

MANAGING PRISON VIOLENCE

Perceptions of Safety among California Correctional Officers

Amy E. Lerman
Dept. of Political Science
University of California, Berkeley
alerman@berkeley.edu

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Executive Summary

Violence against Correctional Staff

- Despite the relative rarity of fatal violence against correctional staff in the California prison system, the rate of work-related violence against Correctional staff has risen significantly in California prisons over the past fifteen years.
- The number of assaults on staff has increased in both men's and women's prisons. However, the number of assaults increased less sharply in women's prisons than in men's prisons.

Perceptions of Safety among Correctional Officers

- Officers overwhelming believe that staff members are likely to be assaulted while working in the institutions, and many consider their own safety to be highly at risk while at work: 85 percent of Correctional Officers felt that staff members were either likely or very likely to be assaulted at their institution, and about half (53 percent) reported that they do not feel safe when on the job.
- Female officers, all else equal, feel no more or less safe than their male counterparts. Likewise, there is little effect of racial or ethnic identity. African-American and Latino officers, all else equal, feel no more or less safe than white officers.
- Officers working with female inmates express the same levels of concern about personal safety as officers working with male inmates.
- Officers in higher security prisons feel less safe at work than officers in lower security prisons.

Reporting on Violence

- If the reports of officers to the California Correctional Officer Survey (CCOS) are accurate and representative, there were roughly 7,412 total incidents of assault during that period. That estimate is more than 2.5 times what is recorded in the official data for the entire year of 2004.
- There are a number of potential explanations for the significant differences in assault rates found between the 2004 state data and the 2006 CCOS. It is possible that the number of assaults against staff has actually sky-rocketed in the past two years. More likely, however, these findings point to a disparity between the number of assaults recorded by the state and the number reported by Correctional Officers when asked. Potential explanations for this discrepancy are discussed.

Overcrowding and Understaffing

- A majority of officers believes that a lack of personnel negatively impacts the safety and security of both staff and inmates: 72 percent of respondents believe that there are not enough staff working to provide for the safety and security of inmates, and 77 percent believe there are not enough staff working to provide for the safety and security of staff.
- Individual perceptions of understaffing are correlated with how safe officers feel. Officers who believe that there are enough staff to provide for the safety and security of staff feel safer than those who do not.
- The percentage of overtime hours that are mandated, or “hold-over,” has a significant and negative relationship to officers’ perceptions of safety.

Equipment and Training

- A majority of officers (87 percent) who have occupied a position during the past six months that called for the issuance of a safety vest reported having been issued a vest. Yet about half of officers who were issued a vest (52 percent) reported some kind of problem with it.
- Those who report problems with their safety vest feel less safe, on the whole, than those who do not identify any problems with their vest.
- More than a quarter of respondents (27 percent) indicated that they do not receive the kind of training they need to keep themselves safe on the job. Likewise, 29 percent of officers feel that they do not receive the kind of training they need to perform their job well.
- An individual’s perception of how well-trained he is appears to be a significant predictor of how safe he feels. Those who feel well-trained, both to do their jobs well and to keep themselves safe, feel significantly safer than those who feel that training has not prepared them to accomplish these tasks.
- Some staff also report feeling that they have not been sufficiently trained in the use of force: 23 percent reported that clear guidelines for when the use of non-lethal force is appropriate have not been communicated, and 22 percent reported that clear guidelines for when the use of lethal force is appropriate have not been communicated.
- Some officers feel that they have not been given adequate information about how to respond to a crisis situation. In the event of an emergency situation—including riots, food strikes, fights, fires, escapes, hostage crises and bomb threats—15 percent of respondents indicated that they do not think there are plans at their institution for what to do, or that they are unsure of whether or not such plans exist.

- Of those staff that have been made aware of emergency plans, almost a quarter (23 percent) report that those plans are either very or somewhat unclear.

Institutional Response to Violence

- About 27 percent of officers feel that action is rarely taken to discipline inmates involved in assaults against staff, and 8 percent report that disciplinary action is very rarely or never taken.
- When action is taken to discipline inmates involved in assaults against staff, many officers feel that it is often inadequate; only 8 percent say that the action taken is always adequate. By comparison, 22 percent of officers report that actions taken in response to inmate-on-staff violence are either very rarely or never adequate.
- Individuals who believe that their institution takes adequate action in response to inmate-on-staff violence feel safer than those who feel that violence against staff is rarely or never responded to adequately.

Introduction

A great deal of scholarship in recent years has focused on the prevention and containment of prison violence. Two distinct theories have emerged from these predominantly sociological studies of prison violence, both of which are rooted in examinations of the attitudes and behaviors of inmates: the deprivation model, and the importation model. The deprivation model hypothesizes that the restrictive nature of prison life imposes psychological stress on inmates, leading them to act out in violent ways in order to protect themselves, both physically and psychically. In comparison, the importation model emphasizes the violent tendencies and relationships that prisoners bring into the prison environment from the outside, transporting the same social networks and personal attributes that lead to violence on the street into the prison.¹

Given the prevalence of these models in guiding discourse about prison violence, it is not surprising that much of this research has centered on the behaviors and attitudes of inmates: gang activity, security classifications, and race relations are generally the focal points of these studies.² This work is important, and makes significant contributions to our understanding of what provokes inmates to behave in violent ways. Yet it is equally important to understand how Correctional Officers perceive prison violence, and to examine inmate-on-staff violence as a particular sub-set of prison violence that may have its own distinct set of causes and consequences.

¹ See Jiang, S. and Fisher-Giorlando, M. (2002). Inmate Misconduct: A test of the deprivation, importation and situational models, *Prison Journal*, 82(3):335.

² For examples of this work, see Akman, D. (1966). Homicides and assaults in Canadian penitentiaries, *Canadian Journal of Corrections*, 8:284-299; Ellis, D., Grasmick, H., and Gilman B. (1974). Violence in prisons: A sociological analysis, *American Journal of Sociology*, 80:16-43; Flanagan, T. (1980). Time served and institutional misconduct: Patterns of involvement in disciplinary infractions among long-term and short-term inmates, *Journal of Criminal Justice*, 8:357-367; MacKenzie, D. (1987). Age and adjustment to prison. *Criminal Justice Behavior*, 14: 427-447.

While researchers have begun to delineate how staff perceptions of their physical safety predict other psychological issues, including work-related stress, strain on families, and job dissatisfaction,³ we know much less about what influences how safe officers feel. Those studies that do assess staff fear and victimization have tended to focus on the characteristics of individual officers, such as their race or gender,⁴ rather than placing the attitudes and experiences of correctional staff in a larger organizational framework. Again, while this collection of research is important, its focus on the individual rather than his or her institutional context has both empirical and theoretical implications; the failure to assess Correctional Officers' attitudes in a multi-level context may bias empirical results, and may also miss the important contributions of environmental factors to staff perceptions of safety. There is thus a pressing need, from a managerial perspective, to understand the *institutional* factors that exacerbate or mitigate violence in a prison setting.⁵

Some recent literature has turned its attention toward just such structural and management characteristics of prisons that may shape the experience of inmates while incarcerated and, by extension, Correctional Officers while on the job.⁶ This research is rooted in two additional theories, the transactional model and the situational model. The transactional model focuses on interactions between the characteristics of individual inmates and the prison

³ Hepburn, J. Ed. (2006). *Journal of Contemporary Criminal Justice: Occupational Stress in Criminal Justice*. 22(1). Thousand Oaks, CA, Sage.

⁴ Gross, G., Larson, S., Urban, G., and Zupan L. (1994). Gender Differences in Occupational Stress among Correctional Officers, *American Journal of Criminal Justice*, 18(2):219; Zupan, L. (1986) Gender Related Differences in Correctional Officers Perceptions and Attitudes, *Journal of Criminal Justice*, 14:349-361; Alpert, G. and Crouch, B. (1991). Cross-Gender Supervision, Personal privacy and Personal Safety: Perceptions of Jail Inmates and Staff, *Criminal Justice and Behavior*, 18(3):304-317; Griffin, M. (2006). Gender and Stress: A Comparative Assessment of Sources of Stress among Correctional Officers, *Journal of Contemporary Criminal Justice*, 22(1):4-25.

⁵ Some scholarship suggests significant differences between the precursors of inmate-on-inmate and inmate-on-staff violence. (Patrick, S. (1998). Differences in Inmate-Inmate and Inmate-Staff Altercations: Examples from a Medium Security Prison. 1998. *The Social Science Journal*, 35(2):253-263.)

⁶ An excellent example of empirical research in this area is Camp et. al.'s The Influence of Prisons on Inmate Misconduct: A Multilevel Investigation. (2003). *Justice Quarterly*, 20(3):501-533.

environment. In this model, prisoners and staff engage in complex relationships with each other and with the “environment they inhabit”.⁷ These relationships are often structured in ways that lead to violent activity. In the situational model, the prison environment shapes settings which precipitate violent occurrences. These situations prompt, pressure or permit inmates to behave in violent ways that they might otherwise avoid.

In its totality, this literature presents a rather complicated set of empirical findings that may leave even the most savvy policy practitioner somewhat stumped. While poor prison management is often cited as one of the, if not the, most significant contributors to prison violence,⁸ studies of violence and prison management present an extensive array of things to consider. Research on prison management urges attention towards a wide range of specific factors, including prison privatization,⁹ overcrowding,¹⁰ staffing ratios,¹¹ and staff experience and training.¹² Each of these factors is cited in the literature as influencing overall levels of prison violence, and it is often difficult to untangle what matters most.

Using state data and data collected through a survey of California correctional staff, this report examines correctional management as it relates to prison safety and the working lives of Correctional Officers. Part I of this report describes the real and perceived safety of officers in

⁷ Bottoms, A. E., William Hay and J. Richard Sparks (1995). Situational and Social Approaches to the Prevention of Disorder in Long-Term Prisons. Long-Term Imprisonment: Policy, Science, and Correctional Practice. T. J. Flanagan. Thousand Oaks, CA, Sage.

⁸ Homel, R. a. T., Carleen (2005). Causes and Prevention of Violence in Prisons. Corrections Criminology. S. O. T. a. S. Eyland. Sydney, Hawkins Press.

⁹ Lukemeyer, A. and McCorkle R. (2006). Privatization of prisons – impact on prison conditions. *American Review of Public Administration*, 36 (2): 189-206.

¹⁰ Lawrence, C. and Andrews, K. (2004). The influence of perceived prison crowding on male inmates’ perception of aggressive events, *Aggressive Behavior*, 30 (4): 273-283; Tartaro, Christine. (2002). The impact of density on jail violence, *Journal of Criminal Justice*, 30 (6): 499-510; Gaes, G. (1994). Prison Crowding Research Reexamined, *Prison Journal*, 74(3):329-363; Sechrest, D. (1991). The effects of density on jail assaults, *Journal of Criminal Justice*, 19(3):211-223.

¹¹ Coates, B. (1984). Impact of Differing Staffing Ratios on Prison Environments, National Institute of Justice.

¹² Walters, G. (1998). Time series and correlational analysis of inmate-initiated assaultive incidents in a large correctional system, *International Journal of Offender Therapy and Comparative Criminology*, 42(2):124-132; Cooke, D. (1991). Violence in Prisons: The influence of regime factors, *Howard Journal of Criminal Justice*, 30(2):95-109.

California prisons. I examine the trends in violence against staff, and present new data on the attitudes of officers towards their personal safety. I then briefly discuss potential discrepancies between official data and survey results probing individual experiences with violence.

Part II, which comprises the majority of the analysis, explores institutional factors that may influence levels of prison violence, perceived safety of correctional staff, and the relationship between them. This section of the report addresses two central questions:

First, what is the degree to which Correctional Officers believe the California prison system to be accomplishing the following security-related responsibilities?

