Washington State Department of Corrections

Prison Violence: Preliminary Study

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Executive Summary

This report has three primary objectives: 1) to identify a sample of offenders for use in our study, 2) to examine characteristics of this sample, and 3) to explore how these characteristics might influence whether an offender is violent or nonviolent. The demographic characteristics examined in this report were age, race, and sex. The sample consisted of 25,273 offenders incarcerated in FY07 and/or FY08. Twelve percent of the sample were violent ($n = 2985$). The remaining 22,288 offenders comprised our comparison group of nonviolent offenders.

Analyses indicated a negative relationship between age and violent behavior (e.g., as age increased, the number of violent infractions decreased). This suggests that older offenders are less likely than younger offenders, to be violent.

In terms of racial differences, non-white offenders were significantly more likely to be violent than white offenders. Hispanic males, in particular, had the highest mean number of violent infractions compared to any other racial/gender group. And while male offenders were found to be more likely to engage in violent behavior than female offenders by a factor of nearly 4:1, there were statistically significant differences found between females of different racial groups. For example, black females seemed to be almost equivalent with male offenders in terms of their mean number of violent infractions.

Findings within this report suggest there might be additional factors to examine in future studies of prison violence. For example, examining the prevalence of Security Threat Groups (STGs) among different racial groups can provide DOC with additional information on who to expect violence from.

<u>Prison Violence: Preliminary Study</u>

Prison violence is a concern for both ethical and financial reasons. Prison violence compromises the safety and well-being of correctional workers as well as the offender population, the result of which is an increase in healthcare costs to DOC. Moreover, an offender who engages in violent behavior might be sanctioned with a loss of good conduct time which keeps the offender incarcerated for a longer period of time, perpetuating the cycle of violence and extending the cost of housing that offender.

The importance of examining prison violence is to better understand the behavior in hopes of developing interventions that are cost efficient and considerate of the safety and welfare of offenders and staff members. This preliminary report is an examination of Washington State prison violence.

This preliminary report will describe the offender demographics: age, gender, and race for both violent and nonviolent offenders. For the purposes of this report, an offender is considered violent if they received a violent prison infraction[1] for which that offender was found guilty (as opposed to a nonviolent infraction such as refusing to work). Likewise, an offender is considered nonviolent if they did not receive a violent infraction (but could have received a nonviolent infraction). The sample consisted of offenders who were incarcerated in fiscal years 2007 and 2008. Infractions prior to fiscal year 2007 were not counted.

Examining the effect of certain demographic variables on prison violence can be difficult since variables that affect violence are related. For example, being both young and male tend to be highly correlated with one another when it comes to violent behavior. Therefore, the very first analysis of this report controls for each of the characteristics (that will be subsequently examined in this report) in order to examine the unique effect of each variable on violent behavior.

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[1] Violent prison infractions include: possession of a weapon, assault on an inmate or staff member requiring hospitalization, assault on an inmate or staff member not requiring hospitalization, sexual assault on an inmate or staff member, homicide, and fighting.

Table 1 illustrates detailed information including the odds ratio as well as its statistical significance. Each line in the table represents a unique characteristic and controls for all other lines (characteristics). A row with an odds ratio of zero is the reference group of that variable of which all other rows of that variable are compared to (i.e. offenders age 18-22 were 2.48 times more likely to have a violent infraction than offenders 38+). One of the most notable observations about this table is that every row is significant. The result of which means that all of the characteristics contribute to getting a violent infraction; some more than others (indicated by the odds ratio).

Table 1

Odds of getting a Violent Infraction by Demographic Variable (N = 25,273)

		Odds Ratio	*z*	*p*
Age Group	18-22	2.48	13.29	< .0001
	23-27	2.10	13.63	< .0001
	28-32	1.93	11.45	< .0001
	33-37	1.36	4.46	< .0001
	38+	1.00	n/a	--
Race	White	1.00	n/a	--
	Black	1.49	7.76	< .0001
	Hispanic	1.81	10.62	< .0001
	Other	1.20	2.48	0.0133
Sex	Male	3.56	14.60	< .0001
	Female	1.00	n/a	--

With the knowledge of individual characteristics on violent infractions, a further examination of the overall effect of these characteristics on violent infractions without controlling for any other characteristic needs exploration. The result of which would be to identify the interaction of characteristics in order to estimate the probability of violent behavior. For example, how the characteristics of being young and male affects violence, not just one independent of the other.

The following sub-analyses does not control for other characteristics that may affect violent behavior. Hence, while they might be perceived to be misleading, they present an informative examination of demographic variables on violence.

Age and Violence

The average age of a violent offender is 31 years. Nonviolent offenders were an average of four years older than violent offenders ($t = -21.25$, $p < .0001$). See Table 2.

