Facility-level and Individual-level Correlates of Sexual Victimization in Juvenile Facilities, 2012

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Abstract

This report examines facility impact on youth sexual victimization and also takes into account critical youth-level predictors. The objectives are to examine the facility-level correlates of youth sexual victimization, identify significant youth characteristics that can predict sexual victimization, and describe the contextual circumstances surrounding youth victimization. This includes analysis of facility attributes that correspond to the Prison Rape Elimination Act standards. Findings are based on the 2012 National Survey of Youth in Custody and a companion facility survey.

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1.   Overview

The second cycle of the National Survey of Youth in Custody (NSYC-2) was completed in 2012. Youth in 326 facilities were selected, and 8,707 youth completed usable surveys about the nature of sexual victimization within the facility. The Bureau of Justice Statistics (BJS) published the first NSYC-2 report in June 2013. It included the nationwide prevalence of sexual victimization for adjudicated youth in juvenile facilities, rankings of facilities with the highest and lowest rates of sexual assault, and state-level estimates of sexual victimization.

This report examines the facility's impact on youth sexual victimization and also takes into account critical youth-level predictors. The objectives are to (1) examine the facility-level correlates of youth sexual victimization, (2) identify significant youth characteristics that can predict sexual victimization, and (3) describe the contextual circumstances surrounding youth victimization. This includes analysis of facility attributes that correspond to the Prison Rape Elimination Act (PREA) standards.

2.   Research Questions

To accomplish these objectives, the analyses were guided by the following research questions:

      a.   Does the rate of youth sexual victimization vary across facilities?

      b.   What facility-level attributes are associated with sexual victimization?

      c.   What youth characteristics are correlated with sexual victimization?

3.   Highlights and Key Findings

Facility Characteristics Associated With all Types of Sexual Assault (Youth-on-Youth and Staff Sexual Misconduct)

- Facilities with higher rates of sexual assault have more youth who have submitted written complaints against staff, do not have enough staff to monitor what takes place in the facility, and have higher levels of gang fights—as reported by the youth. Conversely, sexual victimization is less prevalent in facilities where youth report that there are enough staff to monitor what takes place in the facility, there is little or no gang fighting, and there are fewer complaints against staff.

- In facilities with the highest prevalence of sexual assaults, youth report worrying about being physically assaulted by another youth. These facilities are more likely to house youth who have not previously been incarcerated.

Facility Characteristics Exclusively Associated With Youth-on-Youth Sexual Assault

- Facilities that house only females have the highest rates of youth-on-youth sexual assault.

- Youth in facilities with higher rates of youth-on-youth sexual assault are more likely to have histories of prior sexual assault victimization. These youth are more likely to self-identify as having a lesbian, gay or bisexual orientation.

- Facilities with a high prevalence of youth-on-youth sexual assault tend to house youth in multiple living units.

- Facilities with the highest rates of sexual assault by another youth are more likely to have youth with violent sexual assault as their most serious offense. These facilities also are more likely to provide sex offender treatment.

- Sexual assault by another youth is more prevalent in facilities when youth are informed that sexual activity is not allowed more than 7 days after their arrival.

- Rates of youth-on-youth sexual assault are highest in facilities when youth might not report rule breaking about sexual activity because they are embarrassed or ashamed.

Facility Characteristics Exclusively Associated With Staff Sexual Misconduct

- Facilities with higher rates of staff sexual misconduct tend to be male-only facilities.

- Facilities with higher rates of staff sexual misconduct are more likely to be larger in size, i.e., 25 or more youth. These facilities tend to be detention or training/long-term secure facilities compared to group homes and residential treatment facilities (based on the primary function of the facility on the facility questionnaire). They are also less likely to house only minors.

- Facilities with a higher prevalence of staff sexual misconduct have higher staff turnover, which leads to a loss in staff.

- Facilities with higher rates of staff sexual misconduct have problems related to gang membership, and youth report feeling pressured by the gang to do things they normally would not do.

- Staff sexual misconduct is more prevalent in facilities when youth are never told that sexual activity is not allowed.

- Rates of staff sexual victimization are highest in facilities when youth might not report rule breaking about sexual activity because they are afraid of being punished by facility staff.

- Facilities with higher rates of staff sexual misconduct tend to house more youth with person offenses as their most serious offense.

- Staff sexual misconduct is more common in facilities where staff share personal information with youth in their care.

- In facilities with the highest rates of sexual misconduct, more youth are written up for threatening[1] or fighting with staff and/or other youth.

- Facilities with low rates of staff sexual misconduct have more indicators of PREA compliance, such as youth who would report sexual activity directly to a facility staff member. There is also an indication that youth knowing how to make a report if a staff member or youth is breaking the rules is associated with staff sexual misconduct; however, the results are inconclusive and need further research.

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[1] Threatening is specific to staff only and was not assessed for threats against other youth.

Youth Characteristics Associated With all Types of Sexual Assault (Youth-on-Youth and Staff Sexual Misconduct)

■ Youth who have a history of prior sexual assault are at greatest risk for both types of assault. These youth are more likely to report a pattern of physical victimization in the facility, such as being physically hurt by another youth and worrying about physical assault by staff.

■ Youth were most at risk for both types of sexual victimization in facilities where youth report gang fights in the facility and that the staff provide special treatment.

Youth Characteristics Exclusively Associated With Youth-on-Youth Sexual Assault

■ Rates of youth-on-youth sexual assault were highest for youth self-identifying as lesbian, gay, or bisexual.

■ Youth with violent sexual assault as their most serious offense were at greater risk for sexual assault by another youth. Higher risk is also associated with lower levels of well-defined structure in the facility.

Youth Characteristics Exclusively Associated With Staff Sexual Misconduct

■ Males and black youth are much more likely to be victims of staff sexual misconduct.

■ Youth most at risk of staff sexual misconduct tend to have a history of prior incarceration lasting 6 months or more. Youth who report active gang involvement in the facility are associated with higher rates of staff sexual misconduct.

■ Youth who experience higher rates of staff sexual misconduct reported little to no positive perceptions of staff, high levels of lack of fairness, and staff sharing personal information. These youth were also more likely to experience physical assault and to be physically hurt by staff.

4.   Facility-Level Findings

The analysis of facility-level predictors began by examining the characteristics of the facilities participating in the NSYC-2. During the survey period, each facility administrator (or designee) completed a brief paper-and-pencil questionnaire about the facility. The facility questionnaire (FQ) included information about the total number of youth in the facility, staffing in the facility, number of living units, treatment programs provided, and types of youth housed in the facility (i.e., offense history, histories of problems/conditions/patterns of behavior, etc.) (See Attachment 1 for the complete FQ.) The facility data provided on the FQ are more extensive than data collected by the Office of Juvenile Justice and Delinquency Prevention's biennial censuses (i.e., Census of Juveniles in Residential Placement and Juvenile Residential Facility Census). Of the 326 facilities, 322 completed the FQ. There were 189 surveys from youth within the 4 facilities that declined to participate, and these surveys were excluded from the analyses for this report.

Facility-level analyses included two sources of data: (1) facility responses to specific items on the FQ and (2) aggregated responses from the surveys that reflect youth perceptions of facility characteristics. Responses from the FQ were analyzed to create four sets of conceptual predictors:

- overall facility structure (e.g., facility type, facility size, sex of youth housed)[2]

- staff characteristics (number of male/female staff, positions of staff, years of experience)

- compliance with PREA standards (e.g., screening, monitoring, youth-to-staff ratios)

- facility reports of youths' history (most serious offense[3] and problems/conditions/patterns of behaviors).

Youth survey data were aggregated for each facility to create distinct facility-level predictors based on youth self-reported characteristics and youth perceptions. (See Methodology section for more details.) The aggregated data were organized into five thematic areas:

- Youth reports of compliance with PREA standards;

- Fighting/gang activities;

- Order and disorder;

- Safety and fairness in each facility; and

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[2] The facility provided these data during the enrollment phase of the study.

[3] The facility provided these data on the youth rosters prior to the survey.

- The proportion of youth in each facility with self-identified vulnerability characteristics such as lesbian, gay or bisexual orientation, history of sexual victimization, and those below expected grade level.

These two sets of data (FQ items and facility-level youth aggregates) were combined and analyzed together for a comprehensive analysis of facility characteristics associated with the facility-level rate of victimization (i.e., the proportion of youth reporting victimization within each facility).

Total rates of victimization were lower for youth-on-youth sexual assault than for staff sexual misconduct. The average facility rate for sexual assault by another youth was 2.1%, and it was reported by youth in a third of the facilities (31.4%). The average rate for staff sexual misconduct was 5.2%, and it occurred in about half (49.4%) of the facilities.

The facility-level analyses are organized into the eight content areas (predictors and themes) described above. This report presents the factors representing each area, followed by illustrations and discussions of the individual factors associated with sexual victimization using bivariate group mean comparisons and tests of significance. Finally, for each area, the report identifies which factors best predict each type of sexual victimization based on tests of significance in multivariate models. (See *Methodology* for a full explanation of the analytic process.)

4.1   Structure of Juvenile Facilities

Facilities were examined by key contextual or structural characteristics. These included whether the facility had single or multiple living units; size (i.e., all youth and only adjudicated youth); capacity in relation to the number of assigned youth and the number of assigned beds; primary type (detention center, training school/long-term secure, group home/halfway house, residential treatment center, or other type); operating status of the facility (state or other type of operating agency); sex of the youth housed (males only, females only, or both); type of treatment programs offered; and factors used to assign youth to specific living units.

Table 1

Facility-level victimization rate, by type of incident and selected measures of facility structure, 2012

Facility Structure		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100 %	2.1 %	0.3 %	5.2 %	0.4 %
Type of living unit					
Single*	18 %	0.5 %	0.3 %	2.1 %	0.8 %
Multiple	82	2.5 **	0.3	5.9 **	0.5
Number of all youth held					
1 - 25*	32 %	1.8 %	0.6 %	2.1 %	0.6 %
26 - 50	28	1.9	0.4	4.9 **	0.8
51 - 100	23	2.6	0.5	6.8 **	0.9
101 or more	17	2.3	0.4	9.5 **	0.8
Number of adjudicated youth					
1 - 25*	39 %	1.8 %	0.5 %	2.3 %	0.6 %
26 - 50	26	2.2	0.5	5.4 **	0.8
51 - 100	20	2.4	0.5	6.7 **	0.9
101 or more	16	2.5	0.4	10.3 **	0.9
Facility over capacity [a]					
Yes	7 %	2.0 %	0.7 %	4.9 %	1.7 %
No*	93	2.1	0.3	5.2	0.4
Primary facility type					
Detention	14 %	1.9 %	0.5 %	7.4 %**	1.3 %
Training/long-term secure	31	3.2 **	0.5	7.3 **	0.7
Group home	6	0.4	0.4	4.2	2.0
Residential treatment*	42	1.7	0.4	3.1	0.5
Other [b]	7	1.7	0.7	5.4	1.5
Operating agency					
State	80 %	2.1 %	0.3 %	5.8 %**	0.5 %
Non-state *	20	2.1	0.6	3.1	0.6
Sex of youth housed					
Males only	71 %	1.5 %**	0.2 %	5.7 %**	0.5 %
Both males and females	21	3.0 **	0.7	5.0 **	0.9
Females only*	9	5.3	1.5	1.4	0.7

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

*Comparison group.

**Difference with comparison group is significant at the 95%- confidence level.

[a]Facilities with at least one unit housing more youth than standard beds.

[b]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

- Most facilities housed youth in multiple living units (82%).

- Almost a third (32%) of the facilities were small, housing 1 to 25 total youth. Seventeen percent of the facilities housed 101 or more youth.

- Similar trends were noted for the number of adjudicated youth. Thirty-nine percent of the facilities housed 25 or fewer adjudicated youth and 16% had 101 or more youth.

- The residential population in most facilities (93%) was at or below capacity. Seven percent had at least one housing unit with more youth than standard beds.

- Facilities were represented by five different types of primary functions:

    – residential treatment center (42%);

    – detention center (14%);

    – training school/long-term secure facility (31%);

    – group home/halfway house (6%); and

    – boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway, and homeless shelter, or other nonspecific (7%) (due to the small numbers, these types of facilities were combined into one "other" category).

    – None of the facilities listed reception or diagnostic center as their primary function, but some noted it as a secondary function (not shown in table).

- Most facilities reported that they were state owned or operated (80%).

- More than two-thirds (71%) of the facilities housed males only. Twenty-one percent housed both males and females and 9% housed only females.

Table 2

Facility-level victimization rate, by type of incident and type of treatment provided, 2012

Type of treatment provided		Youth-on-youth victimization rate		Staff sexual misconduct	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100 %	2.1 %	0.3 %	5.2 %	0.4 %
Mental health					
Yes	43 %	2.5 %	0.4 %	5.8 %	0.6 %
No*	57	1.8	0.3	4.8	0.6
Substance abuse					
Yes	41 %	2.2 %	0.4 %	5.5 %	0.6 %
No*	59	2.1	0.3	5.0	0.5
Sex offender					
Yes	25 %	3.5 %**	0.6 %	5.3 %	0.7 %
No*	75	1.7	0.3	5.2	0.5
Arson					
Yes	6 %	1.8 %	0.7 %	4.2 %	1.2 %
No*	94	2.1	0.3	5.3	0.4
Violent offenders					
Yes	21 %	2.9 %	0.6 %	7.1 %**	0.9 %
No*	79	1.9	0.3	4.7	0.5
Other specialized [a]					
Yes	18 %	2.4 %	0.5 %	6.3 %	0.8 %
No*	82	2.1	0.3	5.0	0.5

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

*Comparison group.

**Difference with comparison group is significant at the 95%- confidence level.

[a] 22 facilities indicating treatment but did not indicate which type are included with "other".

■ Facilities offered a variety of specialized treatment programs. Mental health treatment (43%) and substance abuse treatment (41%) were the most common, followed by sex offender treatment (25%), arson treatment (6%), violent offender treatment (21%), and other specialized treatment (18%).

Table 3
Facility-level victimization rate, by type of incident and unit assignment factors, 2012

Unit assignment factors		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100 %	2.1 %	0.3 %	5.2 %	0.4 %
Offense history					
Yes	66 %	2.5 %	0.3 %	6.1 %	0.5 %
No*	15	2.4	0.7	5.3	1.1
Single unit	18	--	--	--	--
Risk of escape					
Yes	56 %	2.3 %	0.3 %	6.0 %	0.5 %
No*	25	2.9	0.7	5.7	0.8
Single unit	18	--	--	--	--
Danger to self					
Yes	66 %	2.5 %	0.3 %	6.1 %	0.5 %
No*	16	2.3	0.6	5.3	0.9
Single unit	18	--	--	--	--
Danger to others					
Yes	67 %	2.4 %	0.3 %	6.0 %	0.5 %
No*	14	2.8	0.7	5.8	1.0
Single unit	18	--	--	--	--
Age					
Yes	59 %	2.6 %	0.4 %	6.3 %	0.6 %
No*	23	2.2	0.5	5.0	0.8
Single unit	18	--	--	--	--
Sex					
Yes	42 %	2.8 %	0.4 %	5.5 %	0.6 %
No*	40	2.1	0.4	6.3	0.7
Single unit	18	--	--	--	--
Sexual orientation					
Yes	35 %	2.2 %	0.4 %	5.8 %	0.7 %
No*	47	2.7	0.4	6.0	0.6
Single unit	18	--	--	--	--
Special needs					
Yes	67 %	2.6 %	0.3 %	6.1 %	0.5 %
No*	15	2.1	0.6	5.2	0.9
Single unit	18	--	--	--	--
Other [a]					
Yes	25 %	2.7 %	0.5 %	6.3 %	0.8 %
No*	57	2.4	0.4	5.8	0.5
Single unit	18	--	--	--	--

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis. None of the unit assignment factors were significantly associated with victimization.

