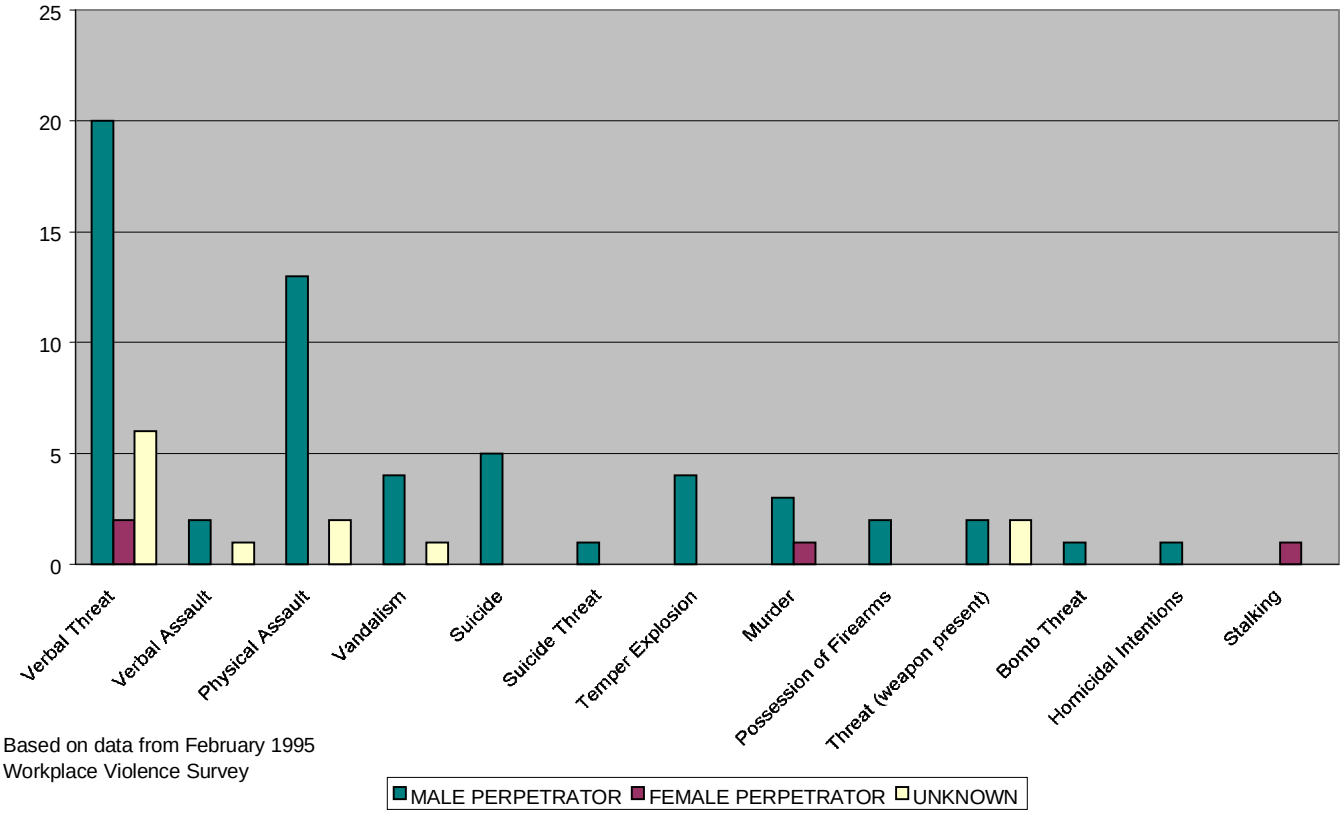
NUMBER OF INCIDENTS BY TYPE AND LOCATION