- maintaining sufficient levels of staff to assure both inmate and staff safety
- supplying required safety equipment to officers and staff
- conveying clear plans for what to do in a variety of emergency situations
- administering necessary staff training pertaining to safety and security
- responding adequately to incidents of violence when they do occur

Second, how does each of these institutional factors influence Correctional Officers' perceptions of safety while inside the institutions? In the final section of Part II, I present a series of multi-level models that attempt to parse out how perceptions of safety vary across individuals, security levels, and prisons.

Finally, Part III concludes with a brief discussion of the effects of violence and perceived violence on the health and well-being of officers and their families. I discuss the potential relationship between institutional violence and occupational stress, job satisfaction, and staff relationships to family. The report concludes with some general discussion, and some suggested avenues for future research.

Data and Methods

This report relies primarily on original data from the California Correctional Officer Survey (CCOS), conducted from April to October of 2006. The CCOS was a large-scale effort to gather the thoughts, attitudes, and experiences of Correctional Officers working in the California state system. The survey asked officers a series of closed-ended questions about a variety of topics, including job satisfaction, work stress, personal safety and security, attitudes towards inmates, and professional orientation. The large size of the survey sample (N=5,775) provides a nice cross section of officers by race and gender, as well as across all of California's correctional institutions. This is particularly important, as it allows for an assessment of how attitudes are affected by institutional characteristics, or variation between prison facilities.

Early on in the research design process, I decided that the survey should be conducted as independently as possible from both the California Department of Corrections and Rehabilitation (CDCR) and the California Correctional Peace Officers Association (CCPOA), the union that represents Correctional Officers and Correctional Counselors in the state.¹³ Surveys were therefore sent to each Correctional Officer through the mail, to each officer's home address, rather than distributed at either union meetings or the workplace. This was primarily to assure that officers felt they could be honest about their working experiences. Respondents were also assured that surveys would be completely anonymous, and that no one outside the University would ever have access to individual surveys.

As nearly as possible, surveys were sent to every Correctional Officer currently working in the California system. While a highly stratified random sample was considered, a focus group conducted with Correctional Officers during the field test revealed a great deal of concern that

¹³ While the survey was conducted independently, in that neither the CDCR nor CCPOA had input into its design or analysis, both organizations provided invaluable support to the project and contributed funds towards the printing and distribution of the survey instrument, and towards data input of surveys once completed and returned.

past survey efforts had “hand-picked” particular people to receive surveys, in order to obtain data that would paint the prison system in an overly positive light. For this reason, it was decided that the additional time and expense of including the total population was worthwhile.

The survey ultimately yielded 5,775 completed and returned surveys, for a response rate of about 33 percent.¹⁴ While a significant proportion of these completed surveys arrived with letters or comments attached, indicating a high level of involvement in the survey project, the final tally is slightly lower than might have been obtained through a site-administered or phone survey. The somewhat low response rate may be due in part to the length of the survey, or may be the result of a general trend towards lower response rates nationally, particularly with mail-administered surveys. The response rate may also reflect a distrust of the project, of survey research, or of academics.

Table 1. CCOS Response Sample Demographics

	Sample (%)	Population (%)
Race		
White	55.1	46.2
Black or African American	8.8	12.3
Hispanic	27.3	34.4
Asian	3.0	1.8
Other	4.0	5.3
Race Unknown	3.9	--
Gender		
Male	84.3	82
Female	15.7	17.7
	N=5,775	N=21,243

Population data is taken from the Department of Corrections and Rehabilitation Office of Personnel Services for October 12, 2006. Sample race sums to more than 100% due to some respondents identifying more than one racial category.

¹⁴ As of June 30, 2006, the CDCR Position Inventory by Institution reported 21,243 established positions filled, and the survey went out to a database of 21,478. Of the mailed surveys, 2,161 were returned with problem addresses. An additional subset of 1,500 is estimated to have been sent to officers who were either retired, called to active military service, or working in the fire camps. These cases were excluded from the population.

The response rate may elicit some worry that the final sample does not represent a neutral cross-section of Correctional Officers. However, it is reassuring to note that though response rates varied by institution, no single prison was severely under-reported.¹⁵ Moreover, as Table 1 shows, though white men were somewhat over-represented in the sample, respondent demographics were quite representative of the total population. As shown in Table 1, about 84.3 percent of the survey sample is male relative to 82 percent in the population, and 55.1 percent of the sample is white as compared to 46.2 percent of the population. In addition, 27.3 percent is Hispanic (compared to 34.3 percent in the population), 8.8 percent black (compared to 12.3 percent), and 3 percent Asian (compared to 1.8 percent).

¹⁵ A break-down of response rates by institution is included in Appendix A.

Part I. Who is Safe and Who Feels Safe?

Section 1. Correctional Officer Safety in California Prisons

Relatively few Correctional Officers have been killed in the line of duty over the past fifty years. According to the Data Analysis Unit of the California Department of Corrections and Rehabilitation, only twenty employees have been fatally wounded on the job since 1952. Fifteen of those killed were stabbed to death, two were bludgeoned, two shot and one thrown to his death from a tier.¹⁶ Of those killed, seventeen were custody staff—fourteen Correctional Officers, two Correctional Sergeants and a Program Administrator—and only three deaths were of non-custody staff.

Yet despite the relative rarity of fatal violence against correctional staff in the California system, the overall rate of violence against correctional staff has risen significantly in California prisons over the past fifteen years. Figure 1 charts the number and rate of assaults and batteries against staff in California prisons for each year from 1989 to 2004. The bars indicate the number of assaults occurring in each year, and the lines indicate the rate of assaults per 100 inmates. As the bars in Figure 1 show, there were 834 reported assault or battery incidents against staff in 1989. By 2004, the total number of such incidents had risen to 2,869. This represents an increase of over 340 percent in just a decade and a half.¹⁷

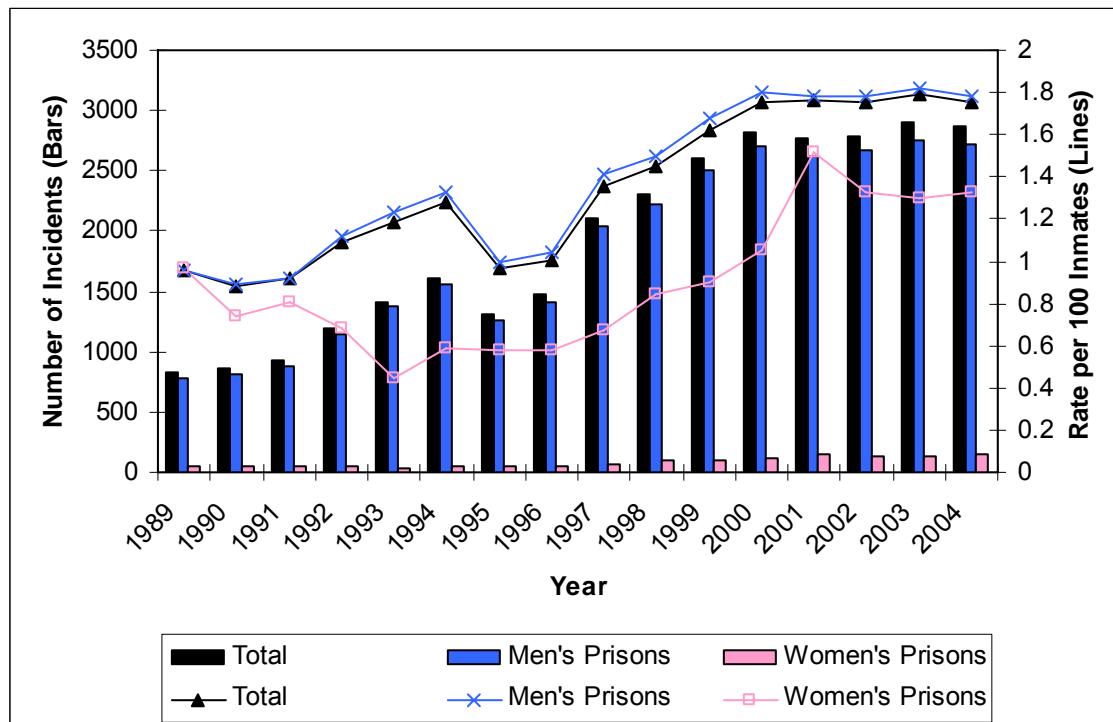
Figure 1 also compares the number and rate of assaults in prisons that house male inmates with those that house female inmates. The number of assaults on staff has increased in both men's and women's prisons. However, the number of assaults in women's prisons increased less severely than in men's prisons. The number of assaults recorded in men's prisons

¹⁶ “Employees Killed by Inmates: January 1952 through January 2005,” Data Analysis Unit, California Department of Corrections and Rehabilitation.

¹⁷ Note that numbers indicate total incidents of assault, not the number of employees assaulted.

increased almost 350 percent over this period, from 779 incidents in 1989 to 2,723 in 2004. By comparison, assaults in women's prisons rose by about 250 percent, from 58 incidents in 1989 to 146 by 2004.

Figure 1. Number and Rate of Assault/Battery Incidents on Correctional Staff



Data are taken from "Inmate Incidents in Institutions" and "Historical Trends 1984 – 2004" reports prepared by the Data Analysis Unit of the California Department of Corrections and Rehabilitation. Rate is relative to the total inmate population on December 31 of that year.

As the lines in Figure 1 indicate, rising numbers of assaults against staff are not merely a function of a growing population of inmates. Levels of violence against staff have risen steeply even when considered as a rate per 100 average daily population (ADP) of inmates. Rates of violence have almost doubled, increasing from 1.1 incidents per 100 ADP in 1989 to 1.8 by 2004. Again, while the rate of incidents per ADP increased in both men's and women's prisons, there are differences between the two types of prisons. While in men's prisons the rate has steadily increased, dipping slightly only in 1995 and 1996, the rise in assault rates has been much

slower in women's prisons, declining in the first half of the 1990s and rising to its current level only from about the year 2001 on.

While the total number of assaults has clearly risen, it may be that the severity of incidents has remained roughly the same, or has even declined over time. Unfortunately, it is impossible to know from these data how serious most of these incidents were, or whether the severity of assaults has risen in conjunction with their number and rate. We can, however, examine changes in the proportion of violent incidents against staff that involved a weapon relative to those in which no weapon was reported. As shown in Table 2, the rate of violent incidents against staff that involved some type of weapon has slightly but steadily decreased in men's prisons in recent years, falling from about .8 incidents per 100 inmates in 1998 to about .5 by 2004. In women's prisons, the rate of incidents involving a weapon has fluctuated slightly in recent years, but has neither steadily increased nor decreased.

Table 2 also shows the number of assaults with a weapon as a percentage of the total number of assaults against staff. In men's prisons, almost half of the reported incidents of assault/battery against staff in 1999 involved the use of a weapon. By 2004, the number of incidents involving a weapon had dropped to slightly less than 30 percent. By comparison, the percentage of incidents in women's prisons involving a weapon dropped from 52 percent in 1998 to 37 percent in 2003, but rose again to 48 percent in 2004. Thus, the proportion of incidents involving a weapon was actually higher in women's prisons than in men's for the most recent year in which data were available.

While these data may be a cause for some concern, they should not be interpreted as an indication that assaults in women's prisons are necessarily more dangerous than, or as dangerous as, those in men's prisons. The relatively high rates of weapons incidents in women's prisons

may be explained by a discrepancy between the types of weapons used by male and female inmates. For example, the types of weapons used in men's prisons may be potentially more lethal on average than those used in women's prisons. Thus, an incident in which an inmate throws a cup of coffee at an officer may be reported as an assault with a weapon at a women's institution, where a cup of coffee would not be recorded as a weapon in a men's prison. If this is the case, the policy implications are different for men's and women's prisons; while tighter controls over contraband might help prevent the use of more serious weapons in men's prisons, the types of things used as weapons in women's prisons may be more difficult to control, as they are not in themselves contraband items. This is certainly a subject that demands greater attention, and should be pursued with more detailed data.