Table 2

Average Age of Violent and Nonviolent Offenders (N = 25,273)

	N	Mean	Median	SD
Violent	2985	31.24	29.2	9.30
Nonviolent	22,288	35.39	34.01	10.40
Overall	25,273	34.94	33.28	10.24

The primary findings reveal that violent offenders are younger than nonviolent offenders. This leads to the next question: does age have an effect on violent behavior? The answer is yes. A primary finding considered the characteristic of age (years of age) and the characteristic of violence ($F = 6.65$, $SS = 45.70$, $p < .0001$). Table 3 displays the number of violent and nonviolent offenders by age group. As the age group distribution increases, the proportion of violent offenders decreases, and the proportion of nonviolent offenders increases. This affirms that violent offenders tend to be younger than nonviolent offenders in Washington State prisons.

Table 3

Age Group Distribution among Violent Offenders and Nonviolent Offenders
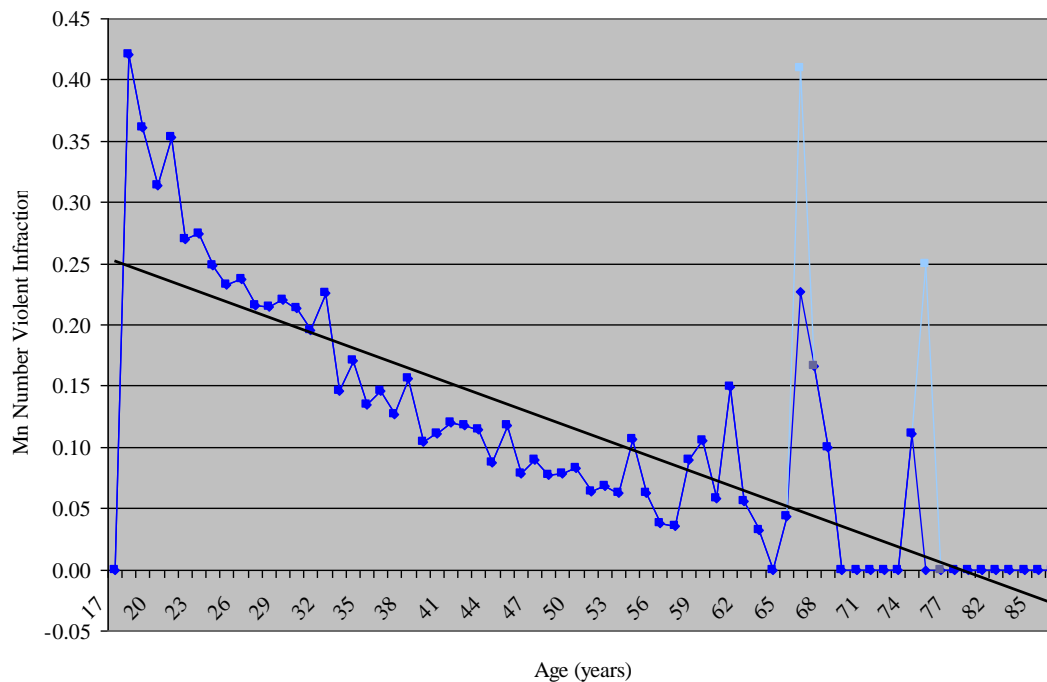
	Violent	Nonviolent	Total
18-22	402	1770	402
	(18.51%)	(81.49%)	(100.00%)
23-27	826	4470	5296
	(15.60%)	(84.40%)	(100.00%)
28-32	663	3949	4612
	(14.38%)	(85.62%)	(100.00%)
33-37	359	3133	3492
	(10.28%)	(89.72%)	(100.00%)
38+	735	8966	9701
	(7.58%)	(92.42%)	(100.00%)
Total	2985	22,288	25,273
	(11.81%)	(88.19%)	(100.00%)

Do offenders become less violent as they age? The before mentioned analysis provides an estimation of offenders in each age group that are violent. However, it does not reveal which offenders are more violent by age group. For example, do younger offenders commit a greater number of violent infractions than older offenders?

Figure 1 considers the correlation between the mean number of violent infractions and the age of the offender. In summary the average number of violent infractions decreased as the age of the offender increased.

Figure 1

Average Number of Violent Infractions by Age across All Offenders (N = 25,273)[1]

The above analysis reveals that there is a correlation between age and the number of violent infractions, and the nature of this relationship appears to be relatively negative (e.g., as age increases, the number of violent infractions decreases). This leads to the next question: is the relationship between age and violence affected by other demographic characteristics such as race and/or gender?

The preliminary analysis found an interaction between age, race, and gender ($F = 2.66$, $p < 0.0001$). The relationship between age, race and violence depends on the gender of the offender. For example, violence tended to decrease with age for all male offenders regardless of race. However, violence tended to increase with age for black females and other females. Table 4 displays the mean number of violent infractions across all offenders by gender, race, and age group.