Based on data from February 1995
Workplace Violence Survey

Figure 2

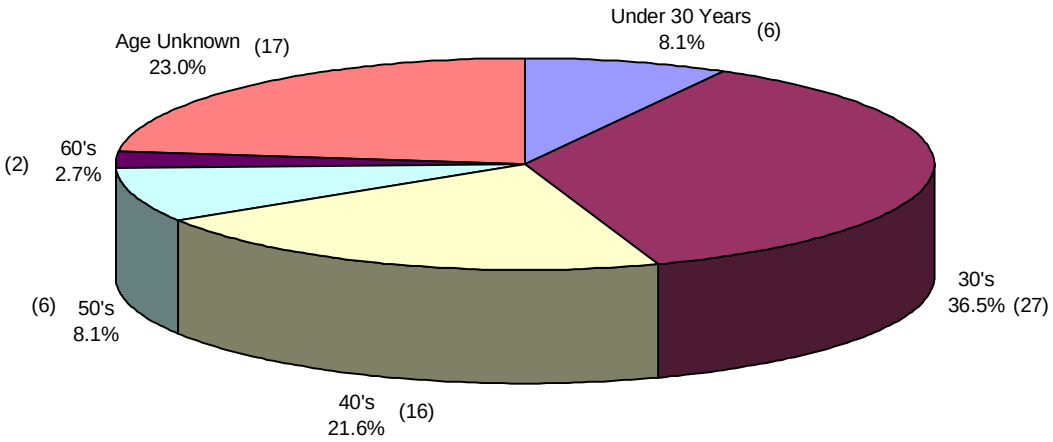
NUMBER OF INCIDENTS BY TYPE AND GENDER