Table 2. Number and Rate of Assault/Battery Incidents on Correctional Staff in Men's and Women's Prisons, with and without a Weapon

Year	WITH WEAPON		WITHOUT WEAPON		PERCENTAGE WITH WEAPON
	Assault/ Battery Incidents	Rate per 100 ADP	Assault/ Battery Incidents	Rate per 100 ADP	Assault/ Battery Incidents
Men's Prisons					
2004	774	.5	1,949	1.3	28
2003	861	.6	1,900	1.3	31
2002	954	.7	1,711	1.2	36
2001	1,025	.7	1,595	1.1	39
2000	1,228	.9	1,469	1.0	46
1999	1,175	.8	1,330	.9	47
1998	1,056	.8	1,159	.8	48
Women's Prisons					
2004	70	.7	76	.7	48
2003	50	.5	86	.9	37
2002	54	.6	76	.8	42
2001	67	.7	81	.8	45
2000	55	.5	61	.6	47
1999	41	.4	60	.5	41
1998	50	.5	47	4	52

Data are taken from annual "Inmate Incidents in Institutions" reports prepared by the Data Analysis Unit of the California Department of Corrections and Rehabilitation.

Finally, it should be noted that direct assaults against staff are not the only types of violence that Correctional Officers experience, or even the type of violence experienced most frequently. Officers are often called on to respond to incidents of inmate-on-inmate violence, and must frequently physically engage with inmates in order to bring the violence to an end. According to survey respondents, the frequency of violent incidents is extremely high: 18 percent of respondents reported that violent incidents occur all the time, and another 55 percent that such incidents occur either often or very often.

Most officers reported having been personally called upon to respond to violent incidents at least once over the past six months; about 79 percent of officers reported having responded to at least one violent incident. Of those officers who reported responding to at least one incident over the past six months, the average number of violent incidents responded to during that period was about 16.

However, despite the frequency of officers being called to respond to violent incidents, officers are more likely to report injuries as a result of direct assaults; a larger proportion of officers have been injured as the result of a direct attack than while responding to a violent incident. Of those who have been the target of at least one direct assault over the past six months, 43 percent report having been injured at least once, while only 19 percent of officers who responded to any incidents over the past six months report having sustained at least one injury.

Section 2. Reporting on Violence

It is clear from the data shown in Section 1 that violence against staff has risen in California prisons over the past decade and a half, and that officers in both men's and women's prisons face significant risk of assault in the workplace. These official data, however, may

underestimate the violence experienced by staff on the ground, the degree to which safety is a concern for Correctional Officers, and the distinctiveness between the two.

Comparing state data from 2004—the most recent year available—with results from the CCOS reveals a huge jump in the number and rate of assaults. The number of assaults in the 2004 official data is significantly smaller than the number of incidents reported by survey respondents as having occurred in early 2006. When asked about their personal experiences with violence, about 14 percent of respondents to the CCOS indicated that they, personally, had been the target of a direct assault during the last six months. Of those who had experienced at least one direct assault during that period, 40 percent reported being assaulted more than once. Roughly equivalent rates of officers reported having been injured at least once during a direct assault over the past six months (12 percent), and of those who had been injured, 42 percent reported having been injured more than once.

These figures for early 2006 represent a significant increase over the official numbers for 2004 shown in Figure 1 and Table 2. If the CCOS data are accurate and representative, there were roughly 7,412 total incidents of assault during that half-year. That estimate is more than 2.5 times what is recorded in the official data for the entire year of 2004. If the second half of 2006 is equivalent to the first, the number of total incidents rises to 14,824 for the year, representing an increase over the official data for 2004 of well over 500 percent. Moreover, the 2006 CCOS data report rates of assault/battery on Correctional Officers only, while the official data for 2004 count all incidents against staff, including assaults against non-custody staff. When this is taken into consideration, there may be an even greater gap between the number of assaults recorded by the state two years ago and the number reported in the survey for the beginning of the 2006 calendar year.

There are a number of potential explanations for these significant differences. It is certainly possible that the number of assaults against staff has actually sky-rocketed in the past two years. When official data are released, it may be that the state data will likewise show a five-fold increase in rates of assault.

More likely, however, these findings point to a discrepancy between the number of assaults recorded by the state and the number reported by Correctional Officers when asked. Again, there are several possible explanations for this disparity. The CCOS survey questions ask officers to recall how often they experienced a direct assault over the past six months. While the six month period is a short enough time-frame that most officers should be able to provide accurate information, it may be that some or all officers are mistakenly over-estimating the number of assaults that actually occurred in that time period. It may also be that some or all officers, in answering questions on the survey, were exaggerating the violence they have experienced.¹⁸

Alternatively, and of far greater concern, is the possibility that the survey results are more accurate than the official data. This would suggest that the numbers released in official data severely underreport the number of violent incidents against staff that have actually occurred. There are several possible explanations for why this might be the case. It may be that records are not being accurately maintained. While officers may be reporting incidents when they occur, records of these incidents may not always make their way to Sacramento for inclusion in the aggregated incidents reports. Or, it may be that officers are not always officially reporting all of the incidents that occur. This could be due to the fear of potential stigma that may be associated

¹⁸ If this last explanation has some validity, it is interesting to speculate on what the motivation of officers to exaggerate would be. As discussed extensively in the next section, many officers feel very unsafe while at work, whether or not they have personally experienced violence in recent months. Exaggerating one's own experiences with violence may be an attempt to convey this concern about physical safety in ways that might otherwise be dismissed as paranoid or unfounded.

with being the victim of assault; because they do not consider most incidents severe enough to be worth recording; because the administrative burden of officially reporting is too great to be bothered with; because they do not believe that reporting the incidents will help; or because officers fear potential repercussions from either inmates or from prison administrators, even when they do not believe they have done anything wrong.¹⁹

Section 3. Perceptions of Safety among Correctional Officers

Not surprisingly, given the levels of violence reported above, Correctional Officers on the whole consider their workplaces to be violent, and consider their own safety to be highly at risk while at work. Officers overwhelming believe that staff members are likely to be assaulted while working in the institutions; 85 percent of respondents felt that staff members were either likely or very likely to be assaulted at their institution, and this varied little across prisons.

Yet while the likelihood of victimization is important to understand, it is neither theoretically nor empirically the same as the degree to which officers' perceive themselves to be safe. Most officers are more likely to face psychological victimization on a daily basis than physical victimization, in the form of either overt verbal threats or subtler forms of intimidation or terrorization.²⁰ Thus, assault rates alone cannot fully capture the stress many officers experience around their personal safety.

¹⁹ In conversations with correctional staff, many voiced the concern that reporting an incident of physical engagement with an inmate, even if they had done nothing wrong during the incident, could potentially lead to administrative actions against them. This illustrates a serious lack of trust between staff and administrators that undoubtedly has implications far beyond issues pertaining to violence and perceptions of safety.

²⁰ Bowker, L. 1980. *Prison victimization*. New York: Elsevier-North Holland.

The survey therefore also asked each officer for his or her perceptions of personal safety while on the job.²¹ Responses reveal significant concerns about personal safety among a large percentage of Correctional Officers. About half of Correctional Officers (53 percent) reported that they do not feel safe when on the job. When asked specifically about working with inmates, the percentage indicating concern about safety is even higher. Almost 60 percent reported feeling unsafe when working among inmates.

There is little variation on this measure between officers working with male and female inmates: 52 percent of officers working in men's prisons agree that they "rarely feel safe" when at work, as do 47 percent of officers working in women's prisons. Likewise, a substantial majority of officers in both men's prisons (60 percent) and women's prisons (57 percent) report that they do not feel safe when working among the inmates.

These expressions of concern about personal safety appear to be highly correlated with individuals' recent experiences with violence. Those officers who report that they have been the target of a direct assault over the past six months feel significantly less safe at work and when working among inmates than do those who have not been the target of a direct assault.²² This is true in the sample as a whole, as well as in both men's and women's prisons. The same appears to be true of those who report having been injured in a direct assault. Those who have been recently injured in a direct assault feel less safe while on the job than those who have not.

²¹ Each question posed a statement about safety, and asked Officers to place their own feelings on a 7-point scale ranging from strongly agree to strongly disagree with that statement. Question wording was informed by the work of other scholars who have measured this concept through survey research. These include Hepburn, J. R. a. C., A.E. (1984). "Relationship Strategies in a Coercive Institution: A Study of Dependence among Prison Guards." *Journal of Social and Personal Relationships* 1: 139-157, Logan, C. (1993). Criminal Justice Performance Measures for Prisons. Washington, DC, National Institute of Justice, U.S. Department of Justice, Griffin, M. L. (2001). "Job Satisfaction among Detention Officers: Assessing the Relative Contribution of Organizational Climate Variables." *Journal of Criminal Justice* 29: 219-232, Griffin, M. L. (2001). *The Use of Force by Detention Officers*. New York, LFB Scholarly Publishing..

²² These differences are statistically significant in a One-way ANOVA at the p<.001 level.

There does not, however, appear to be a significant relationship between how often an officer has been attacked and his or her perceptions of safety. Among those who have been assaulted at least once, being assaulted more frequently does not appear to make an officer feel either more or less safe. Thus, it is likely the experience of having been recently assaulted, rather than the frequency of assault over the past six months, which most closely relates to perceptions of safety.

Section 4. CO Safety by Security Level

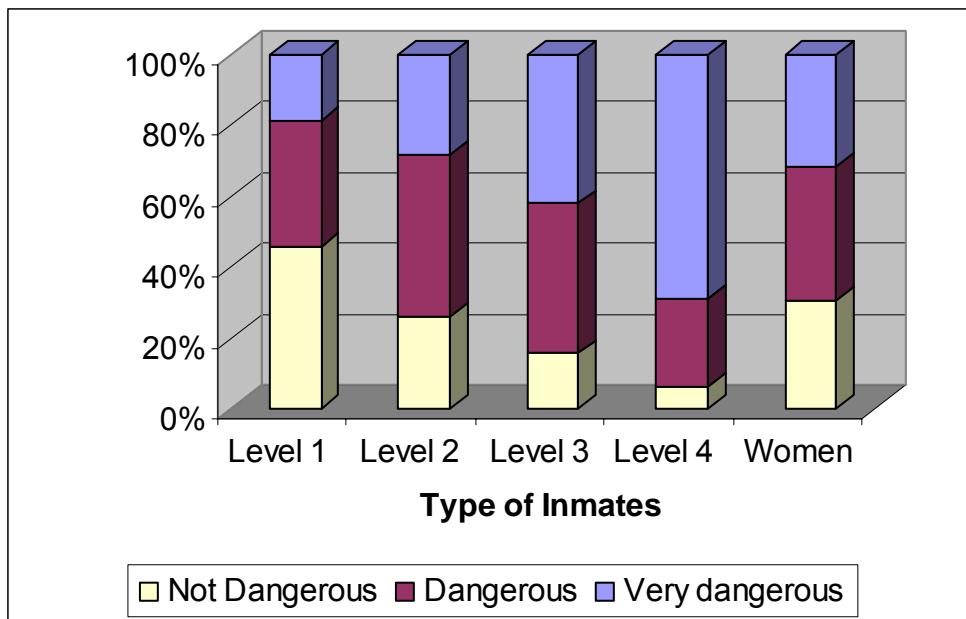
We might reasonably expect staff perceptions of safety to vary according to the security level of inmates to whom they are most often exposed. Security level designations are determined with propensity for violence (among other factors) in mind, and so higher security levels, all else equal, house a larger percentage of inmates with a greater likelihood of perpetrating violence. Officers working in higher security prisons are surely aware of this fact, and thus may rationally experience higher levels of concern about their own safety.

Alternatively, we might expect that security precautions put in place to address more violent inmates should successfully diminish concerns about violence. Inmates in higher security prisons have more restricted movement, spend less time outside their cells, and are subject to more frequent and rigorous search procedures. These extra security measures may alleviate some concerns about violence among Correctional Officers.