-- Not applicable for single unit facilities.

*Comparison group.

[a] Other includes assignment factors of diagnosis/assessment, gang history, predatory/victim typology, pregnancy, physical size, and space available.

Facilities with multiple living units (82%) used a variety of youth-level factors to assign youth to specific living units. These included offense history (66%), risk of escape (56%), danger to self (66%), danger to others (67%), age (59%), sex (42%), sexual orientation (35%), special needs (67%), and other factors such as diagnosis/assessment, gang history, predatory/victim typology, pregnancy, physical size, and space available (25%).

Bivariate Association With Youth-on-Youth Sexual Assault

Four individual structural characteristics were found to be associated with youth-on-youth sexual assault: facilities with multiple living units, training/long-term secure facilities, facilities with female youth (either females only or both males and females) (see table 1), and those offering sex offender treatment (see table 2). None of the assignment factors within multiple-unit facilities were significant (see table 3).

- Multiple-unit facilities (2.5%) had higher rates of youth-on-youth sexual assault than single-unit facilities (0.5%).

- Training/long-term secure facilities had the highest prevalence (3.2%) comparatively.

- Rates in female-only facilities (5.3%) were more than three times greater than those in male-only facilities (1.5%).

- The percentage of youth-on-youth sexual assault was double (3.5%) in facilities that offer sex offender treatment, compared to facilities that do not offer this type of treatment (1.7%) (see table 2).

Bivariate Association With Staff Sexual Misconduct

A number of facility structural characteristics were uniquely associated with staff sexual misconduct: facilities with multiple living units, larger facilities (25 or more youth), detention centers or training/long-term secure facilities, state-operated facilities, facilities housing male youth (either males only or both males and females), and those providing violent offender treatment (see table 2).

- Staff sexual misconduct was reported by 5.9% of youth in facilities with multiple living units, compared to 2.1% of youth in facilities with single units.

- The proportion of youth reporting staff sexual misconduct was highest in the largest facilities: 10.3% in facilities containing 101 or more adjudicated youth, 6.7% in facilities with 51 to 100 adjudicated youth, 5.4% in facilities with 26 to 50 adjudicated youth, and 2.3% in facilities with less than 25 adjudicated youth.

- Staff sexual misconduct was most prevalent in detention centers (7.4%) and training/long-term secure facilities (7.3%) and lowest in residential treatment centers (3.1%) and non-state-operated facilities (3.1%).

- In facilities with only male residents, 5.7% of youth reported staff sexual misconduct, compared to 1.4% in facilities with only female residents.

- Staff sexual misconduct was reported by more youth (7.1%) in facilities that offer violent offender treatment, compared to facilities that do not offer this type of treatment (4.7%).

Table 4
Multivariate stepwise regression models of facility sexual victimization, by youth-on-youth incidence and selected measures of facility structure and type of treatment provided, 2012

Facility structure	Estimate	Standardized Estimate	Predicted percent of youth-on-youth facility victimization
Intercept	4.0 **		
Multiple living units			
Yes	1.5	0.12	2.5 %**
No*	~		1.0
Primary facility type			
Detention	~		
Training/long-term secure	~		
Group home*	~		
Residential treatment	~		
Other [a]	~		
Sex of youth housed			
Males only	-4.0	-0.45	1.8 %**
Both males and females	-2.9	-0.29	2.9 **
Females only*	~		5.8
Sex offender treatment			
Yes	1.5	0.17	3.4 %**
No*	~		1.9
Adjusted R square	0.11		
Degrees of Freedom	4		

Note: Results include a weighted least square adjustment to account for differences in facility size. See *Methodology* section for full explanation.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

[a] Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

In order to assess which structural factors best predicted youth-on-youth sexual victimization (see table 4), the four significant factors were entered together in a multivariate regression model (see Methodology section for a detailed discussion of the stepwise modeling approach and calculation of predicted rates). Facilities with only female residents (5.8%), those offering sexual offender treatment (3.4%), and those with multiple living units (2.5%) had considerably higher predicted rates than facilities without these characteristics. Although the primary type of facility (e.g., training/long-term secure) was significant in the bivariate findings, it was no longer significant in the multivariate model.

Table 5

Multivariate stepwise regression models of facility sexual victimization, by staff sexual misconduct incidence and selected measures of facility structure and type of treatment provided, 2012

Facility structure	Estimate	Standardized Estimate	Predicted percent of staff sexual misconduct facility victimization
Intercept	0.2		
Multiple living units	~		
Primary facility type			
Detention	4.1	0.21	9.2 %**
Training/long-term secure	2.2	0.15	7.3 **
Group home	~		5.1
Residential treatment*	~		5.1
Other [a]	~		5.1
Sex of youth housed			
Males only	2.3	0.14	7.2 %**
Both males and females	~		5.0
Females only*	~		5.0
Number of adjudicated youth			
1-25*	~		3.4 %
26-50	2.4	0.14	5.8 **
51-100	3.6	0.22	7.0 **
101 or more	6.3	0.40	9.6 **
Operating agency	~		
Violent offender treatment	~		
Adjusted R square	0.21		
Degrees of Freedom	6		

Note: Results include a weighted least square adjustment to account for differences in facility size. See *Methodology* section for full explanation.

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

[a] Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

For prediction of staff sexual misconduct, three of six factors remained important in the multivariate models (see table 5). Youth in larger facilities (5.8% in those with 26 or more adjudicated youth, 7.0% in those with 51 to 100 youth, and 9.6% in those with 101 or more youth), detention centers (9.2%), and training/long-term secure facilities (7.3%), and in male-only facilities (7.2%) were significantly more likely to experience sexual victimization by staff. Multiple living units, violent offender treatment, and operating agency (state or nonstate) were no longer important factors after adjusting for other facility structural characteristics.

Because facility-level structural characteristics were predictive of each type of victimization, all significant factors in each facility structural multivariate model were included as controls in the remaining multivariate models. Since significant predictors vary by the type of victimization, the controls also differ by the type of sexual assault.

4.2   Staff Characteristics

Staff characteristics in the facility were assessed by the level and type of staffing changes over the past 12 months (none, added only, added and lost, or lost staff only), the ratio of the total number of youth to all staff, the ratio of the total number of youth to frontline staff only, the total proportion of female staff members in the facility, the total proportion of frontline female staff members in the facility, and the years of experience for all staff and for frontline staff.

Table 6
Facility-level victimization rate, by type of incident and staff characteristics, 2012

Staff characteristics		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100 %	2.1 %	0.3	5.2 %	0.4
Staff changes in past 12 months					
Any staff changes [a]					
Yes	71 %	2.2 %	0.3	6.1 %**	0.5
No *	30	2.0	0.5	3.1	0.6
Type of change					
No change *	30 %	2.0 %	0.5	3.1 %	0.6
Added staff only [b]	10	1.7	0.6	4.2	1.3
Added and lost staff [c]	31	2.0	0.4	5.5 **	0.7
Lost staff only [d]	29	2.6	0.5	7.1 **	0.8
Youth-to-staff ratio - all staff					
0.05 up to 0.48 *	26 %	2.4 %	0.7	5.0 %	0.9
0.48 up to 0.63	24	1.7	0.4	4.8	0.7
0.63 up to 0.81	25	1.9	0.4	5.9	0.8
0.81 to 20.9	25	2.5	0.5	5.2	0.8
Youth-to-staff ratio - frontline staff only [e]					
0.10 up to 0.83	25 %	2.9 % **	0.7	3.9 % **	0.7
0.83 up to 10.16 *	25	1.4	0.3	6.6	1.0
1.16 up to 1.54	24	1.7	0.5	5.1	0.8
1.54 to 12.5	26	2.4	0.5	5.3	0.8
Total proportion of female staff					
0.12 up to 0.33 *	26 %	1.2 %	0.3	4.4 %	0.8
0.33 up to 0.43	24	2.1	0.4	5.9	0.8
0.43 up to 0.53	25	2.2	0.5	6.5	0.9
0.53 to 0.96	25	3.2 **	0.7	4.1	0.8
Total proportion of frontline female staff [e]					
0 up to 0.16 *	24 %	0.5 %	0.2	4.2 %	0.9
0.16 up to 0.31	27	2.3 **	0.4	5.9	0.7
0.31 up to 0.44	24	2.3 **	0.5	5.5	0.8
0.44 to 1	25	3.3 **	0.7	5.2	0.9
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Table 6

Facility-level victimization rate, by type of incident and staff characteristics, 2012 (continued)

Staff characteristics		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
Staff years of experience					
Less than one year					
0 up to 0.09 *	24 %	2.0 %	0.5	5.4 %	0.8
0.09 up to 0.16	25	2.4	0.6	5.3	0.7
0.16 up to 0.26	27	2.3	0.4	4.8	0.7
0.26 to 1	24	1.9	0.6	5.3	1.0
More than one year					
0 up to 0.74 *	24 %	1.9 %	0.6	5.3 %	1.0
0.74 up to 0.84	27	2.3	0.5	4.8	0.7
0.84 up to 0.91	25	2.4	0.6	5.2	0.7
0.91 to 1	24	2.0	0.5	5.4	0.8
Frontline staff years of experience [e]					
Less than one year					
0 to 0.09 *	26 %	2.9 %	0.6	5.2 %	0.7
0.09 up to 0.16	25	1.5	0.3	5.0	0.8
0.16 up to 0.3	25	2.3	0.6	4.3	0.7
0.3 to 1	25	1.9	0.5	6.0	1.0
More than one year					
0 up to 0.7 *	24 %	1.8 %	0.5	6.2 %	1.0
0.7 up to 0.84	25	2.3	0.6	4.2	0.7
0.84 up to 0.91	25	1.6	0.3	5.0	0.8
0.91 to 1	26	2.9	0.6	5.2	0.7

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

[a]Includes all types of staffing changes.

[b]New Hire/replacement hire/added staff/additional positions.

[c]Includes both added and loss of staff.

[d]Reassigned/transferred/promotion/terminated/left/resigned/retired/layoffs, loss of promotions/reorganizations/frozen positions/unspecified turnover/other.

[e]Frontline staff includes: all correctional officers and any frontline staff member with direct supervision responsibilities over youth.

- The majority of facilities (71%) reported a change in staff over the past 12 months. Of these, 10% only added staff, 31% both added and lost staff, and 29% only lost staff.

- At least 75% of facilities had more total staff than youth.

- Approximately a quarter of the facilities had substantially more frontline staff with ratios of 0.10 to 0.83 youth per staff. A quarter of the facilities had proportional numbers of frontline staff and youth with ratios from 0.83 to 1.16 youth per staff, and half of the facilities had considerably more youth than frontline staff with ratios of 1.16 and more youth per staff.

- Most facilities had more male than female frontline staff with about a quarter having more female than male staff (0.53 to 0.96).

- The majority of facilities (76%) contained high proportions of staff with more than 1 year of experience (0.74 and higher). Similar trends were also evident for frontline staff experience. More than half (51%) had 0.84 and higher proportions of frontline staff with more than 1 year of experience.

Bivariate Association With Youth-on-Youth Sexual Assault and Staff Sexual Misconduct

Youth-on-youth sexual assault was significantly associated with lower ratios of staff to youth and the overall proportion of female staff (see table 6), while staff sexual misconduct was related to changes in staff and lower ratios of youth to staff. Staff experience was not relevant to either type of victimization.

- Sexual assault by another youth was highest (2.9%) in facilities where staff outnumber youth (i.e., youth-to-staff ratio for frontline staff only less than 0.83).

- Sexual assault by another youth was more prevalent in facilities where the proportion of female staff was more than half (i.e., 0.53 and above) (3.2%) and frontline female staff was greater than a third (i.e., .0.44 and above) of the total staff (3.3%).

- Facilities with no change in staffing over the past 12 months had the lowest percentage of staff sexual misconduct (3.1%). A higher percentage of youth (5.5%) reported staff sexual misconduct in facilities that both added and lost staff, and the highest rates (7.1%) were reported in facilities that lost staff but did not add any staff.

- Rates of staff sexual misconduct were significantly lower (3.9%) in facilities that had more staff than youth (i.e., youth-to-staff ratio for frontline staff only less than 0.83).

Table 7
Multivariate stepwise regression models of facility sexual victimization, by youth-on-youth incidence and staff characteristics, 2012

Staff characteristics	No controls [a] Estimate	With controls [a] Estimate	Standardized Estimate	Predicted percent of youth-on-youth facility victimization
Intercept	2.1 **	4.0 **		
Youth-to-staff ratio - frontline staff only [b]				
0.10 up to 0.83	1.2 **	~		
0.83 up to 10.16 *	~	~		
1.16 up to 1.54	~	~		
1.54 to 12.5	~	~		
Total proportion of frontline female staff [b]				
0 up to 0.16 *	~	~		
0.16 up to 0.31	~	~		
0.31 up to 0.44	~	~		
0.44 to 1	~	~		
Multiple living units				
Yes		1.5 **	0.12	2.5 %**
No *		~		1.0
Primary facility type				
Detention		~		
Training/long-term secure		~		
Group home *		~		
Residential treatment		~		
Other [c]		~		
Sex of youth housed				
Males only		-4.0 **	-0.44	1.9 %**
Both males and females		-2.9 **	-0.29	3.0 **
Females only *				5.8
Sex offender treatment				
Yes		1.5 **	0.17	3.5 %**
No *		~		1.9
Adjusted R square	0.01	0.10		
Degrees of Freedom	1	4		

(left margin label: Controls [a])

Note: Results include a weighted least square adjustment to account for differences in facility size. See *Methodology* section for full explanation.

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level.

*Comparison group.

[a]Table 3 predictors were entered as controls.

[b]Frontline staff includes: all correctional officers and any frontline staff member with direct supervision responsibilities over youth.

[c]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

After controlling for significant facility structural characteristics in the multivariate model, staff characteristics[4] were no longer predictive of youth-on-youth sexual assault (see table 7). However, all facility structural controls remained significant.

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[4] Due to multicollinearity, the total proportion of female staff and the total proportion of frontline female staff could not be entered into the same model. Total proportion of frontline female staff was chosen because the assault rates were higher overall.