Based on data from February 1995 Workplace Violence Survey

Figure 3

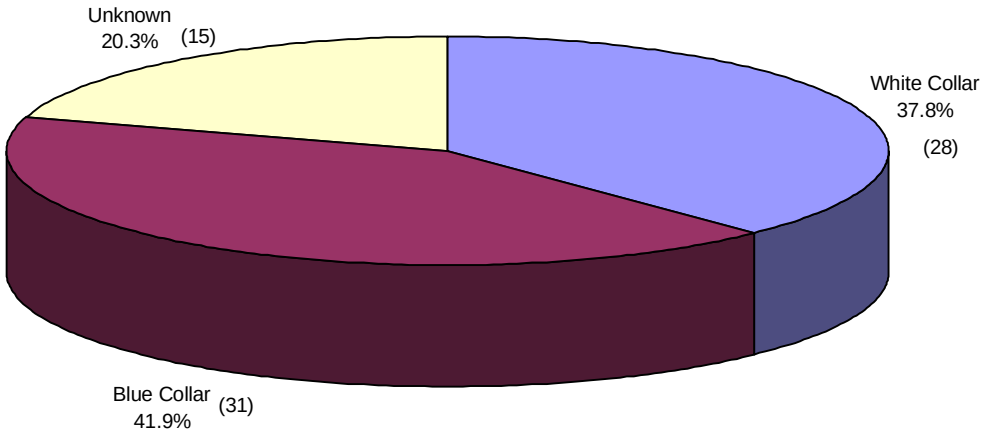
AGE OF PERPETRATOR



Based on data from February 1995
Workplace Violence Survey