When asked to assess how dangerous inmates are with whom an officer has had the most contact over the past six months, there are significant differences across security levels. Figure 2 charts officers' assessments of the inmates to whom they are primarily assigned, by the security

level in which that group of inmates is housed. The figure excludes officers who reported having worked in more than one security level over the past six months.²³

Figure 2. Perceived Dangerousness of Inmates by Security Level and Gender



Officers were first asked what security level inmate they have worked with most often during the past six months. They were then asked the follow-up question: What percentage of the inmates at this security level do you think are: very dangerous, dangerous, not dangerous?

Security levels are for men's prisons only, and women's prisons are presented separately.

Level 1 N=309; Level 2 N=784; Level 3 N=1916; Level 4 N=1864; Women N= 273

As might be expected, almost half of the inmates at Level 1 prisons (45 percent) were on average considered to be 'not dangerous' by officers, and only a small percentage (18 percent) of inmates at this security level were considered to be 'very dangerous'. Each successively higher security level, by comparison, was perceived by officers as having a higher proportion of dangerous and very dangerous inmates, and a smaller proportion of inmates that were not dangerous. Level 4 inmates were rated by officers, on average, as having the highest percentage

²³ While some officers work in prisons that house more than one security level, many are assigned primarily to a single population. About 88 percent of survey respondents indicated that they worked primarily with only one security level over the past six months.

of ‘very dangerous’ inmates (69 percent), and the lowest percentage of inmates deemed to be ‘not dangerous’ (6 percent).

While female inmates in California are not classified or placed according to security level, officers who work in all-female institutions were likewise asked for their opinion as to the relative dangerousness of the inmates with whom they work. On average, officers’ categorization of female inmates most closely approximates that of level 2 male inmates. Slightly less than a third of women were considered to be very dangerous (31 percent), slightly less than a third were classified as not dangerous (30 percent), and the remaining group (37 percent) were categorized as being in the middle.

This considerable variation in the perceived dangerousness of female inmates has potentially significant implications for current policies around the placement of female offenders. Roughly as many female inmates are considered by the officers who work with them to be very dangerous as are thought not to pose a significant threat. Yet women are housed together, without consideration of these differences. This may substantially increase the overall levels of violence in female prisons; more dangerous inmates may pose a threat to less dangerous inmates, either victimizing those who are perceived as more vulnerable or provoking those who might not otherwise be a safety concern.

Likewise, officers may feel more at risk than they otherwise would due to uncertainties about which inmates pose what level of threat. Staff members working with male inmates have at least some sense of the threat posed by inmates with whom they come in contact. While knowledge of an inmate’s security level does not accurately predict all propensity for violence, it does give staff some, hopefully accurate, sense of who they are dealing with. With female offenders, staff may not have any idea whether a particular inmate is more or less dangerous.

This may lead officers either to view all inmates as dangerous despite many who are not, or to be unduly lax about security, despite the presence of some inmates who may pose a risk to staff safety. More research should be pursued that specifically addresses how the housing of women in a single classification system impacts safety and perceptions of safety among inmates and staff, as well as how this system impacts operations and outcomes in women's prisons.

To the extent that the dangerousness of inmates should be expected to correlate with the rate of assaults against staff, officers appear to be correctly assessing the relative security risk posed by different groups of inmates. Table 3 shows the percentage of officers assaulted, the average number of assaults, and officers' average perceptions of safety at each security level and for women's prisons. Again, the table excludes officers who reported having worked with more than one security level over the past six months.

Table 3. Assaults, Injuries and Perceptions of Safety by Security Level

	At least one assault (%)	At least one injury (%)	Mean assaults	Mean injuries	Perceptions of Safety
	I	II	III	IV	V
Level 1 (N=317)	5	5	.06 (.31)	.10 (.65)	.63 (.20)
Level 2 (N=783)	9	7	.12 (.43)	.12 (.54)	.55 (.19)
Level 3 (N=1519)	14	11	.18 (.51)	.21 (.89)	.53 (.20)
Level 4 (N=1864)	18	15	.24 (.60)	.32 (1.36)	.50 (.20)
Women (N=273)	14	11	.21 (.58)	.23 (1.08)	.54 (.21)

Data exclude officers who have worked primarily with more than one security level over the past six months. Security level data are for men's prisons only. For mean scores, standard deviation is shown in parentheses.

As Columns I and II in Table 3 indicate, a larger percentage of officers in higher security prisons than in lower security prisons reported having been assaulted or injured at least once in recent months. Compared to the 5 percent of officers working primarily with Level 1 inmates

who reported at least one assault over the past six months, 18 percent of officers working in Level 4 institutions reported having been the target of a direct assault. The same is true of injuries resulting from direct attacks; the higher the security level, the larger the percentage of officers who reported having been injured at least once from a direct assault over the past six months.

Columns III and IV in Table 3 show the mean number of assaults and injuries for officers assigned to each security level, with the standard deviation, or variability, of the number of assaults and injuries in parentheses. A few respondents reported a particularly high numbers of assaults, which inflates the mean for their sub-group.²⁴ When those outliers are dropped, however, we see a similar pattern in terms of both the mean number of assaults and the mean number of injuries: officers in higher security prisons are not only more likely to report having been assaulted and injured, but on average report experiencing more assaults and injuries than officers in lower security levels. Officers working with female inmates report numbers of assaults and injuries that are somewhere between those reported by officers working with male inmates at Level 3 and at Level 4.

Finally, the last column of Table 3 displays mean scores on the perceptions of safety index. The index combines two questions from the survey that ask officers how safe they feel in the workplace: how strongly officers disagree with the statement “I rarely feel safe when I am at work” and agree with the statement “I feel safe when working among the inmates”.²⁵ Higher scores on the index indicate that officers feel safer while at work. As Column V shows, there is a clear difference between officers working with Level I inmates and those working with other sub-groups of inmates, with officers working in lower security prisons expressing greater

²⁴ Two cases are dropped in Level 1, and one in Level 4.

²⁵ Both variables were standardized and then combined into a linear index. The index ranges from 0 to 1.

feelings of safety than officers in higher security prisons. Compared to a mean score of .63 among officers working in Level 1 prisons, officers working with Level 4 inmates have a mean score of only .50. Officers working with other groups of inmates are somewhere in between, with average scores of .55, .53 and .54 for Levels 2 and 3 and for those working with female inmates, respectively.

Part II. Officer Safety and Correctional Management

The preceding sections have provided an overview of staff safety and perceptions of safety. Part II of this study, in the sections that follow, examines how these perceptions of safety are impacted by various aspects of correctional administration. Each section details the attitudes and experiences of officers related to a specific managerial factor: understaffing and overcrowding, equipment and training, and institutional responses to violent incidents when they occur. The final section presents a series of multi-level models, which attempt to parse out how perceptions of safety vary across individuals, security levels, and prisons.

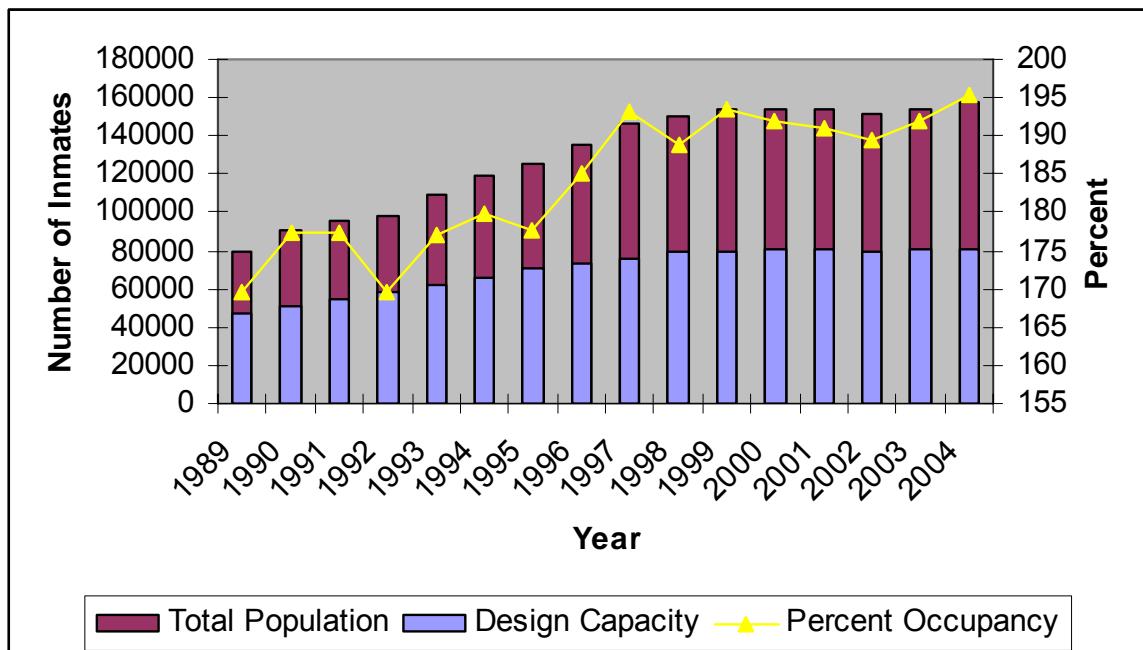
Section 1. Understaffing and Overcrowding

In October of 2006, Governor Schwarzenegger declared a state of emergency in response to the situation of overcrowding in California prisons. As Figure 3 clearly shows, crowding has long been a problem in the state's prisons, but it has become particularly severe in recent years. In 1989, the state's prisons were at 169 percent capacity relative to the numbers they were built to house. While the total design capacity of California prisons has been almost doubled over the past two decades, increasing from 47,210 in 1989 to 80,890 in 2004, it has been outpaced by increases in the state's inmate population. In 2004, the system was at 195 percent capacity statewide.

By the time of the Governor's announcement, almost 10 percent of California inmates, or roughly 17,000 men and women, were being housed in "bad beds," defined by Corrections Secretary James Tilton as "bunks in areas not designed as living spaces...converted gyms,

hallways and lounges...[and] roughly 1,500 sleep in triple-decker bunks.”²⁶ While all of California’s prisons are now overcrowded, current rates of crowding vary across prisons, ranging from 136 percent to a high of 244 percent capacity. On average, California prisons are now at 186 percent capacity relative to the population they were designed for, with a median of 180 percent.

Figure 3. California Prisons, Population and Design Capacity: 1989-2004



Source: Offender Information Services Branch, Estimates and Statistical Analysis Section, Data Analysis Unit, California Department of Corrections.

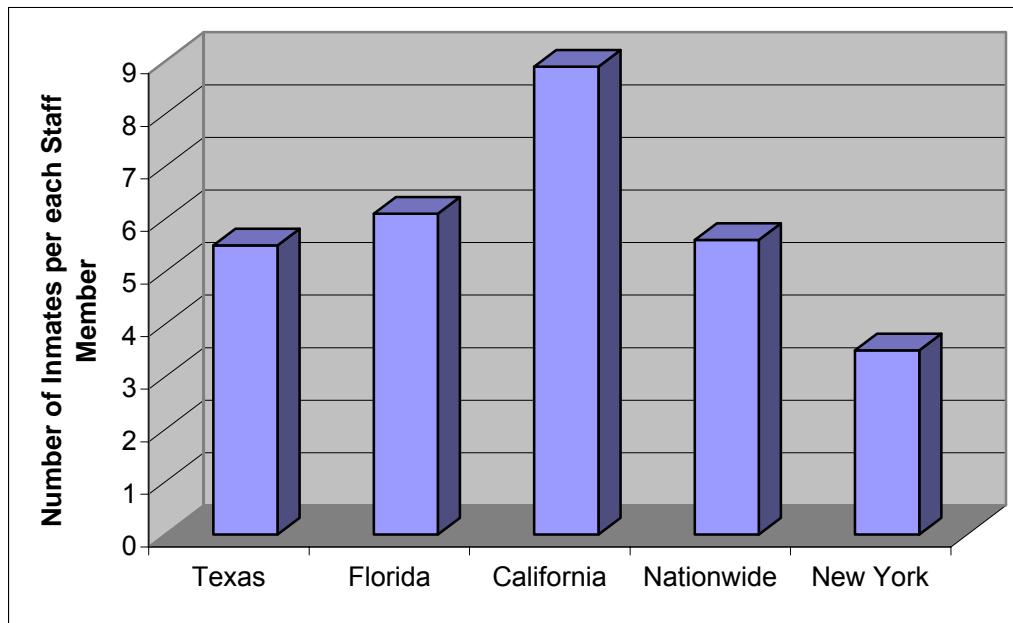
These high levels of overcrowding have severely impacted all areas of prison capacity, from infrastructure to administration. “Crowding is so severe, the governor’s emergency decree [stated], that it has overwhelmed water, sewer and electrical systems at some prisons and fueled hundreds of prisons riots, melees and smaller disturbances in the last year.”²⁷ It is likewise

²⁶ Warren, Jenifer, “State Prison Crowding Emergency Declared,” Los Angeles Times, October 5, 2006.