Table 8
Multivariate stepwise regression models of facility sexual victimization, by staff sexual misconduct and staff characteristics, 2012

		No controls [a]	With controls [a]		
	Staff characteristics	Estimate	Estimate	Standardized Estimate	Predicted percent of staff sexual misconduct facility victimization
	Intercept	4.4 **	-0.2		
	Youth-to-staff ratio - frontline staff only [b]				
	0.10 up to 0.83	~	~		
	0.83 up to 1.16 *	~	~		
	1.16 up to 1.54	~	~		
	1.54 to 12.5	~	~		
	Type of staff change				
	No change *	~	~		6.0 %
	Added staff only	~	~		6.0
	Added and lost staff	2.6 **	~		6.0
	Lost staff only	4.0 **	1.7 **	0.12	7.7 **
	Multiple living units		~		
	Primary facility type				
	Detention		4.0 **	0.20	9.0 %**
	Training/long-term secure		2.4 **	0.16	7.4 **
	Group home		~		5.0
	Residential treatment *		~		5.0
	Other [c]		~		5.0
Controls [a]	Sex of youth housed				
	Males only		2.1 **	0.14	7.2 %**
	Both males and females		~		5.0
	Females only *		~		5.0
	Size of the facility [d]				
	1-25 *		~		3.4 %
	26-50		2.4 **	0.19	5.8 **
	51-100		3.4 **	0.27	6.9 **
	101 or more		6.0 **	0.51	9.4 **
	Operating agency		~		
	Violent offender treatment		~		
	Adjusted R square	0.05	0.23		
	Degrees of Freedom	2	7		

Note: Results include a weighted least square adjustment to account for differences in facility size. See *Methodology* section for full explanation.

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level.

*Comparison group.

[a]Table 4 predictors were entered as controls.

[b]Frontline staff includes: all correctional officers and any frontline staff member with direct supervision responsibilities over youth.

[c]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

[d]Based on the number of adjudicated youth housed at the facility on date of survey visit.

In the multivariate staff sexual misconduct model, after adjusting for controls, facilities losing and not adding staff had significantly higher rates (7.7%) than facilities with other staffing changes (see table 8). Similarly, all structural characteristics remained relevant predictors of staff sexual victimization.

4.3 Compliance With PREA Standards

Facilities' overall compliance with specific PREA standards was examined using two sources of data, (1) facility responses to specific items on the facility questionnaire (FQ) and (2) aggregated responses from the youth survey. The youth survey asked for youth perceptions of how facilities enforce these standards. Responses from the FQ included staff screening practices, monitoring/surveillance practices, and compliance with staff to youth ratios. The following compliance standards are applied to all facilities in the survey, even though some facilities are not legally covered under PREA.

4.3.1 Compliance With PREA Standards – Facility Reports

Table 9
Screening procedures for hiring new staff by primary facility type[a], 2012

	Total	Detention	Training/long-term secure	Group home	Residential treatment	Other [b]
Criminal record [c]	99 %	100 %	100 %	100 %	98 %	100 %
Conviction for child/sexual abuse [c]	98	98	100	100	97	96
Conviction for drug use	97	98	96	95	97	96
Test for current drug use	63	87	74	70	44	78
Psychological evaluation	17	28	24	20	7	22

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

[a]Based on facilities' report of the primary function of the facility.

[b]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

[c]PREA standard.

- ■   Almost all facilities conduct criminal record checks (99%), screen for convictions for child abuse/sexual abuse (98%), and check for convictions for drug use (97%). Sixty-three percent of facilities test for current drug use, and 17% require psychological evaluations (see table 9).

Table 10
Compliance with PREA standards: Monitoring procedures by primary facility type[a], 2012

Facility uses monitoring	Total	Detention	Training/long-term secure	Group home	Residential treatment	Other [b]
Yes video camera surveillance	77 %	96 %	96 %	50 %	62 %	65 %
No video camera surveillance	23	4	4	50	38	35

Location of monitoring	Total	Detention	Training/long-term secure	Group home	Residential treatment	Other [b]
All sleeping areas	95 %	95 %	97 %	100 %	93 %	93 %
Bathrooms and shower areas [c]	87	86	93	90	83	73
Classrooms and library	71	77	61	90	76	73
Other indoor areas	96	98	99	100	93	93
Outdoor recreation areas [c]	92	95	96	100	86	87

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

[a]Based on facilities' report of the primary function of the facility.

[b]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

[c]Includes combined entrances and in the actual areas.

- The majority of facilities (77%) use video camera surveillance. Detention centers (96%) and training/long-term secure (96%) facilities were the most likely to use monitoring compared to other primary facility types (see table 10).

- Of the facilities using monitoring, 95% of all facilities had video monitoring in sleeping areas; 87% of facilities included monitoring in the entrance and/or actual area of bathrooms and showers, 71% in classrooms, 96% in other indoor areas, and 92% in outdoor recreation areas. Group home facilities were the most likely to have monitoring in all these locations when compared to other primary facility types.

Table 11a
Compliance with PREA standards: Staffing ratio standards by shift across all facilities[a], 2012

Frontline staff [b]	Mean Percent	Standard Deviation	1:8	1:16
Day shift [c]	38 %	12	79 %	--- %
Evening shift [d]	38	11	83	---
Night shift [e]	24	9	---	88

Table 11b

Compliance with PREA standards: Staffing ratio standards by shift and primary facility type[a] [f], 2012

Frontline staff [b]	Mean Percent	Standard Deviation	Detention		Training/long-term secure		Group		Residential treatment		Other [g]	
			1:8	1:16	1:8	1:16	1:8	1:16	1:8	1:16	1:8	1:16
Day shift [c]	38 %	12	87 %	--- %	85 %	--- %	80 %	--- %	74 %	--- %	70 %	--- %
Evening shift [d]	38	11	76	---	87	---	90	---	80	---	87	---
Night shift [e]	24	9	---	88	---	89	---	95	---	87	---	78

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

---The staffing standard does not apply to shift.

[a]PREA staffing standard definition: Each secure facility shall maintain 1:8 during waking hours and 1:16 during resident sleeping hours- only security staff shall be included in the ratios.

[b]Frontline staff includes: all correctional officers and any frontline staff member with direct supervision responsibilities over youth.

[c]Day shift 6:00 a.m. to 2:00 p.m.

[d]Evening shift 2:00 p.m. to 10:00 p.m.

[e]Night shift 10:00 p.m. to 6:00 a.m.

[f]Based on facilities' report of the primary function of the facility.

[g]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

- Most facilities (secure and non-secure facilities) were in compliance with the PREA staff-to-youth ratio standards (see table 11a). More than 79% of facilities were compliant with day-shift ratio standards (1 staff per 8 youth), 83% were in compliance with evening-shift ratio standards (1 staff per 8 youth), and 88% were in compliance with night-shift ratio standards (1 staff per 16 youth).

- There were small differences in compliance rates between primary facility types (see table 11b). Detention centers (87%) and training/long-term secure facilities (85%) were the most compliant for day shifts; training/long-term secure (87%), group homes (90%), and other (87%) were most compliant for evening shifts; and training/long-term secure (89%) and group homes (95%) were most compliant for night shifts.

Table 12a
Compliance with PREA standards: Staffing ratio standards by shift across secure facilities[a,b], 2012

Total number of secure facilities n = 219				
Frontline Staff [c]	**Mean Percent**	**Standard Deviation**	**1:8**	**1:16**
Day shift [d]	39 %	11	84 %	--- %
Evening shift [e]	38	11	84	---
Night shift [f]	24	8	---	88

Table 12b
Compliance with PREA standards: Staffing ratio standards by shift across nonsecure facilities[a,b], 2012

Total number of nonsecure facilities n = 78				
Frontline Staff [c]	**Mean Percent**	**Standard Deviation**	**1:8**	**1:16**
Day shift [d]	35 %	16	68 %	--- %
Evening shift [e]	40	11	83	---
Night shift [f]	26	10	---	88

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

---The staffing standard does not apply to shift.

[a]PREA staffing standard definition: Each secure facility shall maintain 1:8 during waking hours and 1:16 during resident sleeping hours- only security

[b]Secure classifications are based on responses to a series of questions in the 2010 CJRP- excludes 25 facilities that had missing information.

[c]Frontline staff includes: all correctional officers and any frontline staff member with direct supervision responsibilities over youth.

[d]Day shift 6:00 a.m. to 2:00 p.m.

[e]Evening shift 2:00 p.m. to 10:00 p.m.

[f]Night shift 10:00 p.m. to 6:00 a.m.

■ PREA compliance for frontline staffing[5] was much more apparent in secure facilities, where the standards are required (see table 12a). Eighty-four percent of secure facilities were at the day and evening ratios, and 88% were in compliance with night-shift staff ratios.

■ Comparatively, nonsecure facilities had 68% compliance with day-time ratios, 83% compliance for evening, and 88% compliance nighttime (see table 12b).

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[5] Frontline staff includes: all correctional officers and any frontline staff member with direct supervision responsibilities over youth.

Bivariate Association With Youth-on-Youth Sexual Assault and Staff Sexual Misconduct

Facility reports of PREA staff screening practices, monitoring/surveillance practices, and compliance with staff-to-youth ratios were tested, but most were not relevant to either type of sexual victimization. Only video surveillance[6] was associated with both types of sexual assault. Testing for current drug use was related to staff sexual misconduct (see table 13).

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[6] Screening for staff criminal records, conviction for child/sexual abuse, and convictions for drug use were not included in the bivariate tests because almost all facilities engaged in these practices.

Table 13

Facility-level victimization rate, by type of incident and facility reports of compliance with PREA standards, 2012

Facility reports of compliance with PREA standards		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100.0 %	2.1 %	0.3	5.2 %	0.4
Types of screening					
Testing of staff for current drug use					
Yes	63.2 %	2.4 %	0.3	6.4 % **	0.5
No *	36.8	1.7	0.4	3.1	0.5
Psychological evaluation					
Yes	17.1 %	1.4 %	0.4	6.3 %	1.1
No *	82.9	2.3	0.3	5.0	0.4
Monitoring					
Video surveillance					
Yes	76.7 %	2.5 % **	0.3	5.8 % **	0.5
No *	23.3	1.0	0.3	3.2	0.8
Location of monitoring					
All sleeping areas					
Yes	95.1 %	2.4 %	0.3	5.8 %	0.5
No *	4.9	2.8	1.3	5.2	2.1
Bathrooms and shower areas					
Yes	87.0	2.5 %	0.3	5.8 %	0.5
No *	13.0	2.2	0.7	5.9	1.4
Classrooms and library					
Yes	70.9	2.5 %	0.3	5.9 %	0.5
No *	29.2	2.3	0.6	5.5	0.9
Other indoor areas					
Yes	96.4	2.5 %	0.3	5.8 %	0.5
No *	3.6	1.5	1.0	5.5	2.7
Outdoor recreation areas					
Yes	91.9	2.6 %	0.3	5.8 %	0.5
No *	8.1	1.1	0.5	5.7	1.5
Staff to youth ratios compliance - all facilities [a]					
1:8 Compliance day					
Yes	79.2 %	2.1 %	0.3	5.3 %	0.5
No *	20.8	2.2	0.5	5.1	0.8
1:8 Compliance evening					
Yes	82.6 %	2.2 %	0.3	5.3 %	0.5
No *	17.5	1.9	0.6	4.7	0.8

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Table 13
Facility-level victimization rate, by type of incident and facility reports of compliance with PREA standards, 2012 (continued)

Facility reports of compliance with PREA standards		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
Staff to youth ratios compliance - all facilities [a]					
1:16 Compliance night					
Yes	87.7 %	2.1 %	0.3	4.9 %	0.4
No *	12.3	2.5	0.8	6.3	1.1
Staff to youth ratios compliance - secure facilities only [a][b]					
1:8 Compliance day					
Yes	84.5 %	2.3 %	0.3	5.8 %	0.6
No *	15.5	1.8	0.5	4.5	0.9
1:8 Compliance evening					
Yes	83.9 %	2.4 %	0.4	5.8 %	0.6
No *	16.1	1.1	0.4	4.8	1.0
1:16 Compliance night					
Yes	88.3 %	2.3 %	0.3	5.4 %	0.5
No *	11.7	2.1	0.7	5.6	1.1

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

[a]PREA staffing standard definition: Each secure facility shall maintain 1:8 during waking hours and 1:16 during resident sleeping hours- only security staff shall be included in the ratios.

[b]Secure classifications are based on responses to a series of questions in the 2010 CJRP- excludes 25 facilities that had missing information.

- Facilities testing staff for drug use had higher rates of staff sexual misconduct (6.4%) than other facilities (3.1%).

- The prevalence of youth-on-youth (2.5%) and staff sexual misconduct (5.8%) was elevated in facilities that use monitoring, although rates were not significantly different by location of monitoring.

4.3.2   Compliance With PREA Standards – Youth Reports

Aggregated survey responses from the youth survey included perceptions of how facilities enforce PREA standards along several dimensions. Youth were asked about whether they knew how to report rule breaking, when and how they learned sexual activity was not allowed, and the methods they could use to report and their willingness to report rule breaking about sexual activity.

Table 14

Facility-level victimization rate, by type of incident and youth reports of facility compliance with PREA standards, 2012

Youth reports of facility compliance with PREA standards		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100 %	2.1 %	0.3 %	5.2 %	0.4 %
Proportion of youth told how to report staff/youth breaking rules					
0 up to 0.70	25 %	2.2 %	0.6 %	5.3 %	0.8 %
0.70 up to 0.81*	26	2.0	0.4	7.4	0.9
0.81 up to 0.91	23	2.6	0.6	4.9 **	0.6
0.91 up to 1	26	1.8	0.5	3.2 **	0.8
Proportion of youth told not get into trouble if report staff/youth breaking rules					
0 up to 0.60	27 %	2.3 %	0.6 %	6.9 %**	0.9 %
0.60 up to 0.70	22	2.7	0.6	6.9 **	0.9
0.70 up to 0.82	26	1.9	0.4	5.4 **	0.7
0.82 up to 1*	25	1.7	0.5	1.7	0.5
Proportion of youth first learned sexual activity not allowed					
In the first 24 hours					
0 up to 0.72	25 %	2.4 %	0.6 %	8.8 %**	1.1 %
0.72 up to 0.82	27	3.3 **	0.5	6.4 **	0.6
0.82 up to 0.92	23	1.5	0.4	3.6	0.6
0.92 up to 1*	25	1.1	0.5	1.8	0.6
Between 1 and 7 days					
0 up to 0.03*	52 %	1.4 %	0.3 %	4.3 %	0.6 %
0.03 up to 0.08	22	2.5	0.4	7.8 **	0.8
0.08 up to 0.50	26	3.1 **	0.6	4.9	0.7
More than 7 days					
0 up to 0.01*	62 %	1.7 %	0.3 %	4.1 %	0.5 %
0.01 up to 0.33	38	2.9 **	0.4	7.1 **	0.6
Never told					
0*	28 %	1.3 %	0.5 %	1.3 %	0.5 %
>0 up to 0.09	21	2.7	0.5	5.0 **	0.6
0.09 up to 0.18	25	2.3	0.5	5.9 **	0.7
0.18 up to 1	26	2.4	0.5	9.1 **	1.1

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Table 14

Facility-level victimization rate, by type of incident and youth reports of facility compliance with PREA standards, 2012 (continued)