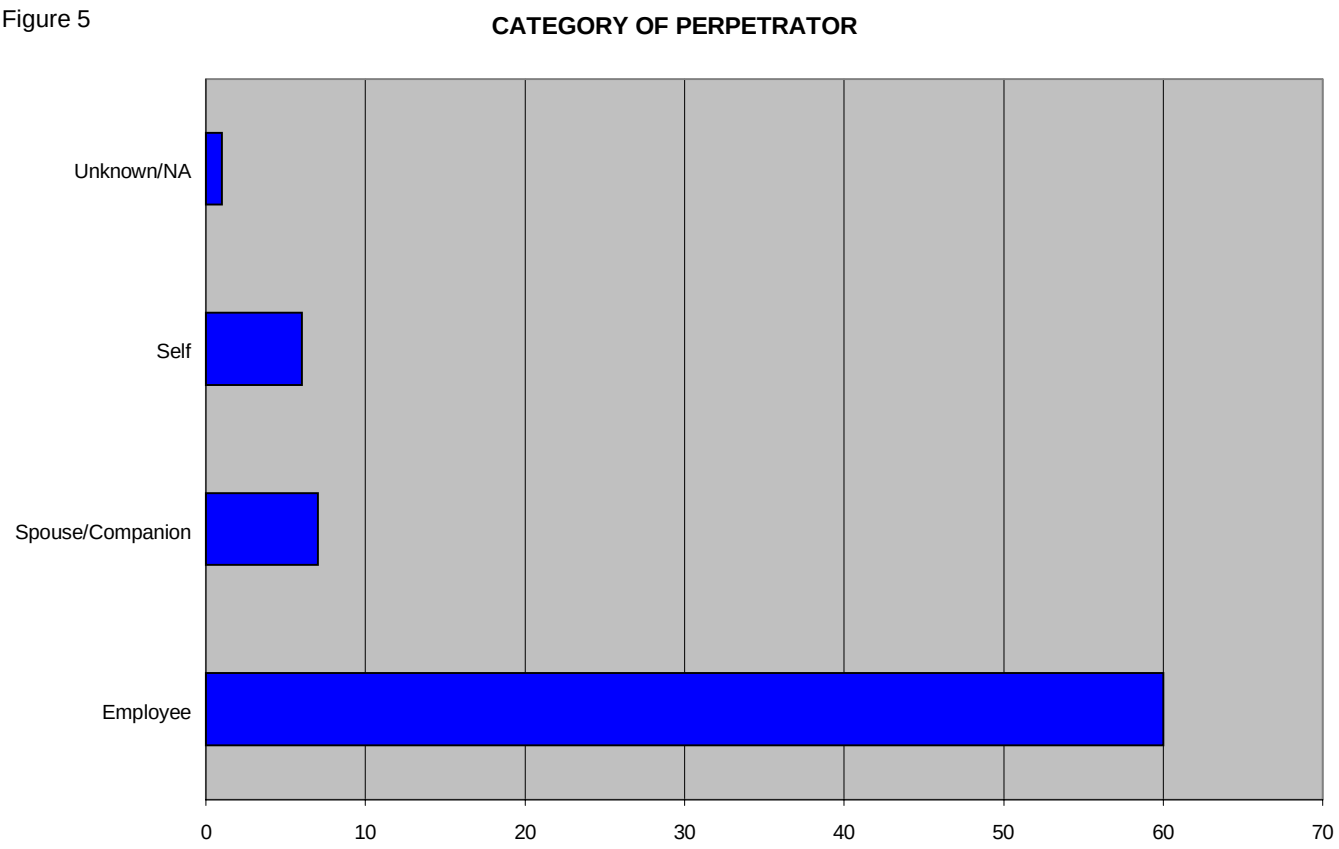
Figure 4

JOB CLASSIFICATION OF PERPETRATOR



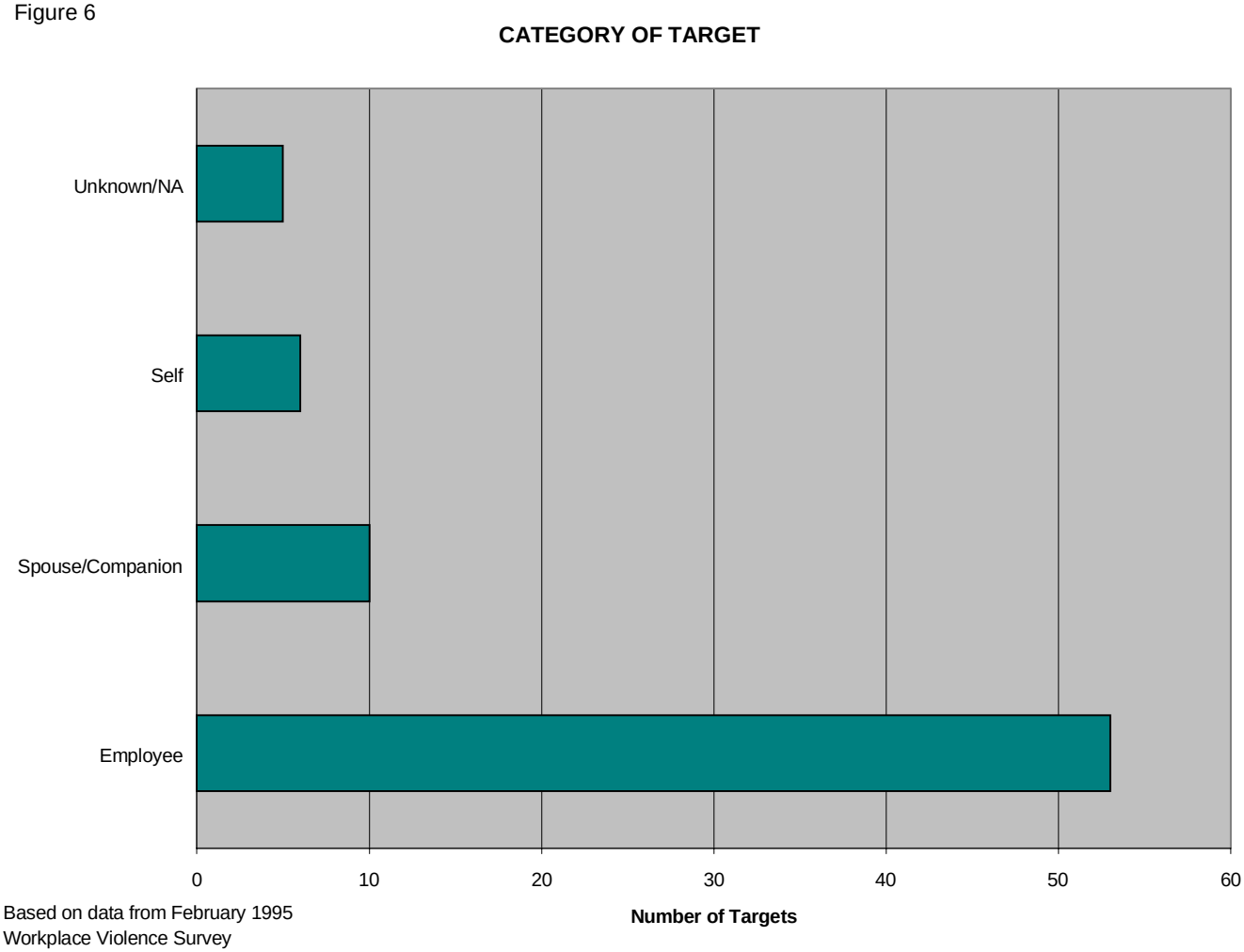
Based on data from February 1995
Workplace Violence Survey