²⁷ Warren, Jenifer, “State Prison Crowding Emergency Declared,” Los Angeles Times, October 5, 2006.

possible that overcrowding has impacted rates of assault on staff. Certainly the rising rate of assaults on staff described above has closely shadowed these rising rates of crowding.²⁸

Figure 4. Comparing California Staffing Rates



Source: Glen S. Cord, Press Release of the New York Department of Correctional Services, June 27, 2002. Data are sourced from 1999 reports of the Criminal Justice Institute, Inc.

The overcrowding crisis has been made even more problematic by persistent problems faced by the state in attracting and retaining correctional staff. Despite high salaries relative to other state systems, there are no prisons in California that are not currently experiencing at least some proportion of unfilled Correctional Officer positions. While California prisons have on average about a 10 percent vacancy rate for officers, in at least one prison the vacancy rate is as high as 24 percent.²⁹ As a result of these elevated vacancy rates, not only are many officers working a large number of overtime hours, but a significant portion of these overtime hours are

²⁸While an important question, a causal connection between rising rates of overcrowding and rising rates of staff assault cannot be established using solely the panel data employed here, and a time series analysis is outside the scope of this paper.

²⁹Vacancy rates are taken from the Department of Corrections and Rehabilitation's Office of Personnel Services, for October 2006.

”forced overtime”, mandated by the Department in order to fill open positions during each shift.³⁰

Moreover, as shown in Figure 4, California employs fewer staff members per inmate than Texas, Florida, New York, or the nation as a whole. Correctional Officers in California generally perceive low levels of staffing to be a significant contributor to problems of violence in California prisons. The majority of officers believe that a lack of personnel negatively impacts the safety and security of both staff and inmates: 72 percent of respondents believe that there are not enough staff working to provide for the safety and security of inmates, and 77 percent believe there are not enough staff working to provide for the safety and security of staff.

Section 2. Equipment and Training

With the death of Manuel Gonzalez in January of 2005, the provision of stab-resistant vests to Correctional Officers became a hotly discussed issue. Officer Gonzalez was stabbed to death by an inmate at the California Institution for Men in Chino, and his death marked the first of an on-duty officer in the California system since 1985. Among other problems noted by the Office of the Inspector General as contributing to the incident was a delay in the distribution of stab-resistant vests to custody employees.³¹ While the Department had purchased vests, and had begun issuing the vests in the manner agreed to in its labor union agreement, the 362 vests that had been purchased for officers at CIM - Chino had been held in a warehouse since September of the previous year, awaiting distribution. Although the Inspector General found “no specific

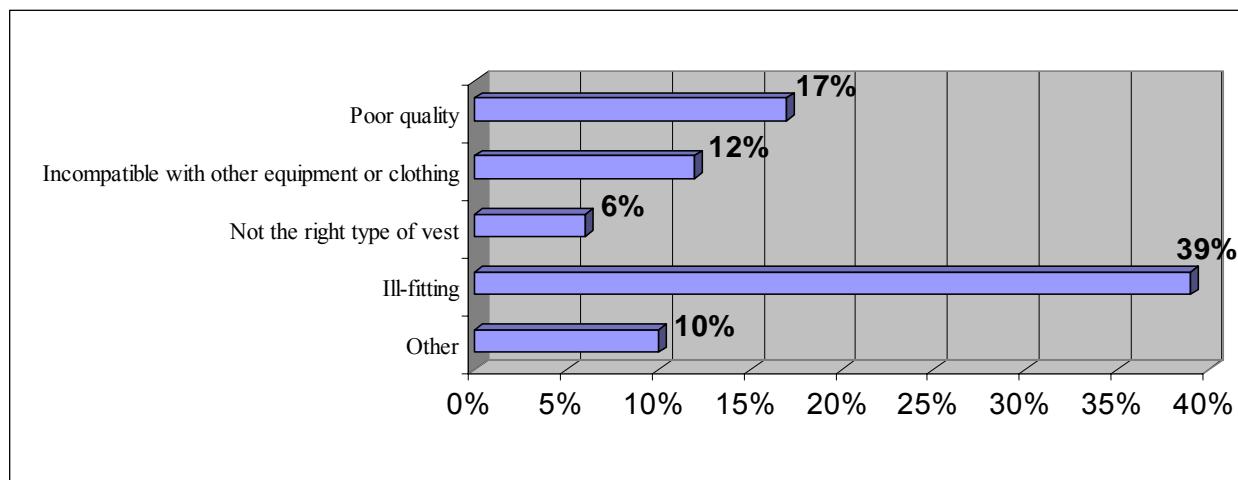
³⁰ There is a significant, positive relationship between the percent of vacant officer positions at each prison and the number of average overtime and holdover hours officers report having worked over the past six months. It should be noted, however, that the percentage of holdover hours as reported in the survey includes both “mandated or holdover overtime, or [hours] worked because [an Officer] anticipated being held over.”

³¹ “Special Review in the Death of Correctional Officer Manuel A. Gonzalez, Jr. on January 10, 2005 at the California Institution for Men”, Office of the Inspector General of the State of California, March 16, 2005.

requirements for protective vests to be issued immediately upon their arrival” the report concluded that “distributing the vests in a reasonable time period would have enhanced employee safety, including that of Officer Gonzalez, whose personally fitted vest remained in the warehouse at the time of his death.”

Nearly all of the officers (90 percent) who responded to the CCOS reported occupying a position during the past six months that called for the issuance of a safety vest as directed by post orders. It appears that, at least as of April 2006, vests had been distributed to most people who required one; of those who occupied a position calling for a safety vest, the vast majority (87 percent) reported having been issued one. Yet of those who have been issued a vest, almost half (52 percent) report some kind of problem with it.

Figure 5. Problems with Issued Vests



Percentages are of those who occupied a position requiring a safety vest over the past six months, and who had been issued a vest at the time of the survey.

Figure 5 shows the problems most often cited by Officers. The most common problem noted by officers is that their vests do not fit correctly. About two out of every five officers reported that the vest they have been issued is ill-fitting. This is a significant problem, given that a vest that does not fit correctly may be inadequate protection from an attempted stabbing. Other

problems reported by officers who have been issued vests include that the vests are of poor quality (17 percent), that the vests are incompatible with other equipment or clothing (12 percent), or that they had not been issued the right type of vest (6 percent).³²

Issuing proper equipment is only one element of preparing custody staff to keep themselves safe on the job, and ensuring that officers feel safe while working. Adequate training regarding practices and procedures may contribute even more significantly to helping staff feel as safe as possible. Staff assessments of training are mixed, with a significant proportion of people asserting that they do not receive the kind of training they require to function well at work. More than a quarter of officers (27 percent) expressed significant concern about the quality of security-related training, indicating that they do not receive the kind of training they believe they need to keep themselves safe on the job. Likewise, 29 percent of officers feel that they do not receive the kind of training they need to perform their job well.

Some officers also feel that they have not been given adequate information about how to respond to a crisis situation. In the event of an emergency situation—including riots, food strikes, fights, fires, escapes, hostage crises and bomb threats—15 percent of respondents indicated that they do not think there are plans at their institution for what to do, or that they are unsure of whether or not such plans exist. Of those staff who have been made aware of emergency plans, almost a quarter (23 percent) report that those plans are either very or somewhat unclear.

Finally, about a quarter of officers also report that they do not feel they have been sufficiently trained in the use of force: 23 percent report that training did not communicate clear

³² While it is difficult to know what the “right type” of vest would be, it is possible that Officers are referring to the fact that vests are stab-resistant, rather than stab-proof.

guidelines for when the use of non-lethal force is appropriate, and 22 percent report that training did not communicate clear guidelines for when the use of lethal force is appropriate.

It is difficult to know from these data whether differences between officers in terms of their feelings of preparedness represent disparate reactions to the same training, indicating that some officers feel more prepared by the same training program than others, or whether some officers have received more effective training than others. It is possible that both may be at work: quality and curriculum may differ across either institutions or time periods, and some officers may feel more prepared than others even after receiving the same training. Whatever the cause, staff concerns about the adequacy of their professional training should clearly be addressed with more in-depth research, and with policy changes if required.

Section 3. Institutional Responses to Violence

Actions taken by the correctional institution in response to violence may significantly impact the likelihood of violence reoccurring. To the extent that some inmates may feel emboldened if they see that no disciplinary action is taken against inmates involved in assaults against staff, violence against officers should be expected to rise if institutional responses to violence are infrequent or inadequate.

Yet how correctional institutions respond to incidents of violence may also have symbolic import for Correctional Officers. Taking disciplinary action against inmates who commit acts of violence against staff implicitly states to officers that the institution values their safety, that someone is looking out for them, and that administrators are responsive to their concerns. Conversely, the feeling that assaults against staff are not dealt with, or are not dealt

with sufficiently, may increase feelings of isolation, which may in turn decrease feelings of safety among Correctional Officers.

Staff evaluations regarding both the consistency and adequacy of institutional responses to violence are mixed. As Table 4 notes, about 28 percent of officers in the aggregate report that disciplinary action is always taken in response to incidents of inmate violence against staff, and somewhat more (37 percent) say that disciplinary action is taken either often or very often. By comparison, almost the same proportion of staff (27 percent) feel that action is rarely taken, and 8 percent report that disciplinary action when a staff member is assaulted is either very rarely or never taken.

Table 4. Institutional Response to Inmate-on-Staff and Inmate-on-Inmate Violence

	Never or Very Rarely	Rarely or Now and Then	Often or Very Often	All the Time
Inmate-on-Staff Violence				
When a staff member has been assaulted, how often has any action been taken by the institution to discipline the inmate or inmates involved?	8%	27%	37%	28%
When action was taken in response to an instance of inmate-on-staff violence, how often do you feel that the action taken was adequate?	22%	38%	31%	8%
Inmate-on-Inmate Violence				
When staff have been made aware of instances of inmate-on-inmate violence, how often was any action taken by the institution to discipline the inmates involved?	4%	18%	48%	30%
When action was taken in response to an instance of inmate-on-inmate violence, how often do you feel that the action taken was adequate?	10%	36%	45%	9%

Data are taken from the 2006 California Correctional Officer Survey.

These evaluations vary significantly between prisons. In some prisons, a large proportion of staff believes that responses to institutional violence are consistently taken. At one prison, almost half (48 percent) of officers surveyed reported that action was taken “all the time”. In other prisons, barely 7 percent of staff make this claim, and about two-thirds (66 percent) report that action is either never or rarely taken to discipline inmates involved in violence against staff.

Yet even when action is taken, many officers feel that it is often inadequate; compared to the 28 percent of officers in the full sample who report that disciplinary action is always taken, only 8 percent say that the action taken is always adequate. About 22 percent of officers report feeling that actions taken in response to inmate-on-staff violence are either very rarely or never adequate. Again, however, these perceptions vary significantly across prisons. At one prison, as high as 22 percent report that actions taken are always adequate, while at others only about 4 percent say the same.