Youth reports of facility compliance with PREA standards		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
Proportion of youth reasons for not reporting breaking the rules about sexual activity					
One-on-one session staff					
0 up to 0.35	25 %	2.5 %	0.5 %	5.8 %	1.0 %
0.35 up to 0.50	25	1.5	0.3	5.8	0.8
0.50 up to 0.61	24	1.9	0.4	5.5	0.8
0.61 up to 1*	26	2.6	0.6	3.8	0.6
One-on-one session youth mentor					
0 up to 0.18	25 %	2.1 %	0.5 %	5.8 %	1.0 %
0.18 up to 0.28	25	2.0	0.4	7.5 **	0.8
0.28 up to 0.41	25	2.4	0.6	4.0	0.6
0.41 up to 1*	25	2.0	0.5	3.6	0.7
Small group session with 6 or fewer youth					
0 up to 0.19	25 %	2.2 %	0.6 %	5.5 %	0.9 %
0.19 up to 0.30	24	2.2	0.5	6.4 **	0.9
0.30 up to 0.44	25	2.1	0.5	5.1	0.7
0.44 up to 1*	26	1.9	0.4	4.0	0.7
Group session with more than 6 youth					
0 up to 0.18	25 %	2.2 %	0.5 %	6.3 %**	1.0 %
0.18 up to 0.33	25	2.0	0.5	6.8 **	0.8
0.33 up to 0.50	27	2.6	0.5	4.7	0.6
0.50 up to 1*	23	1.6	0.4	3.1	0.7
Written materials posters/handbooks					
0 up to 0.53	25 %	1.6 %	0.5 %	4.9 %	0.9 %
0.53 up to 0.68	25	2.8	0.6	5.7 **	0.8
0.68 up to 0.80	24	2.1	0.4	7.0 **	0.8
0.80 up to 1*	26	2.0	0.5	3.4	0.6
Some other way					
0 up to 0.33	25 %	1.9 %	0.5 %	5.3 %	0.8 %
0.33 up to 0.42	27	2.2	0.5	5.6	0.8
0.42 up to 0.50	20	2.2	0.5	6.2	0.9
0.50 up to 1*	28	2.2	0.6	4.1	0.8

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Table 14

Facility-level victimization rate, by type of incident and youth reports of facility compliance with PREA standards, 2012 (continued)

Youth reports of facility compliance with PREA standards		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
Proportion of youth who would report sexual activity in the following way					
Face-to-face with staff member					
0 up to 0.73*	26 %	2.7 %	0.6 %	8.9 %	1.0 %
0.73 up to 0.83	20	2.8	0.6	6.4 **	0.8
0.83 up to 0.94	29	1.1 **	0.2	4.1 **	0.6
0.94 up to 1	25	2.2	0.5	1.7 **	0.5
Face-to-face with someone works/visits outside the facility					
0 up to 0.44	25 %	1.6 %	0.4 %	3.8 %	0.8 %
0.44 up to 0.57	25	2.0	0.4	6.4 **	0.8
0.57 up to 0.68	25	2.2	0.5	7.4 **	1.0
0.68 up to 1*	25	2.7	0.6	3.2	0.5
Make a written report to facility staff/administrators					
0 up to 0.80	26 %	2.1 %	0.6 %	7.0 %**	1.0 %
0.80 up to 0.87	24	1.9	0.3	6.1 **	0.8
0.87 up to 0.96	26	2.5	0.4	5.4 **	0.6
0.96 up to 1*	24	1.9	0.6	2.3	0.6
Use a phone to call someone					
0 up to 0.32	25 %	2.7 %	0.7 %	4.9 %	0.8 %
0.32 up to 0.49	25	2.3	0.5	5.2	0.8
0.49 up to 0.67	28	1.9	0.4	4.6	0.8
0.67 up to 1*	22	1.5	0.3	6.4	0.9
Use some other way					
0 up to 0.57	23 %	2.0 %	0.6 %	5.0 %	0.9 %
0.57 up to 0.67	30	1.7	0.4	6.5 **	0.8
0.67 up to 0.78	22	2.9	0.5	6.3 **	0.9
0.78 up to 1*	25	2.0	0.5	2.9	0.5
Proportion of youth willing to report breaking rules about sexual activity - definitely					
0 up to 0.31	25 %	1.6 %	0.5 %	6.8 %**	0.9 %
0.31 up to 0.46	25	2.8	0.5	6.8 **	0.8
0.46 up to 0.60	23	2.3	0.6	5.2 **	0.8
0.60 up to 1*	26	1.9	0.5	2.3	0.5

Continued on next page

Table 14

Facility-level victimization rate, by type of incident and youth reports of facility compliance with PREA standards, 2012 (continued)

Youth reports of facility compliance with PREA standards		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
Proportion of youth whose reasons for not reporting breaking rules about sexual activity					
Afraid of youth involved					
0 up to 0.02*	37 %	0.9 %	0.3 %	2.4 %	0.6 %
0.02 up to 0.10	30	2.3 **	0.4	5.7 **	0.5
0.10 up to 1	34	3.3 **	0.5	7.9 **	0.8
Afraid of being punished by facility staff					
0 up to 0.01*	37 %	1.1 %	0.3 %	1.7 %	0.4 %
0.01 up to 0.11	30	2.3	0.4	5.5 **	0.6
0.11 up to 1	33	3.1 **	0.6	8.8 **	0.8
Embarrassed/ashamed					
0 up to 0.01*	30 %	0.4 %	0.2 %	2.2 %	0.7 %
0.01 up to 0.12	36	2.3 **	0.3	7.2 **	0.6
0.12 up to 00.5	35	3.4 **	0.6	5.8 **	0.7
Didn't think staff would investigate					
0 up to 0.04*	25 %	0.8 %	0.4 %	1.4 %	0.6 %
0.04 up to 0.13	25	2.9 **	0.6	4.8 **	0.6
0.13 up to 0.21	23	2.3 **	0.4	6.3 **	0.7
0.21 up to 1	26	2.6 **	0.6	8.5 **	1.0
Didn't think youth involved would be punished					
0 up to 0.01*	27 %	0.7 %	0.4 %	1.5 %	0.6 %
0.01 up to 0.11	25	2.4 **	0.5	5.0 **	0.6
0.11 up to 0.19	23	2.3 **	0.4	7.6 **	0.8
0.19 up to 1	26	3.3 **	0.7	7.1 **	1.0
Didn't think would be believed					
0 up to 0.08*	25 %	1.3 %	0.4 %	2.5 %	0.7 %
0.08 up to 0.15	24	2.2	0.5	4.4	0.6
0.15 up to 0.23	27	2.0	0.3	6.8 **	0.8
0.23 up to 1	24	3.0 **	0.7	7.1 **	1.0
Didn't want to be a snitch or tattletale					
0 up to 0.20*	24 %	1.9 %	0.5 %	2.5 %	0.7 %
0.20 up to 0.33	22	1.7	0.4	6.5 **	0.9
0.33 up to 0.44	28	2.1	0.5	6.5 **	0.8
0.44 up to 1	26	2.6	0.6	5.2 **	0.8

Continued on next page

Table 14

Facility-level victimization rate, by type of incident and youth reports of facility compliance with PREA standards, 2012 (continued)

Youth reports of facility compliance with PREA standards		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
Not something cared about					
0 up to 0.20*	25 %	1.5 %	0.5 %	2.5 %	0.7 %
0.20 up to 0.29	24	2.1	0.5	6.3 **	0.8
0.29 up to 0.41	26	2.5	0.4	6.5 **	0.8
0.41 up to 1	25	2.4	0.6	5.7 **	0.9
Youth might have some other reason					
0 up to 0.16*	26 %	1.4 %	0.4 %	2.9 %	0.7 %
0.16 up to 0.24	25	1.8	0.4	5.4 **	0.7
0.24 up to 0.34	26	2.2	0.5	6.0 **	0.8
0.34 up to 1	23	3.2 **	0.7	6.7 **	1.0

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

*Comparison group.

**Difference with comparison group is significant at the 95%- confidence level.

- In the majority of facilities (75%), at least 70% of youth (0.70 and above) indicated that they were told how to report if a staff member or youth was breaking the rules. In 73% of facilities, most youth (0.60 and above) said they were told they would not get into trouble if they reported a staff member or youth breaking the rules.

- Almost three-quarters of youth (0.72 and above) in 75% of facilities confirmed that they learned sexual activity was not allowed within the first 24 hours of their arrival to the facility. Twenty-six percent of facilities had some youth (0.08 to 0.50) indicating they learned this between their first and seventh day, and 38% of facilities had some youth (0.01 to 0.33) reporting they learned more than 7 days after arrival. In 26% of facilities, there was wide variability in the number of youth (0.18 up to 1) reporting that they were never told sexual activity was not allowed.

- In about a quarter of the facilities, almost two-thirds (0.61 and above) of youth learned sexual activity was not allowed through a one-on-one session with a staff member. In approximately 75% of facilities, more than a third (below 0.41) of youth learned sexual activity was not allowed in a one-on-one session with a youth mentor, less than half of all youth (below 0.44) learned in a small group session with 6 or fewer youth, close to half of youth (below 0.50) learned in a group session with more than 6 youth, and the majority of youth (below 0.80) learned through written materials such as posters/handouts. Twenty-eight percent of facilities, had more than half of their youth (0.50 up to 1) learning that sexual activity was not allowed in some other way.

- Many youth (0.73 and above) in 75% of facilities said that they could report sexual activity by talking face-to-face with a staff member. In approximately a quarter of facilities, more than two-thirds of youth (0.68 up to 1) indicated they would report sexual activities to someone who works outside the facility or who visits from outside the facility, and almost all youth (0.96 and above) would make a written report to facility staff or administrators. About half of all facilities had almost 50% (0.49 and above) of

youth who said they would use a phone to call someone, and more than two-thirds (0.67 and above) of youth said they would use some other way to report sexual activity.

■ Forty-nine percent of facilities had almost half or more of their youth (0.46 and above) who indicated that they definitely would report rule breaking about sexual activity to a facility staff member.

■ There were varying reasons about why youth would not report rule-breaking sexual activities in the facilities.

— In about two-thirds of facilities, between 10% and 12% (0.10 to 0.12) of youth said they were afraid of the youth involved, afraid of being punished by facility staff, or embarrassed or ashamed that it happened.

— In approximately half of all facilities, at least 13% of youth (0.13 and above) said that would not report rule-breaking sexual activity because they did not think staff would investigate. At least 11% of youth (0.11 and above) thought that the youth involved would not be punished, at least 15% (0.15 and above) thought they would not be believed, at least 33% (0.33 and above) did not want to be a snitch or tattletale, at least 29% (0.29 and above) said it wasn't something they cared about, and at least 24% (0.24 and above) said they might have some other reason.

Bivariate Association With Youth-on-Youth Sexual Assault

Some aggregated youth responses about how facilities enforce PREA standards were associated with youth-on-youth sexual assault. These included when youth first learned sexual activity was not allowed, how they would report sexual activity, and reasons why they would not report.

■ Youth-on-youth sexual assault was lowest in facilities (1.1%) when almost all youth in the facility reported that they first learned sexual assault was not allowed within the first 24 hours of arriving at the facility. Rates increased in facilities when more youth reported learning between 1 and 7 days (3.1%) or after more than 7 days (2.9%).

■ Rates were lowest in facilities (1.1%) with the large proportions of youth (0.83 up to 0.94) reporting they would report sexual activities by talking face-to-face with a staff member.

■ Youth-on-youth sexual assault was most prevalent in facilities when greater numbers of youth indicated they would not report sexual activity due to the following reasons:

— Afraid of youth involved (3.3%);

— Afraid of being punished by facility staff (3.1%);

— Embarrassed/ashamed that it happened (3.4%);

— Didn't think staff would investigate (2.6%);

— Didn't think youth involved would be punished (3.3%);

— Didn't think would be believed (3.0%); and

— Some other reason (3.2%).

Bivariate Association With Staff Sexual Misconduct

Almost all aggregated youth responses about how facilities enforce PREA standards were associated with staff sexual misconduct. Facilities had lower rates when larger concentrations of youth reported that they knew how to report rule breaking, reported that they learned sexual activity was not allowed within the first 24 hours, reported they that learned sexual activities was not allowed by some method other than talking one-on-one with a staff member, reported that they would report sexual activity in a variety of ways, and that they definitely would report rule breaking about sexual activity. Facilities with the highest rates of staff sexual misconduct had larger numbers of youth who would not report rule breaking for a variety of reasons.

- Facilities had lower rates of staff sexual misconduct when almost all youth said that they were told how to report if a staff member or youth is breaking the rules (3.2%) and they were told they would not get in trouble if they report that a staff member or youth is breaking the rules (1.7%).

- Facilities had lower rates of staff sexual misconduct (1.8%) when almost all youth in the facility reported that they first learned sexual assault was not allowed within the first 24 hours of arriving at the facility. Rates increased in facilities where more youth reported learning between their first and seventh day (7.8%) or after more than 7 days (7.1%), and were highest in facilities where youth indicted they were never told the rules on sexual activities (9.1%).

- Facilities with lower prevalence of staff sexual misconduct had an increased number of youth that learned sexual activity was not allowed through a one-on-one session with a youth mentor (3.6%), in a small group session with 6 or fewer youth (4.0%), in a group session with more than 6 youth (3.1%), and through written materials such as posters/handbooks (3.4%).

- Staff sexual misconduct was lower in facilities where greater proportions of youth reported that they would report sexual activity in the following ways:

  — Face-to-face with a staff member (1.7%);

  — Face-to-face with someone who works or visits outside the facility (3.2%);

  — A written report to facility staff or administrators (2.3%); and

  — Some other way (2.9%).

- Facilities had the lowest rates of staff sexual misconduct (2.3%) when the majority of youth indicated they would definitely be willing to report rule breaking about sexual activity.

- Staff sexual misconduct was most prevalent in facilities when greater numbers of youth indicated they would not report sexual activity due to the following reasons:

  - Afraid of youth involved (7.9%);

  - Afraid of being punished by facility staff (8.8%);

  - Embarrassed/ashamed that it happened (5.8%);

  - Didn't think staff would investigate (8.5%);

  - Didn't think youth involved would be punished (7.1%);

  - Didn't think they would be believed (7.1%);

  - Didn't want to be a snitch or tattletale (5.2%);

  - Not something they care about (5.7%); and

  - Some other reason (6.7%).