Table 4

Mean Number of Violent Infractions across by Age Group, Gender, and Race for All Offenders (N = 25,273)

	Male				Female				Total
	White	**Black**	**Hispanic**	**Other**	**White**	**Black**	**Hispanic**	**Other**	
18-22	0.31	0.29	0.51	0.34	0.13	0.04	0.04	0.00	0.31**
23-27	0.25	0.22	0.44	0.24	0.04	0.25	0.09	0.04	0.25**
28-32	0.21	0.25	0.37	0.23	0.03	0.13	0.06	0.14	0.21
33-37	0.13	0.21	0.25	0.17	0.03	0.22	0.04	0.06	0.14
38+	0.10	0.18	0.14	0.11	0.01	0.07	0.03	0.03	0.10**
Overall	**0.16**	**0.22**	**0.34**	**0.20**	**0.03**	**0.12**	**0.05**	**0.06**	**0.17**

**indicates statistical significance

Gender and Violence

Table 5 shows that nonviolent behavior is more prevalent than violent behavior, and male offenders are approximately four times more likely to engage in violent behavior than their female counterparts ($O.R. = 3.823$, $p < .0001$).

Table 5

Gender Distribution among Violent Offenders and Nonviolent Offenders

Gender	Violent	Nonviolent	Total
Male	13.24	86.76	100.00
	($N = 2838$)	($N = 18,604$)	($N = 21,442$)
Female	3.84	96.16	100.00
	($N = 147$)	($N = 3684$)	($N = 3831$)
Total	**11.8**	**88.2**	**100.00**
	($N = 2985$)	($N = 22,288$)	($N = 25,273$)

Race and Violence

Table 6 reports what proportion of violent infractions is reported for each racial group. This table displays infractions—not people. For example, 52% ($n = 2282$) of violent infractions were committed by white offenders.

Table 6

Number of Violent Infractions Committed by each Racial Group (N = 4413)

<u>Race</u>	<u>Number</u>	<u>Percent</u>
White	2282	51.71
Black	916	20.76
Hispanic	868	19.67
Other	347	7.86
Total	**4413**	**100.00**

How does race contribute to violent behavior <u>and</u> how does race correlate with gender? Table 7 addresses this question. There was a significant correlation found between race and gender ($F = 6.67$, $p = .0002$). The relationship between race and the number of violent infractions varies depending on whether an offender is male or female. Secondly, there were correlations found for race ($F = 71.91$, $p < .0001$) and for gender ($F = 223.09$, $p < .0001$). Compared to any other race/gender combination, Hispanic males had the highest number of violent infractions. A surprising number came from black females who had the highest mean number of violent infractions compared to any other female group. Black females engage in violent behavior at a higher rate than any other female racial group but not as much as male offenders.

Table 7

Mean Number of Violent Infractions across all Gender and Racial Groups

	<u>Race</u>	<u>Mean</u>	<u>*F*</u>	<u>*P*</u>
Male	White	0.16		
	Black	0.22		
	Hispanic	0.34	***	.006
	Other	0.20		
Female	White	0.03		
	Black	0.12	***	.006
	Hispanic	0.05		
	Other	0.06		
	Overall	**0.17**		

Overall F (7, 25,273) = 62.21, p < .0001.

Table 8 shows that black females tend to be a group by themselves in terms of their violent behavior. However, between the years 2005-2006 Hispanic females had a high mean number of violent infractions.

Table 8

Mean Number of Violent Infractions over Time by Gender and Race

	Race	Mean Number Violent Infractions				
		1999 - 2000	2001 - 2002	2003 - 2004	2005 - 2006	2007 - 2008
Male	White	0.14	0.14	0.13	0.14	0.16
	Black	0.26	0.23	0.22	0.21	0.22
	Hispanic	0.25	0.23	0.23	0.26	0.34
	Other	0.18	0.20	0.18	0.19	0.20
Female	White	0.03	0.02	0.02	0.04	0.03
	Black	**0.18**	**0.11**	**0.13**	**0.11**	**0.12**
	Hispanic	0.08	0.05	0.08	0.12	0.05
	Other	0.06	0.07	0.05	0.07	0.06
	Overall	**0.15**	**0.13**	**0.13**	**0.14**	**0.17**

* Bold added for emphasis.

Question to be Addressed in Further Studies

- Where in the incarceration cycle do offenders engage in violent behavior?

Technical Notes

[1] Within the individual age groups of sixty-six and seventy-five, there were outliers which drove the mean up. To control for this, these outliers were winsorized. This means that their values were replaced with a value that was one more than the second highest value. For example, one offender in the sixty-six year old age group had a violent infraction count of 6 whereas the other sixty-six year olds had a violent infraction count of one. This offender's violent infraction count of 6 was replaced with the value 2.