Section 4. A Hierarchical Model of Perceptions of Safety

The preceding sections have detailed a number of characteristics of prison management that may significantly predict perceptions of safety experienced by Correctional Officers. Issues related to overcrowding and understaffing, equipment and training, and institutional responses to violence have each been addressed as potentially relevant in determining how safe officers feel.

While it is difficult to parse out the causal contributions of each of these factors to perceptions of safety, it may at least be possible to assess how closely each item correlates with individual and aggregate perceptions of safety. In particular, it is possible to determine how much of the variation in perceptions of safety occurs between individuals, between security levels, and between prisons, and what contribution different factors make to that variability.

A series of hierarchical linear models allow us to look at the effects of the specific institutional characteristics detailed above, controlling for the individual characteristics of Correctional Officers, on staff perceptions of their own personal safety. Hierarchical linear modeling, also known as random effects modeling, is a type of analysis employed to assess data that is multilevel in nature. When individual data is nested within larger organizational units, observations are not fully independent. So for example, we would expect that scores on a math test vary across individual students with different levels of ability, but that students in a good school have higher scores, on average, than in a worse school. Here, this clustering is due to the common experience of staff working within the same security level or at the same prison, which leads to increased homogeneity among each subset of staff members. While Ordinary Least Squares (OLS) regression will produce standard errors that are too small, increasing the probability that a null hypothesis will be rejected, hierarchical linear modeling deals with this problem by taking the multilevel data structure into account.³³

An Unconditional Means Model is the simplest multi-level model. The unconditional means model is equivalent to a one-way ANOVA with random effects. It includes no independent variables, allowing us just to measure how variation in perceptions is allocated across three different levels: variation between individuals, between security levels within prisons, and between prisons. In all of the following models, Y denotes the score on the perceptions of safety index, which is calculated by combining two questions on how safe officers feel at work: how strongly officers disagree with the statement "I rarely feel safe when I am at

³³For an excellent treatment of HLM, see Raudenbush, S. and Bryk, A. (2002). *Hierarchical Linear Models: Applications and Data Analysis Methods*, Sage Publications, 2nd edition. For good examples of the use of multi-level models in criminal justice research, see Camp et. al.'s *The Influence of Prisons on Inmate Misconduct: A Multilevel Investigation*. (2003). *Justice Quarterly*, 20(3):501-533; and Wooldredge, J., Griffin, Timothy and Pratt, Travis (2001). "Considering hierarchical models for research on inmate behavior: Predicting misconduct with multilevel data." *Justice Quarterly* 18(1): 203-231.

work” and agree with the statement “I feel safe when working among the inmates.³⁴ In these models, i indexes individual officers, s indexes security levels within prisons, and p indexes prisons.

The first level of the Unconditional Means Model computes variability across individuals in perceptions of safety. The Level 1 equation describes the perception of Officer i in Security Level s in Prison p as a function of the mean perceptions of officers at his security level within his prison (β_{0sp}), plus an error term (ε_{isp}) that measures individual variation around the prison-security level mean.

$$\text{Level 1: } Y_{isp} = \beta_{0sp} + \varepsilon_{isp} \quad [1]$$

The second level equation computes the variability across security levels within prisons, such that the mean perceptions of safety in a particular security level within a given prison (β_{0sp}) is a function of the mean perceptions of safety of all officers at that prison (λ_{00p}) plus a deviation specific to each security level within that prison (u_{0sp}).

$$\text{Level 2: } \beta_{0sp} = \lambda_{00p} + u_{0sp} \quad [2]$$

The third level models the variability in the mean perceptions of safety among prisons, letting the prison mean (λ_{00p}) vary around a grand mean for all prisons in the state (ξ_{000}) with a prison-specific random term (V_{00p}).

$$\text{Level 3: } \lambda_{00p} = \xi_{000} + V_{00p} \quad [3]$$

The combined model then substitutes the Level 2 and Level 3 equations into the Level 1 equation. Thus, the final model estimates the perception of safety of Officer i as a function of the grand mean for all prisons (ξ_{000}), and three random terms, one at each level of the model—the individual (ε_{isp}), the prison-security level (u_{0sp}), and the prison (V_{00p}).

³⁴ The perceptions of safety index ranges from 0-1, with observed scores from .17 to 1, with a mean of .53. As shown in the histogram in Appendix B, the distribution of the index is roughly normal.

$$\text{Combined: } Y_{isp} = \xi_{000} + V_{00p} + u_{0sp} + \varepsilon_{isp} \quad [4]$$

Covariance parameters from the Unconditional Means Model reveal significant variation at the individual, the prison-security, and the prison levels. The intraclass correlation coefficients indicate that about 5 percent of the total variation in perceptions of safety occurs between security levels within prisons, and about 2.5 percent of the total variation occurs between prisons. The fixed effect estimate of the intercept is .54, indicating that the grand mean, or the mean perception of safety across all prisons, is at about the middle of the index.

As the model indicates that significant variability exists between officers' perceptions of safety at the level of the individual, it makes sense to add covariates to the model that might explain this variation. We might expect perceptions of safety to vary according to the race and gender of Correctional Officers, or relative to other salient demographic characteristics of an individual officer, including age, tenure, or education. We might also expect perceptions of safety to vary according to whether or not an officer has been the target of a direct assault over the past six months, and how often an officer has responded to violent incidents.

The first set of conditional models examines the relationship between individual characteristics and perceptions of safety.³⁵ Equations at the second and third levels remain the same, but variables are added at the level of the individual, such that α_{kisp} are k variables that predict perceptions of safety, and β_{ksp} are the coefficients that indicate how strongly each variable is associated with perceptions of safety and in what direction.

$$\text{Level 1: } Y_{isp} = \beta_{0sp} + \beta_{1sp}\alpha_{1isp} + \beta_{2sp}\alpha_{2isp} + \cdots + \beta_{ksp}\alpha_{kisp} + \varepsilon_{isp} \quad [4]$$

For the purposes of simplicity, all variables are first modeled as fixed effects; that is, the effects of each variable are not allowed to vary across security levels or prisons.

³⁵ These models are detailed in Appendix C.

In this first specification, there appears to be no difference between male and female officers in terms of perceptions of safety. Female officers, in the aggregate and all else equal, feel no more or less safe than their male counterparts. Likewise, there is little effect of racial or ethnic identity. African-American officers, *ceteris paribus*, feel no more or less safe than white officers. While there is a significant negative effect of being Latino relative to being white, the size of the effect is small and this effect disappears in fuller model specifications.

Perhaps, though, the relevant consideration is not only the race or gender of the individual officer, but rather the race and gender of an individual officer in relation to the demographic composition of officers at his or her prison. So, for example, male and female officers may experience similar perceptions of safety in prisons where females make up a significant percentage of the total staff, but female officers may feel less safe as the proportion of female staff decreases.

The second conditional model therefore allows the effects of race and gender to vary across prisons, and includes cross-level interactions of the demographics of staff with the proportional demographics of the Correctional Officers at the prison where a particular officer works. Thus, we can look not only at differences between male and female officers, but how these differences function in relation to the gender composition of Correctional Officers as a whole.³⁶

These effects are estimated by adding additional random coefficients to the third level of the model, such that for each racial and gender group the prison mean (λ_{00p}) is predicted by an average intercept across prisons (ξ_{000}) with a unique increment to the intercept associated with

³⁶ Unfortunately, the most recent data on the racial composition of inmates by institution is for the year 2000. The models shown in Appendix C therefore include the aggregate demographics of Correctional Officers, but not of inmates. In future research, more current data should be used to accurately evaluate questions relating to race and racial composition.

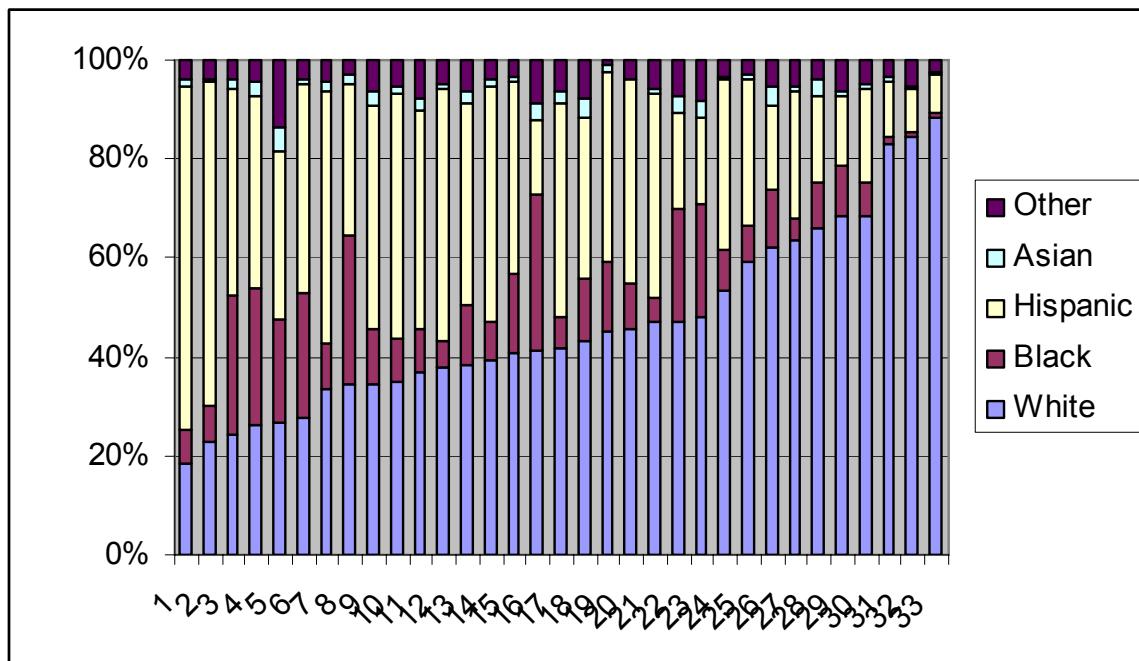
prison p (V_{00p}), and the slope (λ_{10p}) is now modeled as a function of the average regression slope across prisons (ξ_{100}) plus a unique increment to the slope associated with prison p (V_{10p}).

$$\text{Level 3: } \lambda_{00p} = \xi_{000} + V_{00p} \quad [5a]$$

$$\lambda_{10p} = \xi_{100} + V_{10p} \quad [5b]$$

California prisons vary significantly by the percentage of female custody staff. System-wide, roughly 17 percent of officers are female. Across prisons this percentage ranges from 11 percent to just under 20 percent. However, variation in the percentage of female officers does not appear to significantly impact female officers' perceptions of safety. Female officers, on average, do not feel either more or less safe as the percentage of female officers increases. This finding suggests that, as far as "safety in numbers" for female correctional staff is concerned, the "numbers" need not be of a particular gender.

Figure 6. Composition of Correctional Officers by Race and Ethnicity, by prison



Source: Department of Corrections and Rehabilitation's Office of Personnel Services, generated 7/24/06.

The same appears to be true of minority officers. As is immediately evident from Figure 6, the racial composition of Correctional Officers varies a great deal across prisons. According to the Department of Corrections and Rehabilitation's Office of Personnel Services, the proportion of non-white officers as of July 2006 ranges from a high of 81 percent at one prison to a low of 11.5 percent at another. The proportion of black and Latino officers fluctuates as well: While the pool of Correctional Officers is in one prison composed of 30 percent African-Americans, another has only 1.6 percent, and two prisons each have less than a percent. Likewise, prisons range from a large percentage of Latino officers (70 percent and 65 percent, for example) to only a small minority (8.6 percent and 7.8 percent).

Just as there was no significant difference between white and minority officers in the first model, there is likewise no effect of any of the ethnicity interaction terms. Thus, being black in a prison with a higher proportion of black officers, Latino in a prison with a higher proportion of Latino officers, or Asian in a prison with a higher proportion of Asian officers, does not make an officer feel any more or less safe. While the racial diversity of custody staff may have other benefits, it does not appear to directly impact the safety perceptions of minority correctional staff. Moreover, once the proportion of Latino officers is accounted for, the difference between Latinos and whites disappears.