4.3.3   Compliance With PREA Standards- Combined Facility and Youth Reports

Multivariate Findings for Youth-on-Youth Sexual Assault

Table 15

Multivariate stepwise regression models of facility sexual victimization, by youth-on-youth incidence and facility and youth reports of compliance with PREA standards, 2012

Facility and youth reports of compliance with PREA standards	No controls [a]	With controls [a]		Predicted percent of youth-on-youth facility victimization
	Estimate	Estimate	Standardized Estimate	
Intercept	0.6	3.3 **		
Proportion of youth first learned sexual activity not allowed				
In first 24 hours	~	~		
Between 1 - 7 days	~	~		
More than 7 days	11.6 **	9.8 **	0.11	
High [b]				2.6 %**
Low [c]				2.0
Proportion of youth who would report sexual activity - face-to-face with staff member	~	~		
Proportion of youth whose reasons for not reporting breaking rules about sexual activity				
Afraid of youth involved	~	~		
Afraid of being punished by staff involved	~	~		
Embarrassed/ashamed	13.6 **	10.5 **	0.20	
High [b]				2.9 %**
Low [c]				1.7
Didn't think staff would investigate	~			
Didn't think youth involved would be punished	~			
Didn't think would be believed	~	~		
Youth might have some other reason	~	~		
Video surveillance	~	~		
Multiple living units				
Yes		~		
No *		~		
Primary facility type				
Detention		~		
Training/long-term secure		~		
Group home *		~		
Residential treatment		~		
Other [d]		~		
Sex of youth housed				
Males only		-3.2 **	-0.36	1.9 %**
Both males and females		-2.3 **	-0.24	2.8 **
Females only *		~		5.1
Sex offender treatment				
Yes		1.4 **	0.16	3.3 %**
No *		~		1.9
Adjusted R square	0.09	0.15		
Degrees of Freedom	2	5		

Controls [a] (bracket spanning Video surveillance through Sex offender treatment)

Continued on next page

Table 15

Multivariate stepwise regression models of facility sexual victimization, by youth-on-youth incidence and facility and youth reports of compliance with PREA standards, 2012 (continued)

Note: Results include a weighted least square adjustment to account for differences in facility size

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level

*Comparison group.

[a]Table 3 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate.

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate.

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

After controlling for facility structural characteristics in the multivariate models, two indicators of compliance with PREA standards were associated with youth-on-youth sexual assault (see table 15). Facility structural characteristics such as the sex of youth housed (female-only facilities) and facilities providing sex offender treatment remained significant for increased rates of youth-on-youth victimization.

■   Facilities had higher rates of youth-on-youth sexual assault (2.6%) when greater numbers of youth reported that they learned sexual activity was not allowed more than 7 days after their arrival in the facility, and when more youth indicated that they would not report breaking rules about sexual activity because they would be embarrassed or ashamed (2.9%).

Table 16
Multivariate stepwise regression models of facility sexual victimization, by staff sexual misconduct and facility and youth reports of compliance with PREA standards, 2012

Facility and youth reports of compliance with PREA standards	No controls [a] Estimate	With controls [a] Estimate	Standardized Estimate	Predicted percent of staff sexual misconduct facility victimization
Intercept	10.2 **	-2.1		
Proportion of youth told how to report staff/youth breaking rules	~	7.8 **	0.16	
High [b]				7.4 %**
Low [c]				5.8
Proportion of youth told not get into trouble if report staff/youth breaking rules	~	~		
Proportion of youth first learned sexual activity not allowed				
In the first 24 hours	~	~		
Between 1 - 7 days	~	~		
More than 7 days	~	~		
Never told	15.5 **	16.5 **	0.27	
High [b]				8.0 %**
Low [c]				5.1
Proportion of youth learned how sexual activity not allowed				
One-on-one session youth mentor	~	~		
Small group session with 6 or fewer youth	~	~		
Group session with more than 6 youth	~	~		
Written materials posters/handbooks	~	~		
Proportion of youth who would report sexual activity in the following way				
Face-to-face with staff member	-11.1 **	-11.1 **	-0.22	
High [b]				5.5 %**
Low [c]				7.7
Face-to-face with someone works/visits outside the facility	~	~		
Make a written report to facility staff/administrators	~	~		
Use some other way	~	~		
Proportion of youth willing to report breaking rules about sexual activity - definitely	~	~		
Proportion of youth whose reasons for not reporting breaking rules about sexual activity				
Afraid of youth involved	~	~		
Afraid of being punished by staff involved	18.0 **	22.28 **	0.27	
High [b]				8.0 %**
Low [c]				5.2
Embarrassed/ashamed	~	~		
Didn't think staff would investigate	~	~		

Table 16

Multivariate stepwise regression models of facility sexual victimization, by staff sexual misconduct and facility and youth reports of compliance with PREA standards, 2012 (continued)

Facility and youth reports of compliance with PREA standards	No controls [a] Estimate	With controls [a] Estimate	Standardized Estimate	Predicted percent of staff sexual misconduct facility victimization
Proportion of youth whose reasons for not reporting breaking rules about sexual activity (continued)				
Didn't think youth involved would be punished	~	~		
Didn't think would be believed	~	~		
Didn't want to be a snitch or tattletale	~	~		
Not something cared about	~	~		
Youth might have some other reason	~	~		
Video surveillance				
Yes	2.3 **	~		
No *	~	~		
Testing for current drug use	~	~		
Multiple Living Units		~		
Primary facility type		~		
Detention		~		
Training/long-term secure		~		
Group home		~		
Residential treatment *		~		
Other [d]		~		
Sex of youth housed				
Males only		6.2 **	0.39	7.3 %**
Both males and females		5.1 **	0.29	6.2 **
Females only*		~		1.3
Size of the Facility [e]				
1-25 *		~		4.1 %
26-50		~		5.9 **
51-100		2.0 **	0.12	6.9 **
101 or more		4.1 **	0.26	9.0 **
Operating agency		~		
Violent offender treatment		~		
Adjusted R square	0.33	0.43		
Degrees of Freedom	4	8		

Note: Results include a weighted least square adjustment to account for differences in facility size

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

~Predictor deleted from the stepwise model when p>0.05 level

[a]Table 4 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate.

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate.

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

[e]Based on the number of adjudicated youth housed at the facility on date of survey visit

Several indicators of compliance with PREA standards were associated with staff sexual misconduct after controlling for structural characteristics in the multivariate models (see table 16). Structural characteristics such as sex of youth housed (male-only and facilities with both males and females), and size of the facility remained relevant predictors of staff sexual victimization.

- Facilities had lower rates of staff sexual misconduct when more youth acknowledged that they would report sexual activity by talking face-to-face with a staff member (5.5%). Conversely, facilities had higher rates of staff sexual misconduct (7.4%) when more youth were told how to report if a staff member or youth is breaking the rules.[7]

- Facilities had an elevated prevalence of staff sexual misconduct when increased numbers of youth reported never being told about rules on sexual activity (8.0%) and when more youth were afraid or scared of being punished by facility staff for reporting rule breaking about sexual activity (8.0%).

4.4   Facility Reports of Youths' History

Facilities reported on the percentage of youth in their care with specific histories of problems, conditions, or patterns of behavior (see table 17). These included a history of self-injury/suicidal behavior, violence toward others, abuse by parents, predatory sexual behavior, rape victimization, prostitution, gang memberships/affiliation, psychiatric condition, and developmental disability.

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[7] The positive direction of this variable in the multivariate model seems to be related to its correlation with other variables in the model rather than a true reflection of higher rates. As shown in table 14 this variable was associated with the reduced likelihood of staff sexual misconduct in the bivariate tests; therefore, the authors are hesitant to put too much interpretation of the positive direction of the coefficient in the multivariate model.

Table 17
Facility-level victimization rate, by type of incident and youths' history, 2012

Youths' history		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100 %	2.1 %	0.3	5.2 %	0.4
Types of youth in the facility [a]					
Self injury/suicidal					
0%-25% *	80 %	2.0 %	0.3	5.4 %	0.5
26%-50%	14	1.8	0.5	4.3	1.0
51%-75%	6	5.0 **	1.3	5.3	1.6
76%-100%	1	2.0	2.0	4.6	4.6
Violent toward others					
0%-25%	27 %	1.9 %	0.4	5.8 %	0.9
26%-50%	23	2.3	0.6	5.0	0.7
51%-75%	30	2.1	0.5	4.1 **	0.7
76%-100% *	20	2.2	0.5	6.5	0.9
Abused by parents					
0%-25%	35 %	2.0 %	0.4	5.4 %	0.8
26%-50%	36	1.8 **	0.4	5.3	0.6
51%-75%	21	2.2	0.4	4.7	0.8
76%-100% *	8	3.8	1.1	5.7	1.4
Predatory sexual behavior					
0%-25% *	89 %	2.0 %	0.3	5.2 %	0.4
26%-50%	7	3.1	1.1	6.3	1.2
51%-75%	2	3.8	1.7	5.1	3.0
76%-100%	2	5.1	3.2	2.0	2.0
Rape victimization					
0%-25% *	83 %	1.7 %	0.2	5.6 %	0.5
26%-50%	11	4.4 **	1.3	4.0	1.0
51%-75%	4	2.3	1.0	2.8	1.6
76%-100%	2	8.4 **	3.2	2.6	1.4
Prostitution					
0%-25% *	95 %	1.9 %	0.2	5.3 %	0.4
26%-50%	4	7.8 **	3.0	4.5	1.6
51%-100%	1	4.6	4.6	1.1	1.1
Gang membership/affiliation					
0%-25% *	33 %	2.7 %	0.5	3.6 %	0.6
26%-50%	27	2.0	0.5	4.9	0.7
51%-75%	28	2.0	0.5	6.9 **	0.9
76%-100%	12	1.0 **	0.4	6.5 **	1.3
Psychiatric condition					
0%-25% *	29 %	1.8 %	0.5	5.7 %	0.8
26%-50%	35	2.1	0.4	5.6	0.7
51%-75%	24	1.6	0.3	5.0	0.7
76%-100%	12	4.0 **	1.0	3.6	0.9
Developmental disability					
0%-25% *	70 %	2.0 %	0.3	5.2 %	0.5
26%-50%	24	2.4	0.5	4.9	0.8
51%-75%	5	2.4	0.9	6.6	1.6
76%-100%	2	3.3	1.8	7.9	3.6

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

*Comparison group.

**Difference with comparison group is significant at the 95%- confidence level.

[a]Categories were based on original items in the Facility Questionnaire.

- Most facilities (80%) reported that a quarter or less of their youth population had a history of self-injury/suicidal behavior.

- The percentages of youth with histories of violence towards others were almost evenly distributed across facilities. More than a quarter of facilities had low numbers of youth with histories of violence toward others (25% or less). Conversely, 20% of facilities had more than three-quarters of their youth population with this history (76% to 100%).

- Thirty-five percent of the facilities had low percentages of youth (25% or less) with histories of abuse by parents while 29% of all facilities had large percentages (more than 50%) with this background.

- The percentages of youth with predatory sexual behavior were low (up to 25%) in the majority of facilities (89%).

- The majority of facilities contained small percentages (25% or less) of youth with histories of rape victimization and prostitution (83% and 95% respectively).

- Concentrations of youth with histories of gang membership/gang affiliation were moderate to high (26% and above) across two-thirds (67%) of all facilities.

- Similarly, the majority of facilities (71%) had moderate to high percentages (26% and above) of youth with histories of psychiatric conditions.

- Percentages of youth with histories of developmental disabilities were low (up to 25%) in more than two-thirds of all facilities (70%).

Bivariate Association With Youth-on-Youth Sexual Assault

Youth-on-youth assault rates were higher in facilities housing greater concentrations of youth with histories of victimization and/or psychiatric conditions (see table 17).

- Sexual assault by another youth (5.0%) was more common in facilities where more than half of their youth population (51% to 75%) had a history of self-injury/suicidal behavior.

- Nearly 4% of youth experienced sexual assault by another youth in facilities where more than three-quarters of the youth population was identified as having been abused by a parent.

- Facilities with more than three-quarters of the youth population having histories of rape victimization had significantly higher rates (8.4%) of youth-on-youth sexual assault.

- Almost 8% (7.8%) of youth reported sexual assault by another youth in facilities where the proportion of youth with a history of prostitution was a quarter to half of the population.

- Youth-on-youth sexual assault was lowest (1.0%) in facilities when more than three-quarters of the youth had a history of gang membership/affiliation.

■ More youth (4.0%) were sexually assaulted by another youth in facilities that reported greater concentrations of youth with a history of psychiatric conditions (76% to 100%).

Bivariate Association With Staff Sexual Misconduct

Opposite factors were associated with staff sexual misconduct. Facilities with more concentrations of youth with histories of violence towards others and histories of gang membership/affiliation had the highest rates of staff sexual misconduct (see table 17).

■ Staff sexual misconduct was more prevalent in facilities (6.5%) when three-quarters of the youth population had a history of violence toward others.

■ Facilities with more than half of the youth with a history of gang membership/affiliation were more likely to have more incidents of staff sexual misconduct (6.9%, 6.5%).

In addition to collecting histories of youth problems, conditions, or patterns of behavior on the FQ, facilities also provided information about each youth's most serious offense leading to the current placement (see table 18). This information was then aggregated to the facility level so that the average rate (i.e., mean) of youth with a particular most serious offense could be calculated across all facilities. (See *Methodology* section for a more thorough description of facility aggregation.) Facilities were assessed to determine if their concentrations of youth were higher or lower than the average across facilities. The most serious offense factors were then tested individually with sexual victimization.

Table 18

Facility-level victimization rate, by type of incident and facility offense profile, 2012

Facility offense profile		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100 %	2.1 %	0.3	5.2 %	0.4
Most serious offense responsible for current placement [a]					
Murder (mean = 1%)					
High [b]	25 %	3.4 % **	0.6	7.4 % **	0.8
Low [c] *	75	1.7	0.3	4.5	0.5
Violent sex assault (mean = 10%)					
High [b]	29 %	3.3 % **	0.5	6.8 % **	0.8
Low [c] *	71	1.6	0.3	4.6	0.5
Non-violent sex offense (mean = 2%)					
High [b]	18 %	2.8 %	0.6	5.2 %	0.8
Low [c] *	82	2.0	0.3	5.2	0.5
Person offense (mean = 32%)					
High [b]	49 %	2.2 %	0.4	6.2 % **	0.6
Low [c] *	51	2.1	0.3	4.3	0.5
Property offense (mean = 29%)					
High [b]	49 %	1.7 %	0.3	5.1 %	0.6
Low [c] *	51	2.5	0.4	5.4	0.6
Drug offense (mean = 6%)					
High [b]	35 %	1.6 %	0.4	4.4 %	0.6
Low [c] *	65	2.4	0.3	5.7	0.5
Other (mean = 17%) [d]					
High [b]	38 %	1.7 %	0.4	4.5 %	0.6
Low [c] *	62	2.4	0.3	5.6	0.5

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

[a]Proportion of youth in the facility with the identified most serious offense

[b]Proportion of youth with this offense is greater than or equal to the mean of other facilities

[c]Proportion of youth with this offense is less than the mean of other facilities

[d]Includes status offenses, probation/parole violations, public order offenses

- The percent of youth with murder as their most serious offense was low across all facilities (average 1%).

- Violent sexual assault (average 10%) was more common than nonviolent sexual assault (average 2%) as the most serious offense for youth across all facilities.

- Person offenses were the most prevalent (average 32%) most serious offense and property offenses were the second most prevalent most serious offense (average 29%).

- On average, 6% of youth had a drug-related as their crime most serious offense, and 17% had other types of crimes.

Bivariate Association With Youth-on-Youth Sexual Assault and Staff Sexual Misconduct

Facilities with greater concentrations of youth with violent offense histories (murder and violent sexual assault) had higher rates of sexual victimization (see table 18).