Figure 5



Based on data from February 1995
Workplace Violence Survev

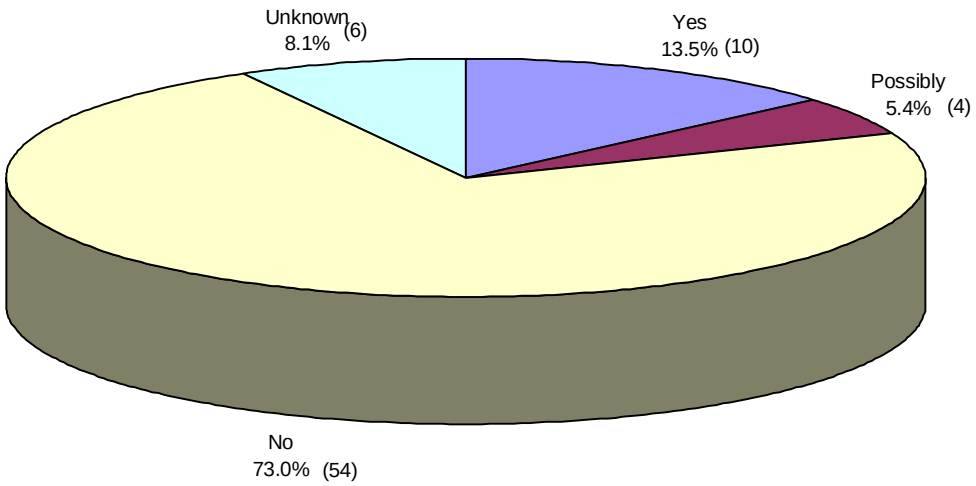
Figure 6



Based on data from February 1995 Workplace Violence Survey

Figure 7

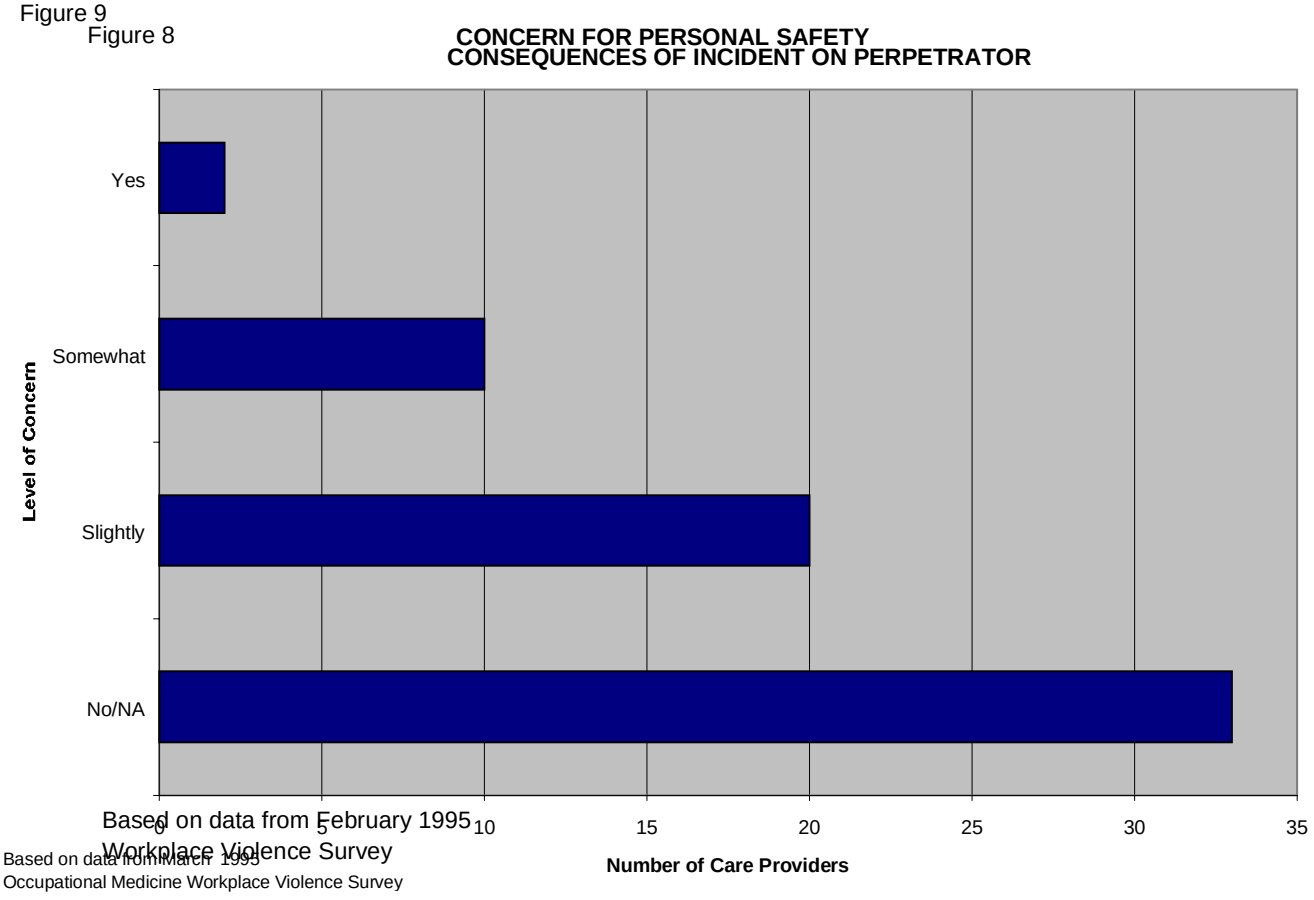
NUMBER OF INCIDENTS RELATED TO DRUG/ALCOHOL USE



Based on data from February 1995