Other individual demographic predictors show mixed results. The length of time an individual has been working for the Department of Corrections does not appear to correlate with his or her feelings of safety, nor does the length of time an officer has been working at the prison to which he or she is currently assigned. Likewise, having some college education, a college degree (either a BA or AA), or having completed at least some post-graduate work relative to

having only a high school education or GED does not appear to either enhance or mitigate feelings of safety.

The age of an officer, however, does appear to relate to his or her perceptions of safety in a significant way. Those in older age groups, relative to those in the 18-30 year range, report feeling less safe while in the institutions. There are several possible explanations for these differences. The effect may simply be related to the relative honesty of each group when responding to the survey. Younger officers may be less likely than older officers to admit when they do not feel safe. Or, it may be that officers in these older groups feel less capable of engaging in physical confrontation with inmates, or are more wary of having to do so. Finally, it may be the case that younger people have less fear generally for their personal safety, or have a higher tolerance for risk on the whole.

Finally, perceived safety in this set of models appears clearly related to real rates of violence and perceived characteristics of inmates. Having been the target of a direct assault over the past six months, as well as having been injured in such an assault, are negatively related to how safe an officer feels. So too are the proportion of inmates perceived to be either dangerous or very dangerous. As might be expected, the larger the percentage of inmates an officer perceives to fall into these categories, the less safe that individual feels.

The next set of models adds predictors at the level of the prison-security level, and these models confirm that the security level in which an officer works has a significant and negative relationship to his or her perceptions of safety.³⁷ Officers working in Level 1 units have higher average scores on the perceptions of safety index than officers at other levels, suggesting that Level 1 officers feel significantly safer, on average, than officers working with higher

³⁷ These models are detailed in Appendix D.

classification inmates. The reverse is true for Level 4 officers, who on the whole feel significantly less safe than other officers.³⁸

The final set of models includes prison specific management characteristics, including levels of overcrowding and understaffing, measures of satisfaction with equipment and training, and officer evaluations of institutional responses to violence.³⁹ Where indicated, management variables have been aggregated to the prison-security level, and individual variables are centered on the security level mean.

Overcrowding and Understaffing

While the number of overtime hours an officer reports having worked over the past six months does not seem to correlate with his or her perception of safety, the percentage of those hours that are mandated, or “hold-over,” has a significant, and negative, relationship to perceptions of safety. The more overtime hours an officer works because he is required to, rather than because he chooses to, the less safe that officer feels while at work. It is possible that this is related to how tired an officer feels while at work. An officer called upon to work a large number of extra shifts, particularly when overtime hours are unexpected or undesired, may understandably feel less capable of protecting herself from violence while at work. Forced overtime may also make individuals feel less in control of their environment, and therefore less safe. Finally, it is also possible that this relationship is mostly a function of self-selection, in that those officers who feel safe may more willingly take on overtime hours than those who generally feel unsafe.

³⁸ It is likely that, at least in part, security level in these models serves as a proxy for aggregate levels of violence. In further specifications, this appears to be the case. Once assault rates at the prison level are added, the significance of security level dummy variables diminishes.

³⁹ These models are detailed in Appendix E.

Individual perceptions of understaffing are also related to the degree to which officers feel unsafe. Officers who believe that there are not enough staff working to provide for the safety and security of staff feel less safe than those who do not agree that this is the case. These sentiments explain variation at both the prison-security level and at the level of the individual.

Finally, while levels of overcrowding do not appear significant in this last set of models, this does not necessarily indicate that levels of overcrowding have no effect on perceptions of safety. As noted in Section 1 of Part II, current rates of overcrowding differ across prisons, from a low of 136 percent to a high of 244 percent design capacity. While this represents significant variation, it may be that the variation does not capture enough difference to perceive an effect. Put another way, it may be that the effect of overcrowding is between prisons that are not overcrowded relative to prisons that are, rather than between prisons that are overcrowded and prisons that are very overcrowded. Thus, it may not be the case that rising rates of occupancy have no relationship to perceptions of safety, but rather that the effects are not captured by comparing prisons within the current system, with its high rates of overcrowding system-wide.

Equipment and Training

Most officers who require a stab-resistant vest have by now received one, and there does not appear to be a difference in perceptions of safety between those who have a vest and those few who still do not. There does, however, appear to be a small but significant difference between those who report problems with their vest and those who have a vest with which they identify no problems. Having identified some type of problem with one's vest predicts a drop in perceptions of safety of about .017, or just less than 2 percent of the scale.

Neither awareness of plans for what to do in the case of an emergency nor the perceived clarity of an institution's emergency plans appear to significantly predict variation between officers or prison-security levels. However, an individual's perception of how well-trained he is appears to be a significant predictor of how safe he feels. In this model, training has been centered on the security level mean, such that the quality of training is considered as variation between individuals within security levels. Those who feel well-trained, both to do their jobs well and to keep themselves safe, feel significantly safer than those who feel that training has not prepared them to accomplish these tasks. Moreover, the size of the effect is quite large, and this variable alone explains almost 8 percent of individual variance in perceptions of safety.

Institutional Response to Violence

Beliefs about the frequency with which an institution takes action to discipline those involved in violence against staff does not seem to significantly impact perceptions of safety. However, the adequacy of institutional responses to violence does emerge as an important predictor of variation between individuals. Individuals who believe that their institution takes adequate action to discipline inmates involved in violence against staff feel safer than those who believe that inmate-on-staff violence is rarely or never responded to adequately.

Part III. Implications and Conclusions

The analyses presented in the preceding sections have pointed to several important conclusions about perceptions of safety among California Correctional Officers. While real rates of violence are a significant predictor of individual perceptions of safety, it is clear from the analysis presented above that many other factors influence how safe officers feel. In particular, evidence from multi-level models suggests that some characteristics of correctional management may be significantly correlated with how safe staff members feel while working in California's prisons. Perceptions of insufficient training, inadequate institutional responses to violence against staff, and insufficient staffing; problems with staff-resistant vests; and the proportion of overtime hours worked that are mandated, all appear to predict increased concerns about safety among correctional staff.

Confidence among Correctional Officers that they can prevent and respond to emergencies in safe and effective ways is surely important in its own right. Yet, how safe officers feel may also have broader implications that are worthy of consideration. The perception of officers that their personal safety is at risk may negatively impact both the well-being of Correctional Officers more generally, and the ability of the California correctional system to carry out its most basic responsibilities.

Results of the CCOS indicate that Correctional Officers in California prisons maintain high levels of work-related stress, and that a large percentage of officers believe that their work negatively impacts their relationships with family. A majority of officers (70 percent) report feeling stressed while at work, and about two-thirds (65 percent) report that they are under a lot of pressure at work. About half of respondents report that these stresses spill over into their personal life. Many officers (48 percent) report having become harsher or less trusting towards

family members since taking a job as a Correctional Officer, or feel that what happens at work negatively affects family relationships (50 percent).

Preliminary analyses show strong relationships between perceptions of safety and these negative social and psychological outcomes among California Correctional Officers. Of those who report feeling relatively safe at work, 60 percent indicate psychological stress, and 42 percent indicate negative effects on family. By comparison, a much larger proportion of those who report feeling *unsafe* at work express these sentiments. Of this group, 87 percent indicated that they experience high levels of psychological stress, and 62 percent indicated that work has negatively affected relationships with their spouse/partner or children.⁴⁰

The relationship between perceptions of safety and negative outcomes for both officers and inmates should be confirmed with more rigorous analyses, and this is an important direction for future research. However, if high rates of concern over safety do in fact result in these significant levels of personal stress and interpersonal strain, the perceived safety of officers may ultimately impact rates of retention and burn-out. This would undoubtedly place even greater strain on a system that is already experiencing difficulty attracting and retaining correctional staff, and would adversely impact the functioning of the California prison system as a whole.

⁴⁰ Chi squares indicate that these group differences are statistically significant at the p<.001 level.

Appendix A. Additional Information on Data and Methods

Each year, the Federal Bureau of Prisons conducts a comprehensive survey to gather information on the attitudes and perceptions of staff around a variety of issues. Questions are asked in six broad categories: Socio-Demographics, Personal Safety & Security, Work Environment, Quality of Life, Personal Well-Being, and a Special Interest Section on a topic that varies each year. The BOP made this survey available to adapt to the needs of the California system, and it served as the basis for the initial survey instrument.

A field test of the drafted instrument was conducted in February of 2006, at a CCPOA Board of Directors meeting. Those in attendance included Correctional Officer representatives from each prison in the state system, for a total of roughly 90 attendees. Each attendee was invited to take the survey, after which a question and answer period was held to address any issues or concerns that participants had with the survey instrument. The survey instrument was then significantly revised based on these completed surveys and the comments offered by participants. The final survey instrument included sixty-eight closed-ended questions, requiring respondents to choose one or more of the given answers. One of these questions has parts A and B; two have parts A, B and C; two have parts A-D; one has parts A-E; one has parts A-F; and one has parts A-O.

In the week preceding the initial survey mailing, a full page advertisement was placed in the Peacekeeper, a publication of the California Correctional Peace Officers Association, informing officers about the survey, explaining its objectives, and inviting participation. A postcard, survey and cover letter were then sent to each Correctional Officer at the end of March, 2006 with a stamped and addressed reply envelope. The cover letter explained the goals of the survey, as well as providing information about confidentiality. Cash prizes were offered to three

Correctional Officers to be picked at random from the prison that returned the largest percentage of their surveys.

Two weeks after the initial mailing, a follow-up postcard was sent to every officer, reminding people to fill out their surveys. In addition, a second full page advertisement was run in the Peacekeeper. At the end of June, a second mailing of the survey was sent to the full sample. The second mailing included a duplicate copy of the survey, a slightly different cover letter, and a pre-addressed business reply envelope.

Table 5 breaks down the survey sample by percentages for each institution. While there was some variation between prisons in terms of the proportion of officers participating in the survey, no individual prison had to be excluded from analysis due to a paucity of respondents.