- Both types of sexual victimization were more prevalent in facilities with higher-than-average concentrations of youth with murder (3.4% and 7.4%) and violent sexual assault (3.3% and 6.8%) as their most serious offense. Staff sexual misconduct was also associated with greater-than-average numbers of youth with person offenses (6.2%).

Table 19

Multivariate stepwise regression models of facility sexual victimization, by youth-on-youth incidence and youths' history, 2012

Youths' history	No controls [a] Estimate	With controls [a] Estimate	Standardized Estimate	Predicted percent of youth-on-youth facility victimization
Intercept	1.6 **	3.7 **		
History of rape victimization				
0% *	~	~		2.3 %
1%-25%	~	~		2.3
26%-50%	~	~		2.3
51%-75%	~	~		2.3
76%-100%	4.6 **	3.4 **	0.11	5.7 **
History of self injury/suicidal				
0%-25% *	~	~		
26%-50%	~	~		
51%-75%	~	~		
76%-100%	~	~		
Abused by parents				
0%-25% *	~	~		
26%-50%	~	~		
51%-75%	~	~		
76%-100%	~	~		
History of prostitution				
0%-25% *	~	~		
26%-50%	4.6 **	~		
51%-75%	~	~		
76%-100%	n/a	n/a		
History of gang membership/affiliation				
0%-25% *	~	~		
26%-50%	~	~		
51%-75%	~	~		
76%-100%	~	~		
History of psychiatric condition				
0%-25% *	~	~		
26%-50%	~	~		
51%-75%	~	~		
76%-100%	~	~		
Most serious offense - murder	~	~		
Most serious offense - violent sexual assault	4.8 **	5.3 **	0.23	
High [b]				2.9 %**
Low [c]				1.8
Most serious offense - property	~	~		

Continued on next page

Table 19
Multivariate stepwise regression models of facility sexual victimization, by youth-on-youth incidence and youths' history, 2012 (continued)

		No controls [a]	With controls [a]		
		Estimate	Estimate	Standardized Estimate	Predicted percent of youth-on-youth
	Multiple living units				
	Yes		1.6 **	0.13	2.5 %**
	No *		~		0.9
	Primary facility type				
	Detention		~		
Controls [a]	Training/long-term secure		~		
	Group home *		~		
	Residential treatment		~		
	Other [d]		~		
	Sex of youth housed				
	Males only		-4.0 **	-0.44	1.8 %**
	Both males and females		-2.8 **	-0.28	3.0 **
	Females only *		~		5.8
	Sex offender treatment		~		
	Adjusted R square	0.11	0.15		
	Degrees of Freedom	3	5		

Note:Results include a weighted least square adjustment to account for differences in facility size

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

~Predictor deleted from the stepwise model when p>0.05 level

[a]Table 3 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

All youth history factors including problems, conditions, patterns of behaviors, and most serious offenses were tested in the same multivariate models.[8] After controlling for facility structural characteristics, two of these factors remained significantly predictive of youth-on-youth sexual assault, while multiple living units and sex of youth housed remained highly relevant (see table 19).

- ■ Rates of youth-on-youth sexual assault (5.7%) were most prevalent in facilities with large concentrations of youth with histories of rape (76% or more youth) and greater-than-average numbers of youth with violent sexual assault (2.9%) as their most serious offense.

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[8] To increase the overall model strength (i.e., adjusted R square) and ease of interpretation, all proportional categorical aggregate factors were included in the model using the continuous version. High/low categories were used to calculate the predicted rates (see Methodological section for more details).

Table 20

Multivariate stepwise regression models of facility sexual victimization, by staff sexual misconduct and youths' history, 2012

Youths' history	No controls [a] Estimate	With controls [a] Estimate	Standardized Estimate	Predicted percent of staff sexual misconduct facility victimization
Intercept	1.2 **	-4.3 **		
History of gang membership/affiliation				
0%-25% *	~	~		
26%-50%	2.1 **	~		
51%-75%	3.5 **	~		
76%-100%	5.0 **	~		
History of violence toward others				
0%-25% *	~	~		
26%-50%	~	~		
51%-75%	~	~		
76%-100%	~	~		
Most serious offense murder	~	~		
Most serious offense violent sexual assault	5.8 **	~		
Most serious offense person offense	8.0 **	6.3 **	0.16	
High [b]				7.0 %**
Low [c]				5.3
Multiple living units		~		
Primary facility type				
Detention		3.8 **	0.19	8.8 %**
Training/long-term secure		2.3 **	0.16	7.4 **
Group home		~		5.1
Residential treatment *		~		5.1
Other [d]		~		5.1
Sex of youth housed				
Males only		5.2 **	0.33	7.3 %**
Both males and females		3.8 **	0.21	5.8 **
Females only *		~		2.1
Size of the facility [e]				
1-25 *		~		3.8 %
26-50		2.2 **	0.13	6.0 **
51-100		3.0 **	0.18	6.7 **
101 or more		5.4 **	0.34	9.2 **
Operating agency		~		
Violent offender treatment		~		
Adjusted R square	0.10	0.24		
Degrees of Freedom	5	8		

(left margin label: Controls [a] — spanning from Multiple living units through Violent offender treatment)

Note:Results include a weighted least square adjustment to account for differences in facility size across the 322 facilities.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

~Predictor deleted from the stepwise model when p>0.05 level

[a]Table 4 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

[e]Based on the number of adjudicated youth housed at the facility on date of survey visit

Facilities with greater-than-average numbers of youth with person offenses as their most serious offense (7.0%) were more likely to have higher levels of staff sexual misconduct after controlling for facility structural characteristics in the same multivariate models. Some structural factors also remained highly predictive.

4.5   Youth Reports of Involvement With Gangs and Fighting

The level of fighting and gang activity in the facilities was assessed based on the proportion of youth reporting these activities. These include the number of youth being written up for fighting, number of youth reporting the presence of gangs in the facility, gang fighting in the facility, being a member of a gang while in the facility, feeling pressure to do things they wouldn't otherwise do as a member of a gang while in the facility, and feeling safer being a member of a gang while in the facility. The number of times youth were written up for fighting was measured using a three-item scale. Higher numbers represented more sanctions (see Appendix B for scale).

Table 21

Facility-level victimization rate, by type of incident and youth reports of involvement with gangs and fighting, 2012

Youth reports of involvement with gangs and fighting		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100 %	2.1 %	0.3	5.2 %	0.4
Discipline for physical assault or threats					
Written up for fighting [a]					
0 up to 0.17 *	26 %	0.9 %	0.3	1.4 %	0.5
0.17 up to 0.48	24	2.6 **	0.5	4.9 **	0.8
0.48 up to 0.77	25	2.1	0.5	5.6 **	0.7
0.77 up to 1	25	2.9 **	0.6	9.0 **	0.9
Gang activity					
Gangs in facility					
0 up to 0.29 *	25 %	1.5 %	0.5	1.6 %	0.5
0.29 up to 0.58	25	1.6	0.4	3.4	0.6
0.58 up to 0.82	24	2.4	0.5	6.2 **	0.9
0.82 up to 1	25	3.0 **	0.6	9.8 **	0.9
Gang fights in facility					
0 up to 0.03 *	25 %	1.2 %	0.4	1.4 %	0.6
0.03 up to 0.25	26	1.9	0.4	3.3	0.6
0.25 up to 0.55	25	2.6 **	0.6	5.7 **	0.8
0.55 up to 1	25	2.8 **	0.5	10.6 **	0.9
Gang member in facility [b]					
0 *	28 %	1.7 %	0.5	1.5 %	0.6
>0 up to 0.13	21	2.0	0.4	5.1 **	0.7
0.13 up to 0.25	25	2.4	0.5	5.7 **	0.8
0.25 up to 1	26	2.5	0.5	8.8 **	0.9
Gang pressure					
0 *	65 %	2.0 %	0.3	3.2 %	0.4
0.01 -0.25	35	2.4	0.3	8.9 **	0.7
Safer in gang					
0 *	32 %	1.8 %	0.5	2.2 %	0.6
>0 up to 0.09	18	1.9	0.4	5.9 **	1.0
0.09 up to 0.17	24	2.3	0.6	5.1 **	0.7
0.17 up to 1	26	2.5	0.5	8.6 **	0.9

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

*Comparison group.

**Difference with comparison group is significant at the 95%- confidence level.

[a]This measure is a construct and the data represents an overall score across several survey items (see appendix 2 for a listing of the items). The score was generated by summing all positive responses by each individual youth in a facility, and then computing an average score for all youth within a facility.

[b]Youth report gang activity in the facility and that they are a member of the gang

- Most facilities (75%) had low levels of youth reporting being written up for fighting behavior (0 to 0.77 items for all youth in the facility).

- The presence of gangs was reported by more than half of all youth (0.58 and above) in at least 50% all facilities. A quarter of facilities had the majority of their youth (0.82 and above) reporting gangs in the facility.

- In half (51%) of all facilities, less than a quarter of youth (below 0.25) reported gang fights. Levels of gang membership were relatively low in the majority of facilities (74%). In more than one-quarter of facilities (28%), no youth identified as a member of a gang. Less than 25% of youth (less than 0.25) in almost half (46%) of facilities reported being a member of a gang.

- Throughout the majority of facilities (65%), youth reported that they did not experience gang pressure.

- Approximately a third of facilities (32%) had no youth that felt safer in a gang. More than a quarter had at least 17% (0.17 and above) of youth reporting that they felt safer in a gang.

Bivariate Association With Youth-on-Youth Sexual Assault

Fighting and gang activity were significantly associated with increased rates of youth-on-youth sexual assault. Facilities with larger proportions of youth receiving sanctions for fighting, endorsing gangs in the facility, and gang fights had the highest rates (table 21).

- Facilities with less than 17.0% (0.17 and below) of youth with a history of being written up for fighting had low rates of youth-on-youth victimization (0.9%), while those with the highest number of youth receiving sanctions had the highest levels (2.9%).

- High concentrations of youth (0.82 and above) reporting gang activity in the facility was significantly associated with elevated rates (3.0%) of sexual assault by another youth.

- Similar levels of youth-on-youth sexual assault (2.8%) were evident when the majority of youth (0.55 and above) report gang fights in the facility.

Bivariate Association With Staff Sexual Misconduct

Staff sexual misconduct was significantly related to fighting and all gang factors. Rates of staff sexual misconduct were greatest in facilities that had high concentrations of youth receiving sanctions for fighting and reporting any type of gang activity (see table 21).

- Staff sexual misconduct rates were almost double in facilities where the most youth received sanctions for fighting (9.0%) and reported the presence of gangs in the facility (9.8%).

- In facilities where the majority of youth (0.55 and above) reported gang fights, the prevalence of staff sexual misconduct was more than double (10.6%) the facility average (5.2%).

- Gang membership was directly related to staff sexual misconduct. As the overall concentration of youth reporting membership in a gang increased, so did the likelihood of staff sexual misconduct.

- In facilities with any proportion of youth reporting gang pressure, the likelihood of staff sexual misconduct was almost three times greater (8.9% vs. 3.2%) than facilities with no youth experiencing gang pressure.

- Staff sexual misconduct was directly related to the proportion of youth who reported feeling safer in a gang. The lowest rates were in facilities with no youth saying they felt safer (2.2%).

Table 22

Multivariate stepwise regression models of facility sexual victimization, by youth-on-youth incidence and youth reports of involvement with gangs and fighting, 2012

	No controls [a]	With controls [a]		Predicted percent of youth-on-youth facility victimization
Youth reports of involvement with gangs and fighting	Estimate	Estimate	Standardized Estimate	
Intercept	1.4 **	5.0 **		
Written up for fighting	~	~		
Gangs in facility	~	~		
Gang fights	1.6 **	1.9 **	0.14	
High [b]				2.8 %**
Low [c]				1.8
Multiple living units		~		
Primary facility type				
Detention		~		
Training/long-term secure		~		
Group home *		~		
Residential treatment		~		
Other [d]		~		
Sex of youth housed				
Males only		-4.4 **	-0.50	1.7 %**
Both males and females		-3.1 **	-0.31	3.1 **
Females only *		~		6.2
Sex offender treatment				
Yes		1.4 **	0.17	3.3 %
No*		~		1.9
Adjusted R square	0.0	0.11		
Degrees of Freedom	1	4		

(left margin label: Controls [a])

Note:Results include a weighted least square adjustment to account for differences in facility size across the 322 facilities.

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level

*Comparison group.

[a]Table 3 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

After controlling for facility structural characteristics, only gang fights were significant in predicting youth-on-youth sexual assault in the multivariate model (see table 22). Facilities had elevated rates (2.8%) where the majority of youth report gang fights. Female-only residential facilities and facilities providing sex offender treatment remained robust predictors of youth-on-youth assault.

Table 23

Multivariate stepwise regression models of facility sexual victimization, by staff sexual misconduct and youth reports of involvement with gangs and fighting in the facility, 2012

Youth reports of involvement with gangs and fighting in the facility	No controls [a] Estimate	With controls [a] Estimate	Standardized Estimate	Predicted percent of staff sexual misconduct facility victimization
Intercept	0.0	-1.0		
Written up for fighting	6.3 **	6.4 **	0.36	
High [b]				8.7 %**
Low [c]				4.5
Gang pressure	20.5 **	19.3 **	0.10	
High [b]				7.1 %
Low [c]				6.1
Gangs in facility	~	~		
Gang fights	6.1 **	5.7 **	0.24	
High [b]				8.2 %**
Low [c]				5.1
Gang member in facility	~	~		
Safer in gang	~	~		
Multiple living units		~		
Primary facility type				
Detention		~		
Training/long-term secure		~		
Group home		~		
Residential treatment *		~		
Other [d]		~		
Sex of youth housed				
Males only		1.5 **	0.09	7.0 %**
Both males and females		~		5.5
Females only *		~		5.5
Size of the facility [e]				
1-25 *		~		
26-50		~		
51-100		~		
101 or more		~		
Operating agency		~		
Violent offender treatment		~		
Adjusted R square	0.34	0.35		
Degrees of Freedom	3	4		

(Left margin label spanning control rows: Controls [a])

Note: Results include a weighted least square adjustment to account for differences in facility size across the 322 facilities.

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level

*Comparison group.

[a]Table 4 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

[e]Based on the number of adjudicated youth housed at the facility on date of survey visit

Fighting and gang factors remained significantly predictive of staff sexual misconduct after adjusting for facility structural characteristics (see table 23).

- ■ Higher-than-average concentrations of youth receiving sanctions for fighting (8.7%), reporting gang pressure (7.1%), and gang fights (8.2%) were significantly predictive of staff sexual misconduct.

- ■ In the multivariate model, most facility structural factors were no longer relevant with the exception of male-only residential facilities (7.0%).

4.6   Youth Reports of Vulnerability

Facilities were assessed by the concentrations of vulnerable youth populations. These include proportions of youth reporting lesbian, gay, or bisexual orientation, histories of prior sexual assault, lower educational performance (such as two or more levels below the expected school grade level), age mixture of youth in the facility (proportion of youth 14 and younger, 18 and older, and mixing younger and older youth), no prior detention history, and the length of time in the facility (see table 24).