Workplace Violence Survey

Figure 9

Figure 8

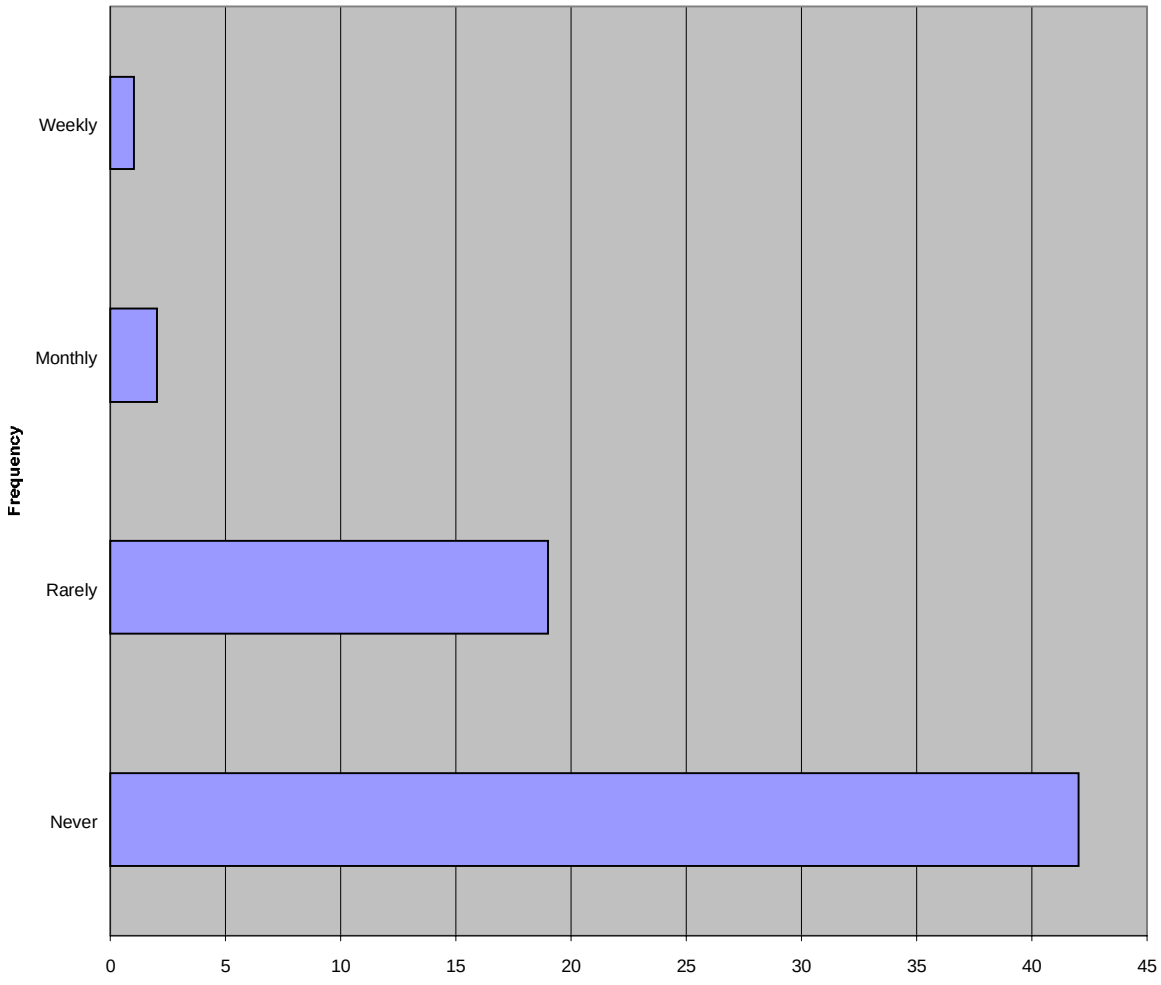


Based on data from February 1995 Workplace Violence Survey

Based on data from March 1995 Occupational Medicine Workplace Violence Survey

Figure 10

VERBAL ABUSE OF CARE PROVIDERS



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