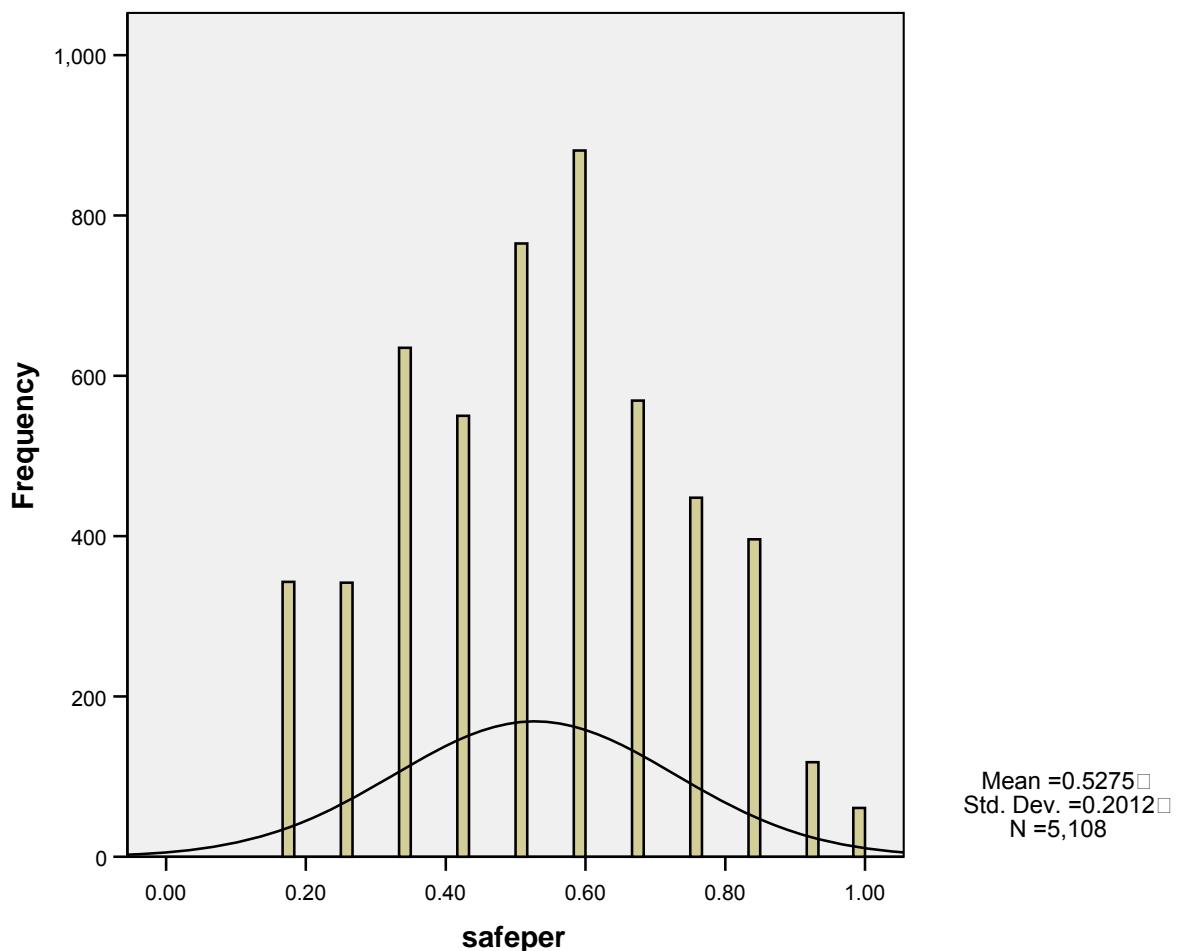
Table 5. Response Rates by Institution

Institution	Estimated Positions Filled	Returned Surveys (#)	Response Rate (%)
AVENAL STATE PRISON	671	161	24.0
CA. CORRECTIONAL CENTER	520	164	31.5
CA. CORRECTIONAL INSTITUTION	975	245	25.1
CA. INSTITUTION FOR MEN	888	236	26.6
CA. INSTITUTION FOR WOMEN	302	67	22.2
CA. MEDICAL FACILITY	526	190	36.1
CA. MEN'S COLONY	748	249	33.3
CA REHABILITATION CENTER	605	138	22.8
CA. STATE PRISON - CORCORAN	1057	220	20.8
CA. STATE PRISON - SACRAMENTO	747	215	28.8
CA. STATE PRISON - SOLANO	597	123	20.6
CA. STATE PRISON - WASCO	703	172	24.5
CALIPATRIA STATE PRISON	564	157	27.8
CENTINELA STATE PRISON	607	139	22.9
CENTRAL CA. WOMENS FACILITY	376	95	25.3
CHUCKAWALLA VALLEY STATE PRISON	331	77	23.3
CORRECTIONAL TRAINING FACILITY	728	182	25.0
CSP - LOS ANGELES COUNTY	637	170	26.7
DELANO II STATE PRISON	751	136	18.1
DEUEL VOCATIONAL INSTITUTION	549	157	28.6
FOLSOM STATE PRISON	449	150	33.4
HIGH DESERT STATE PRISON	671	214	31.9

IRONWOOD STATE PRISON	587	150	25.6
MULE CREEK STATE PRISON	475	148	31.2
NORTH KERN STATE PRISON	653	137	21.0
PELICAN BAY STATE PRISON	805	271	33.7
PLEASANT VALLEY STATE PRISON	689	159	23.1
R J DONOVAN CORR FACILITY	683	184	26.9
SALINAS VALLEY STATE PRISON	725	181	25.0
SAN QUENTIN STATE PRISON	805	198	24.6
SIERRA CONSERVATION CENTER	543	159	29.3
SUBSTANCE ABUSE TR.FACILITY	872	203	23.3
VALLEY STATE PRISON FOR WOMEN	404	121	30.0

Additional surveys were returned that did not specify an institution.

Appendix B. Histogram of the Perceptions of Safety Index



Appendix C. Predicting Perceptions of Safety Using HLM with Level 1 Covariates

	Unconditional Means Model	Model I (individual CO demographics)	Model II (cross-level interactions with CO composition)
Race			
Black		-.015 (.013)	.024 (.027)
* % Black COs			-.222 (.137)
Hispanic		-.020* (.008)	-.019 (.021)
* % Hispanic COs			-.004 (.050)
Asian		-.036# (.020)	-.034 (.022)
Other		-.034# (.017)	-.035* (.017)
Gender			
Female		.008 (.009)	.055 (.041)
* % Female COs			-.277 (.226)
Age			
31-45		-.024# (.012)	-.025* (.012)
46-65		-.027* (.013)	-.029* (.014)
65+		-.044** (.017)	-.044** (.017)
Education			
some college		-.015 (.011)	-.014 (.011)
AA or BA		-.011 (.012)	-.010 (.012)
Post Grad		.003 (.031)	.005 (.031)

Tenure at CDCR			
6 to 10 years	-.020 (.014)	-.020 (.014)	
11 to 20 years	-.027# (.016)	-.026# (.016)	
21 years or more	-.007 (.024)	-.011 (.024)	
Tenure at current prison			
6 to 10 years	.006 (.013)	.007 (.013)	
11 to 20 years	.029 (.015)	.029# (.015)	
21 years or more	.020 (.029)	.028 (.029)	
Recent experiences with violence			
assaulted in past six months	-.037*** (.010)	-.037*** (.010)	
injured from assault in past six months	-.038*** (.011)	-.038*** (.011)	
incidents responded to (0-1)	-.079# (.048)	-.082# (.048)	
Assessment of Inmates			
proportion very dangerous inmates	-.037*** (.016)	-.308*** (.016)	
proportion dangerous inmates	-.215*** (.018)	-.216*** (.018)	
intercept	.537*** (.008)	.803 (.020)	.805*** (.020)
residual (1)	.038*** (.001)	.032*** (.001)	.031*** (.001)
intercept (2)	.002** (.001)	.001** (.000)	.001*** (.000)
intercept (3)	.001# (.001)	.000 (.000)	.000 (.000)
-2 log likelihood	-1996.456	-1748.681	-.1746.119

Dependent variable: Perceptions of safety index is constructed from questions: "I rarely feel safe when I am at work" and "I feel safe when working among the inmates". Variables were standardized and then combined into a linear index, with a high score indicating feelings of safety. Model II allows race and gender variables to vary across prisons. All other variables are modeled as fixed effects. Aggregate race and gender composition of Correctional Officers are taken from Department of Corrections and Rehabilitation's Office of Personnel Services.
 p<.001***, p<.01**, p<.01*, p<.1#

Appendix D. Predicting Perceptions of Safety Using HLM with Level 2 Covariates

	Unconditional Means Model	Model I (security level)	Model II (level 1 excluded)	Model III (level 2 excluded)	Model IV (level 3 excluded)
security level		-.038*** (.006)			
level 1				.096*** (.020)	.120*** (.020)
level 2			-.0967*** (.020)		.024# (.013)
level 3			-.1207*** (.020)	-.024# (.013)	
level 4			-.1437*** (.020)	-.047*** (.014)	-.023# (.012)
intercept	.537*** (.008)	.647*** (.019)	.647*** (.019)	.552*** (.011)	.527*** (.009)
residual (1)	.038*** (.001)	.037*** (.001)	.038*** (.001)	.038*** (.001)	.038*** (.001)
intercept (2)	.002** (.001)	.001* (.000)	.001 (.000)	.001 (.000)	.001 (.000)
intercept (3)	.001 (.001)	.001# (.000)	.001* (.000)	.001* (.000)	.001* (.000)
-2 log likelihood	-1792.589	-1826.95	-1835.626	-1835.626	-1835.626

Dependent variable: Perceptions of safety index is constructed from questions: "I rarely feel safe when I am at work" and "I feel safe when working among the inmates". Variables were standardized and then combined into a linear index, with a high score indicating feelings of safety. Officers who reported having primarily worked with more than one security level over the past six months are excluded from analysis.

p<.001***, p<.01**, p<.01*, p<.1#

Appendix E. Predicting Perceptions of Safety Using HLM with Levels 1, 2 and 3 Covariates

	Unconditional Means Model	Model 1 (prison management)	Model 2 (full model)
Understaffing and Overcrowding			
relative Overcrowding (0-1)	.007 (.056)	-.004 (.051)	
relative CO Vacancy Rate (0-1)	.075# (.042)	.052 (.039)	
proportion of overtime that is holdover hours	-.039*** (.008)	-.024* (.010)	
relative overtime hours (0-1)	-.026 (.019)	-.018 (.022)	
not enough staff for staff safety (centered)	-.122*** (.009)	-.112*** (.011)	
not enough staff for staff safety (aggregated)	-.120* (.058)	-.140* (.062)	
Equipment and Training			
no vest	-.026# (.016)	-.005 (.019)	
problems with vest	-.022*** (.007)	-.017* (.007)	
training (centered)	.197 (.022)	.172*** (.025)	
training (aggregated)	.059 (.197)	.317 (.213)	
know of emergency plans (centered)	-.005 (.010)	-.006 (.011)	
know of emergency plans (aggregated)	.115 (.074)	.095 (.082)	
clarity of emergency plans (centered)	-.028# (.015)	-.017 (.017)	
clarity of emergency plans (aggregated)	-.004 (.118)	-.037 (.130)	
Institutional Response to Violence			
frequency inst response to violence (centered)	.049 (.017)	.014 (.019)	
frequency inst response to violence (aggregated)	.214 (.152)	.181 (.167)	
adequacy inst response to violence (centered)	.074*** (.017)	.074*** (.019)	

adequacy inst response to violence (aggregated)	.157 (.160)	-.059 (.176)
Prison Characteristics		
relative staff assault rate (0-1)	-.005 (.027)	.011 (.024)
female institution	-.035 (.037)	-.008 (.037)
Security level Characteristics		
security level 2		.006 (.025)
security level 3		.032 (.025)
security level 4		.047# (.027)
Individual Characteristics		
Age		
31-45		-.009 (.012)
46-65		-.011 (.013)
65+		-.041* (.017)
Recent experiences with violence		
assaulted in past six months		-.013 (.010)
injured from assault in past six months		-.031** (.011)
incidents responded to (0-1)		-.020 (.053)
Assessments of Inmates		
proportion very dangerous inmates		-.256*** (.019)
proportion dangerous inmates		-.175*** (.020)
proportion inmates in gangs (centered)	-.154*** (.018)	-.079*** (.022)
proportion inmates in gangs (aggregated)	-.246*** (.064)	-.090 (.067)
number of different gangs (centered)	-.093 (.098)	-.063 (.062)
number of different gangs (aggregated)	.455 (.849)	.247 (.965)

intercept	.537*** (.008)	.506*** (.145)	.582*** (.155)
residual (1)	.038*** (.001)	.030*** (.001)	.027*** (.001)
intercept (2)	.002** (.001)	.000 (.000)	.000 (.000)
intercept (3)	.001 (.001)	.001 (.000)	.000# (.000)
-2 log likelihood	-1792.589	-2094.259	-1739.068

Dependent variable: Perceptions of safety index is constructed from questions: "I rarely feel safe when I am at work" and "I feel safe when working among the inmates". Variables were standardized and then combined into a linear index, with a high score indicating feelings of safety. Officers who reported having primarily worked with more than one security level over the past six months are excluded from analysis. Officers at two prisons where data on aggregate staff assault numbers were unavailable are also excluded from analysis.

Aggregate staff assaults are taken from Inmate Incidents in Institutions, 2005, and are calculated per 100 average daily population (ADP). CO Vacancy Rates are taken from Department of Corrections and Rehabilitation Office of Personnel Services. Rates of overcrowding are taken from Inmate Incidents in Institutions, 1998, 1999, 2000, 2001, 2002, 2003, Data Analysis Unit, California Department of Corrections.

p<.001***, p<.01**, p<.01*, p<.1#