Table 24

Facility level victimization rate, by type of incident and youth reports of vulnerability, 2012		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
Youth reports of vulnerability	%	Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100	2.1 %	0.3	5.2 %	0.4
Proportion of youth within a facility reporting lesbian, gay, bisexual orientation					
0 up to 0.07	50	0.5 % **	0.1	5.4 % **	0.6
0.07 up to 0.18	25	2.5 **	0.4	6.9 **	0.9
0.18 to 1 *	25	5.0	0.8	3.1	0.5
Proportion of youth within a facility reporting prior sexual assault					
0	29	0.4 %**	0.2	4.0 %	0.9
>0 up to 0.1	23	0.9	0.2	7.8 **	0.8
0.1 up to 0.24	24	2.8	0.4	6.8 **	0.8
0.24 to 1 *	25	4.5	0.8	2.7	0.5
Proportion of youth within a facility who are two or more grade levels below age expectation					
0 up to 0.9 *	24	1.8 %	0.5	3.6 %	0.7
0.09 up to 0.18	25	3.2 **	0.7	5.5	0.7
0.18 up to 0.32	25	2.3	0.5	6.2 **	0.8
0.32 to 1	25	1.2	0.3	5.5	0.9
Age mixture of youth in the facility					
Young minors & adults mix [<15 and 18+] *	50	2.4 %	0.4	6.7 %	0.6
Older minors & adults mix [15,16,17 and 18+]	25	2.2	0.5	5.1	0.8
Only minors [Only <18]	23	1.5	0.5	2.3 **	0.6
Only adults [Only 18+]	1	0.0	0.0	0.0	0.0
Proportion of youth 14 and younger within a facility					
0	32	1.9 %	0.4	4.4 % **	0.7
>0 up to 0.04 *	16	2.0	0.5	8.9	1.1
0.04 to 0.13	28	2.5	0.5	5.9 **	0.7
0.13 to 1	25	2.0	0.5	3.2 **	0.8
Proportion of youth 18 and older within a facility					
0 up to 0.03 *	25	1.6 %	0.4	2.6 %	0.6
0.03 up to 0.15	23	1.5	0.4	5.8 **	1.0
0.15 up to 0.36	26	2.6	0.6	5.5 **	0.8
0.36 to 1	25	2.7	0.5	7.1 **	0.8

Table 24

Facility-level victimization rate, by type of incident and youth reports of vulnerability, 2012 (continued)

Youth reports of vulnerability	%	Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
Previous detention history					
No history					
0 up to 0.12 *	25	1.5 %	0.4	3.5 %	0.7
0.12 up to 0.19	24	1.9	0.4	4.8	0.8
0.19 up to 0.31	26	1.9	0.4	6.7 **	0.8
0.31 to 1	25	3.1 **	0.7	5.9 **	0.9
Length of time in the facility					
Less than 6 months					
0 up to 0.47	25	3.4 % **	0.7	6.5 % **	0.8
0.47 up to 0.61	24	2.7 **	0.6	6.7 **	0.8
0.61 up to 0.82	26	1.6	0.4	3.9	0.7
0.82 to 1 *	25	0.7	0.3	3.9	0.8

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

- In half of all facilities (50%), less than 7% of youth (0.07 and less) self-identified as lesbian, gay, or bisexual .

- Almost a third (29%) of facilities had no youth with a history of prior sexual assault, compared to a quarter that had at least 25% (0.24 and above) with this history.

- The majority of facilities (75%) had at least 9% of their youth (0.09 and above) two or more grade levels below expected. A quarter had almost a third (0.32 and above) of their youth population two or more grade levels below expected.

- Half of all facilities had mixtures of much younger youth (less than 15) with older youth (18 and older). Twenty-three percent housed only minor youth, and 1% housed only adult youth (18 and older).

- Approximately two-thirds of all facilities contained some proportion of youth 14 or younger.

- A quarter of all facilities had more than a third of their population (0.36 and above) 18 or older.

- Seventy-five percent of the facilities had large proportions of youth with previous detention histories. Twenty-five percent of the facilities had approximately a third or more (0.31 and above) of their population with no previous detention history.

- The majority of youth (0.47 and above) in many facilities (75%) were there less than 6 months.

Bivariate Association With Youth-on-Youth Sexual Assault

Facilities with the highest rates of sexual assault by another youth were those with greater proportions of youth with vulnerability characteristics, no history of prior incarceration, and longer lengths of stay (see table 24).

- Sexual assault by another youth was more prevalent in facilities with the highest concentrations of lesbian, gay, or bisexual youth (5.0%) and youth with a prior history of sexual assault (4.5%).

- Facilities with moderate numbers of youth (0.09 to 0.18) two or more grade levels below expected had the highest rates (3.2%).

- Sexual assault by another youth was also more prevalent in facilities with greater proportions of youth (0.31 and above) with no prior detention history (3.1%), and lower proportions of youth (0 to 0.47) in the facility less than 6 months (3.4%).

Bivariate Association With Staff Sexual Misconduct

Vulnerability factors associated with staff sexual misconduct were opposite the factors associated with youth-on-youth sexual assault. Lesbian, gay, or bisexual youth and those with histories of sexual assault had the lowest rates. Similar to youth-on-youth assault, rates were lowest when the proportion of youth had histories of incarceration, and shorter lengths of stay. Unlike youth-on-youth sexual assault, staff sexual misconduct was associated with the age mixture of youth in the facility (see table 24).

- Staff sexual misconduct was lowest in facilities with the highest concentrations of lesbian, gay, or bisexual youth (3.1%) and youth with histories of prior sexual assault (2.7%).

- Facilities with less than 10% (0.09 or less) of youth below their expected grade level had the lowest rates of staff sexual misconduct (3.6%).

- The rate of staff sexual misconduct was higher (6.7%) in facilities that mix younger minors (up to 14 years) with adults (18 or older).

- Staff sexual misconduct was most prevalent (8.9%) in facilities with smaller proportions of youth ages 14 or younger (>0 up to 0.04) and in facilities where more than a third of the youth (0.36 and above) population was 18 or older (7.1%).

- Staff sexual misconduct was also less frequent in facilities when the proportions of youth with no prior detention history (3.5%) were the smallest (0 to 0.12) and when large concentrations of youth (0.61 and above) were in the facility less than 6 months (3.9%).

Table 25

Multivariate stepwise regression models of facility sexual victimization, by youth-on-youth incidence and youth reports of vulnerability, 2012

	No controls [a]	With controls [a]		
Youth reports of vulnerability	Estimate	Estimate	Standardized Estimate	Predicted percent of youth-on-youth facility victimization
Intercept	1.2	-1.7 **		
Proportion of youth - lesbian, gay, bisexual	5.6 **	5.5 **	0.24	
High [b]				2.9 %**
Low [c]				1.7
Proportion of youth - prior sexual assault	5.5 **	6.1 **	0.25	
High [b]				3.0 %**
Low [c]				1.6
Proportion of youth - 2+ yrs. below grade level	~	~		
No previous detention history	3.4 **	3.6 **	0.13	
High [b]				2.7 %**
Low [c]				1.9
Less than 6 months time in facility	-2.2 **	~		
Multiple living units				
Yes		1.7 **	0.13	2.5 %**
No *		~		0.8
Primary facility type				
Detention		~		
Training/long-term secure		~		
Group home *		~		
Residential treatment		~		
Other [d]		~		
Sex of youth housed				
Males only		~		
Both males and females		~		
Females only *		~		
Sex offender treatment		~		
Adjusted R square	0.22	0.23		
Degrees of Freedom	4	4		

(Left margin label: Controls [a])

Note:Results include a weighted least square adjustment to account for differences in facility size across the 322 facilities.

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level

*Comparison group.

[a]Table 3 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

After controlling for facility characteristics and entering all significant youth vulnerability factors into the multivariate model, all remained predictive of youth-on-youth sexual assault (see table 25) with the exception of length of time in the facility. Most structural characteristics were no longer relevant with the exception of facilities with multiple living units.

- ■ Facilities had higher rates of youth-on-youth assault with greater-than-average concentrations of lesbian, gay, or bisexual youth (2.9%), youth with histories of prior sexual assault (3.0%), and those with no prior detention history (2.7%).

Table 26
Multivariate stepwise regression models of facility sexual victimization, by staff sexual misconduct and youth reports of youth vulnerability, 2012

	No controls [a]	With controls [a]		
Youth reports of youth vulnerability	Estimate	Estimate	Standardized Estimate	Predicted percent of staff sexual misconduct facility victimization
Intercept	10.4 **	-0.3		
Proportion of youth - lesbian, gay, bisexual	~	~		
Proportion of youth - prior sexual assault	-9.2 **	~		
Proportion of youth - 2+ yrs. below grade level	~	~		
Age range of youth in facility				
Younger minors & adults mix [<15 and 18+] *	~	~		6.9 %
Older minors & adults mix [15 to 18+]	~	~		6.9
Only minors [Only <18]	-3.6 **	-2.0 **	-0.11	4.9 **
Only adults [Only 18+]	~	~		6.9
Proportion of youth 14 and younger	~	~		
Proportion of youth 18 and older	~	~		
No previous detention history	7.1 **	9.2 **	0.19	
High [b]				7.6 %**
Low [c]				5.6
Less than 6 months time in facility	-5.7 **	~		
Multiple living units		~		
Primary facility type				
Detention		~		
Training/long-term secure		~		
Group home		~		
Residential treatment *		~		
Other [d]		~		
Sex of youth housed				
Males only		2.0 **	0.12	7.1 %**
Both males and females		~		5.2
Females only *		~		5.2
Size of the Facility [e]				
1-25 *		~		2.8 %
26-50		2.8 **	0.17	5.7 **
51-100		4.3 **	0.26	7.2 **
101 or more		7.1 **	0.45	10.0 **
Operating agency		~		
Violent offender treatment		~		
Adjusted R square	0.14	0.22		
Degrees of Freedom	4	6		

(Left margin label: Controls [a])

Note:Results include a weighted least square adjustment to account for differences in facility size across the 322 facilities.

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level.

*Comparison group..

[a]Table 4 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate.

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate.

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

[e]Based on the number of adjudicated youth housed at the facility on date of survey visit.

In the staff sexual misconduct multivariate models, two vulnerability factors remained predictive after adjusting for structural characteristics. Facilities housing only male and larger facilities remained important predictors of staff sexual misconduct (See table 26).

- Staff sexual misconduct was lower in facilities that housed only minor youth (4.9%) but higher when the majority of youth had no prior detention history (7.6%).

4.7   Youth Reports of Facility Order and Disorder

The level of order and disorder in the facility was measured along several dimensions: written complaints against staff, youth perceptions of enough staff to monitor what was going on in the facility, whether it was easy to break rules in the facility, and staff grooming behaviors, such as sharing personal information with youth and providing special treatment to youth.

Table 27

Facility-level victimization rate, by type of incident and youth reports of facility order and disorder, 2012

Youth reports of facility order and disorder		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100 %	2.1 %	0.3 %	5.2 %	0.4 %
Proportion of youth filed a written written complaint against staff member					
0 up to 0.11*	25 %	0.6 %	0.3 %	1.1 %	0.3 %
0.11 up to 0.31	24	1.7	0.5	4.1 **	0.6
0.31 up to 0.50	25	2.6 **	0.5	7.6 **	0.8
0.50 up to 1	26	3.5 **	0.7	7.9 **	1.1
Proportion of youth who report enough staff to monitor what is going on					
0 up to 0.60*	24 %	3.7 %	0.8 %	7.6 %	1.0 %
0.60 up to 0.74	26	2.4	0.4	6.9	0.8
0.74 up to 0.86	25	1.5 **	0.4	4.7 **	0.7
0.86 up to 1	25	0.9 **	0.3	1.6 **	0.5
Not easy to break rules					
0 up to 0.43	24 %	3.2 % **	0.7 %	5.4 % **	0.9 %
0.43 up to 0.53	26	2.2	0.5	6.2 **	0.8
0.53 up to 0.67	29	1.6	0.3	5.9 **	0.8
0.67 - 1 *	21	1.6	0.5	2.9	0.6
Staff boundaries					
Staff share personal information					
0 up to 0.22 *	25 %	1.2 %	0.4 %	1.6 %	0.4 %
0.22 up to 0.33	18	2.8 **	0.6	5.1 **	0.6
0.33 up to 0.45	30	2.4	0.5	7.6 **	0.8
0.45 up to 1	27	2.2	0.6	6.0 **	1.0
Staff provide special treatment					
0 up to 0.17 *	29 %	0.9 %	0.3 %	2.4 %	0.6 %
0.17 up to 0.25	16	2.4	0.5	4.2	0.6
0.25 up to 0.37	30	2.2	0.4	6.5 **	0.8
0.37 up to 1	25	3.2 **	0.7	7.6 **	0.9

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.
*Comparison group.
**Difference with comparison group is significant at the 95%- confidence level.

- In about three-quarters of all facilities (74%), less than half of all youth (less than 0.50) reported filing a written complaint against a staff member.

- In more than three-quarters of all facilities (76%), more than half of all youth (0.60 and above) indicated that there was enough staff to monitor what was going on in the facility.

- In half of the facilities, the majority of all youth (0.53 and above) believed it was not easy to break rules. In a quarter of the facilities, less than half of the youth population reported it was not easy to break rules (less than 0.43).

- There were varying reports of potential staff grooming behavior across facilities. In 27% of the facilities, less than half or more (0.45 and above) of the youth reported staff sharing personal information. In 30% of the facilities, at least a third (0.33 to 0.45) reported staff sharing personal information, and in 25% of facilities, less than a quarter (0.22 and below) of youth reported staff sharing personal information. Twenty-nine percent of facilities had less than a fifth (less than 0.17) of youth reporting staff providing special treatment, while more than half of the facilities (55%) had at least one-quarter (0.25 and above) of youth reporting staff providing special treatment.

Bivariate Association With Youth-on-Youth Sexual Assault and Staff Sexual Misconduct

All facility order and disorder factors were associated with increased prevalence of youth-on-youth sexual assault and staff sexual misconduct. Rates of victimization were lowest in facilities when less youth filed written complaints against staff, when there is sufficient staff to monitor the facility, when there is consistent enforcement of rules, and when there is reduced staff grooming behaviors (table 27).

- Facilities had lower rates of victimization when less than 11% (below 0.11) of youth filed a written complaint against a facility staff member.

- The prevalence of victimization was lowest in facilities when most youth (0.86 and above) reported that there were enough staff to monitor what was taking place in the facility (0.9%, 1.6%) and when the majority of youth (0.67 and above) believed it was not easy to break rules (1.6%, 2.9%).

- Similar trends were also evident for staff grooming behaviors. The risk of victimization was significantly lower (1.2%, 1.6% and 0.9%, 2.4%) when smaller numbers of youth reported staff sharing personal information (0 to 0.22) and staff providing special treatment (0 to 0.17).

Table 28
Multivariate stepwise regression models of facility sexual victimization, by youth-on-youth incidence and youth reports of facility order and disorder, 2012

	No controls [a]	With controls [a]		
Youth reports of facility order and disorder	Estimate	Estimate	Standardized Estimate	Predicted percent of youth-on-youth facility victimization
Intercept	3.9 **	6.1 **		
Proportion of youth filed a written written complaint against staff member	3.5 **	2.5 **	0.14	
High [b]				2.8 %**
Low [c]				1.9
Proportion of youth who report enough staff to monitor what is going on	-3.9 **	-3.3 **	-0.14	
High [b]				1.9 %**
Low [c]				2.8
Staff provide special treatment	~	~		
Multiple living units		~		
Primary facility type				
Detention		~		
Training/long-term secure		~		
Group home *		~		
Residential treatment		~		
Other [d]		~		
Sex of youth housed				
Males only		-3.08 **	-0.35	1.9 %**
Both males and females		-1.93 **	-0.20	3.0 **
Females only *		~		5.0
Sex offender treatment				
Yes		1.41 **	0.16	3.3 %**
No *		~		1.9
Adjusted R square	0.08	0.14		
Degrees of Freedom	2	5		

(Left margin label: Controls [a])

Note: Results include a weighted least square adjustment to account for differences in facility size

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level

*Comparison group.

[a]Table 3 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate.

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate.

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

After controlling for facility structural characteristics in the multivariate models, two predictors of facility order and disorder were associated with victimization by another youth. Facilities with higher rates of youth-on-youth sexual assault had more youth who reported filing written complaints against a staff member (2.8%) (See table 28). Facilities had lower rates when more youth reported that there was enough staff to monitor what was taking place in the facility (1.9%). Structural characteristics such as housing only female residents and those providing sex offender treatment remained significantly predictive of youth-on-youth sexual assault.

Table 29
Multivariate stepwise regression models of facility sexual victimization, by staff sexual misconduct and youth reports of facility order and disorder, 2012

	No controls[a]	With controls[a]		
Youth reports of facility order and disorder	Estimate	Estimate	Standardized Estimate	Predicted percent of staff sexual misconduct facility
Intercept	5.5 **	-4.4		
Proportion of youth filed a written complaint against staff member	8.9 **	10.1 **	0.31	
High [b]				8.3 %**
Low [c]				4.8
Proportion of youth who report enough staff to monitor what is going on	-6.2 **	-5.5 **	-0.13	
High [b]				6.0 %**
Low [c]				7.2
Not easy to break rules	~	~		
Staff share personal information	~	6.2 **	0.13	
High [b]				7.4 %**
Low [c]				5.9
Staff provide special treatment	8.9 **	~		
Multiple living units		~		
Primary facility type				
Detention		3.6 **	0.18	8.6 %**
Training/long-term secure		2.4 **	0.17	7.1 **
Group home		~		6.9
Residential treatment *		~		5.3
Other [d]		~		5.7
Sex of youth housed				
Males only		8.0 **	0.50	7.6 %**
Both males and females		5.9 **	0.33	5.4 **
Females only *		~		0.2
Size of the facility [e]				
1-25 *		~		4.2 %
26-50		~		6.1 **
51-100		~		6.8 **
101 or more		2.7 **	0.17	8.8 **
Operating agency		~		
Violent offender treatment		~		
Adjusted R square	0.20	0.37		
Degrees of Freedom	3	8		

(Controls[a] label applies to the section from "Multiple living units" through "Violent offender treatment")

Note: Results include a weighted least square adjustment to account for differences in facility size

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level

*Comparison group.

[a]Table 4 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate.

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate.

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

[e]Based on the number of adjudicated youth housed at the facility on date of survey visit

After adjusting for facility structural characteristic, the same factors of facility order and disorder were predictive of staff sexual misconduct. In addition, staff grooming behaviors were also associated with increased rates of staff sexual misconduct. Structural factors such as primary facility type (e.g., detention centers, training/long-term secure), facilities housing male residents, and larger facilities retained significance (see table 29) in the multivariate models.

- Rates of staff sexual misconduct were higher in facilities when the majority of youth reported filing written complaints against a staff member (8.3%) and when more youth reported staff engaging in grooming behaviors such as sharing personal information (7.4%).

- Rates of staff sexual misconduct were lower in facilities when more youth reported that there was enough staff to monitor what was taking place (6.0%).

4.8 Youth Reports of Facility Safety and Fairness

Fairness in the facility was measured using scales assessing positive perceptions of staff (eight items, see Appendix B) and the level of lack of fairness (seven items, see Appendix B). Higher scores indicate higher levels of positive perceptions and higher levels of lack of fairness. Physical safety was captured by a three-item scale evaluating direct physical assault by another youth and/or staff (see Appendix B), and a single item assessing worrying about being physically assaulted by another youth and/or staff (see table 30).

Table 30

Facility-level victimization rate, by type of incident and youth reports of facility safety and fairness, 2012

Youth reports of facility safety and fairness	%	Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
		Mean Percent	Standard Error	Mean Percent	Standard Error
All facilities	100	2.1 %	0.3	5.2 %	0.4
Positive perceptions of staff [a]					
1 up to 4.11 *	25	3.1 %	0.6	9.7 %	1.0
4.11 up to 5.26	25	2.6	0.5	6.5 **	0.8
5.26 up to 6.50	25	1.4 **	0.4	3.8 **	0.6
6.50 - 8	25	1.4 **	0.5	0.9 **	0.3
Lack of fairness [a]					
0 up to 1.80 *	25	0.8 %	0.3	1.0 %	0.3
1.80 up to 2.89	25	1.6	0.4	3.4 **	0.6
2.89 up to 3.73	25	2.1	0.5	6.2 **	0.8
3.73 - 6	25	4.0 **	0.7	10.3 **	1.0
Facility safety					
Physical assault by youth [a]					
0 up to 0.35 *	25	1.1 %	0.4	2.5 %	0.7
0.35 up to 0.69	25	1.3	0.3	3.5	0.5
0.69 up to 1.03	25	2.2	0.4	5.8 **	0.8
1.03 - 3	25	3.9 **	0.9	9.1 **	1.0
Physical assault by staff [a]					
0 *	32	0.7 %	0.2	1.6 %	0.6
0.02 up to 0.18	17	1.5	0.3	4.0 **	0.6
0.18 up to 0.37	25	3.1 **	0.6	5.5 **	0.6
0.37 up to 1.5	25	3.3 **	0.7	10.5 **	1.0
Worry about physical assault by another youth					
0 up to 0.13 *	25	0.5 %	0.2	1.6 %	0.5
0.13 up to 0.26	24	1.2	0.3	4.0 **	0.7
0.26 up to 0.4	25	2.4 **	0.4	6.9 **	0.7
0.4 - 1	26	4.3 **	0.8	8.2 **	1.0
Worry about physical assault by staff					
0 *	30	0.6 %	0.3	0.8 %	0.3
0.02 up to 0.13	22	2.0 **	0.4	4.2 **	0.6
0.13 up to 0.21	21	2.9 **	0.6	5.0 **	0.7
0.21 - 1	26	3.3 **	0.6	11.2 **	1.0

Note: Based on 322 unweighted juvenile facilities that returned a Facility Questionnaire. Four facilities were excluded from analysis.

*Comparison group.

**Difference with comparison group is significant at the 95%- confidence level.

[a]This measure is a construct and the data represents an overall score across several survey items (see appendix 2 for a listing of the items). The score was generated by summing all positive responses by each individual youth in a facility, and then computing an average score for all youth within a facility.

- The majority of youth in facilities reported moderate to high levels of positive perceptions of staff. Half of all facilities had moderate levels (4.11 to 6.5 items) and one quarter of facilities had high levels of positive perceptions of staff (6.5 to all 8 items). Twenty-five percent of facilities had youth endorsing low levels of positive perceptions of staff.

- Similar trends were evident for lack of fairness with half of facilities with low to moderate levels (0 to 2.89) and a quarter with higher levels (3.73 to 6).

- More than half of all facilities, had low episodes of youth being assaulted by another youth (less than one incident, 0 to 0.69, reported by the majority of youth in the facility). In almost one third of all facilities (32%) there were no reports of youth assaulted by staff and low incidents in the remaining facilities.

- Most facilities had small numbers of youth (less than one item reported by most youth) reporting worry about physical assault by another youth (74% of the facilities) or by staff (73% of the facilities).

Bivariate Association With Youth-on-youth Sexual Assault and Staff Sexual Misconduct

All of safety and fairness factors were associated with both types of victimization. Rates of youth-on-youth assault and staff sexual misconduct were highest in facilities when youth had fewer positive impressions of staff and perceived the facility to be unfair (see table 30). Reports of victimization were also elevated in facilities when more youth reported being physically assaulted by other youth and/or staff, or worrying about being assaulted by other youth and staff.

- The prevalence of youth-on-youth sexual assault was twice (3.1% vs. 1.4%) as high and for staff sexual misconduct was 10 times greater (9.7% vs. 0.9%) in facilities with the fewest positive perceptions of staff compared to facilities with the most favorable perceptions of staff.

- In facilities with the highest concentrations of youth that perceived the facility to be unfair, the rates of both types of victimization were significantly higher (4.0%, 10.3%) than facilities with moderate to low concentrations of youth with these perceptions.

- Rates of youth-on-youth and staff sexual misconduct are highest in facilities when more youth reported physical assault by another youth (3.9%, 9.1%), physical assault by staff (3.3%, 10.5%), worry about physical assault by another youth (4.3%, 8.2%) and/or worry about physical assault by staff (3.3%, 11.2%).

Table 31
Multivariate stepwise regression models of facility sexual victimization, by youth-on-youth incidence and by youth reports of safety and fairness, 2012

	No controls[a]	With controls[a]		
Youth reports of safety and fairness	**Estimate**	**Estimate**	**Standardized Estimate**	**Predicted percent of youth-on-youth facility victimization**
Intercept	0.2	3.0 **		
Positive perceptions of staff	~	~		
Lack of fairness	~	~		
Physical assault by another youth	~	~		
Physical assault by staff	~	~		
Worry about physical assault by another youth	7.1 **	5.2 **	0.22	
High [b]				3.0 %**
Low [c]				1.6
Worry about physical assault by staff	~	~		
Multiple living units		~		
Primary facility type				
Detention		~		
Training/long-term secure		~		
Group home *		~		
Residential treatment		~		
Other [d]		~		
Sex of youth housed				
Males only		-3.0 **	-0.34	1.9 %**
Both males and females		-2.0 **	-0.20	2.9 **
Females only *		~		4.9
Sex offender treatment				
Yes		1.3 **	0.15	3.3 %**
No *		~		1.9
Adjusted R square	0.09	0.14		
Degrees of Freedom	1	4		

(left margin label: **Controls** [a])

Note:Results include a weighted least square adjustment to account for differences in facility size across the 322 facilities.

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level.

*Comparison group.

[a]Table 3 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate.

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate.

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

After controlling for the facility structural characteristics, only one safety and fairness factor was still predictive of youth-on-youth sexual assault. Sexual assault by another youth was almost twice the rate (3.0% vs. 1.6%) in facilities when the majority of youth worry about physical assault by another youth (see table 31). Facilities housing only female residents and those providing sex offender treatment remained significantly associated with elevated rates of youth-on-youth sexual assault in the multivariate model.

Table 32

Multivariate stepwise regression models of facility sexual victimization, by staff sexual misconduct and youth reports of safety and fairness, 2012

	No controls [a]	With controls [a]		
Youth reports of safety and fairness	Estimate	Estimate	Standardized Estimate	Predicted percent of staff sexual misconduct facility victimization
Intercept	5.6 **	1.1		
Positive perceptions of staff	-0.8 **	-1.2 **	-0.26	
High [b]				5.1 %**
Low [c]				8.1
Lack of fairness	~	~		
Physical assault by youth	1.8 **	~		
Physical assault by staff	6.3 **	8.7 **	0.36	
High [b]				8.5 %**
Low [c]				4.8
Worry about physical assault by another	~	8.7 **	0.17	
High [b]				7.6 %**
Low [c]				5.6
Worry about physical assault by staff	6.3 **	~		
Multiple living units		~		
Primary facility type				
Detention		~		
Training/long-term secure		~		
Group home		~		
Residential treatment *		~		
Other [d]		~		
Sex of youth housed				
Males only		7.3 **	0.46	7.4 %**
Both males and females		6.0 **	0.34	6.0 **
Females only *		~		0.1
Size of the Facility [e]				
1-25 *		~		
26-50		~		
51-100		~		
101 or more		~		
Operating agency		~		
Violent offender treatment		~		
Adjusted R square	0.43	0.47		
Degrees of Freedom	4	5		

(left margin label: **Controls [a]**)

Note:Results include a weighted least square adjustment to account for differences in facility size across the 322 facilities.

**Difference with comparison group is significant at the 95%- confidence level.

~Predictor deleted from the stepwise model when p>0.05 level.

*Comparison group.

[a]Table 4 predictors were entered as controls.

[b]Continuous predictor - weighted assault rate is greater than the median rate.

[c]Continuous predictor - weighted assault rate is less than or equal to the median rate.

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

[e]Based on the number of adjudicated youth housed at the facility on date of survey visit.

In the staff multivariate model, three safety and fairness factors remained predictive of sexual misconduct after adjusting for facility structural characteristics (see table 32). The highest rates of victimization were in facilities where the majority of youth had less favorable perceptions of staff (8.1%), when the majority of youth reported physical assault by staff (8.5%), and/or when the majority of youth worried about physical assault by another youth (7.6%). Most structural factors were no longer relevant with the exception of facilities with male residents.

5.   Facility Profiles of Sexual Victimization

As shown in the previous section, the multivariate analysis examined facility characteristics and other factors collected by the National Study of Youth in Custody (NSYC) surveys to assess the ability of these factors to predict youth sexual victimization. These results present facility profiles that describe the characteristics of facilities that are most likely to have higher rates of youth-on-youth sexual assault (see figure 1) and staff sexual misconduct (see figure 2). These profiles present the facility characteristics that have the strongest association with each type of sexual assault. Each profile lists two sets of facility characteristics: (1) those that are common to high incidence of both youth- and staff-perpetrated assaults and (2) those that are significant for one but not the other. Below, the authors describe each of these sets.

5.1   Facility Characteristics Associated With Both Types of Sexual Assault (Youth-on-Youth and Staff Sexual Misconduct)

There are several features of facilities that are associated with both youth and staff sexual assault. Two features are related to facility order/disorder and gang fights. Facilities with higher rates of sexual assault have more youth-based written complaints against staff, do not have enough staff to monitor what takes place within the facility, and have higher levels of gang fights. Conversely, sexual victimization is less prevalent in facilities where youth report that there are enough staff to monitor what takes place within the facility, there is little to no gang fighting, and there are fewer complaints against staff.

Other factors associated with both types of assault are indicators of safety, fairness and vulnerability within the facilities. Facilities have the highest rates sexual assault when youth report worrying about being physically assaulted by another youth. Facilities with more youth who have not previously been incarcerated are also more likely to have high rates of sexual assault. This could be because these youth are easier targets for perpetrators of assault or that no previous detention history is correlated with other facility characteristics that are not measured in this study.

5.2   Facility Characteristics Exclusively Associated With a Single Type of Sexual Assault

There are a number of differences between the characteristics of facilities with higher rates of sexual assault by another youth and facilities with higher rates of staff sexual misconduct. Many of these differences stem from the observation that youth-on-youth sexual assault is committed by female
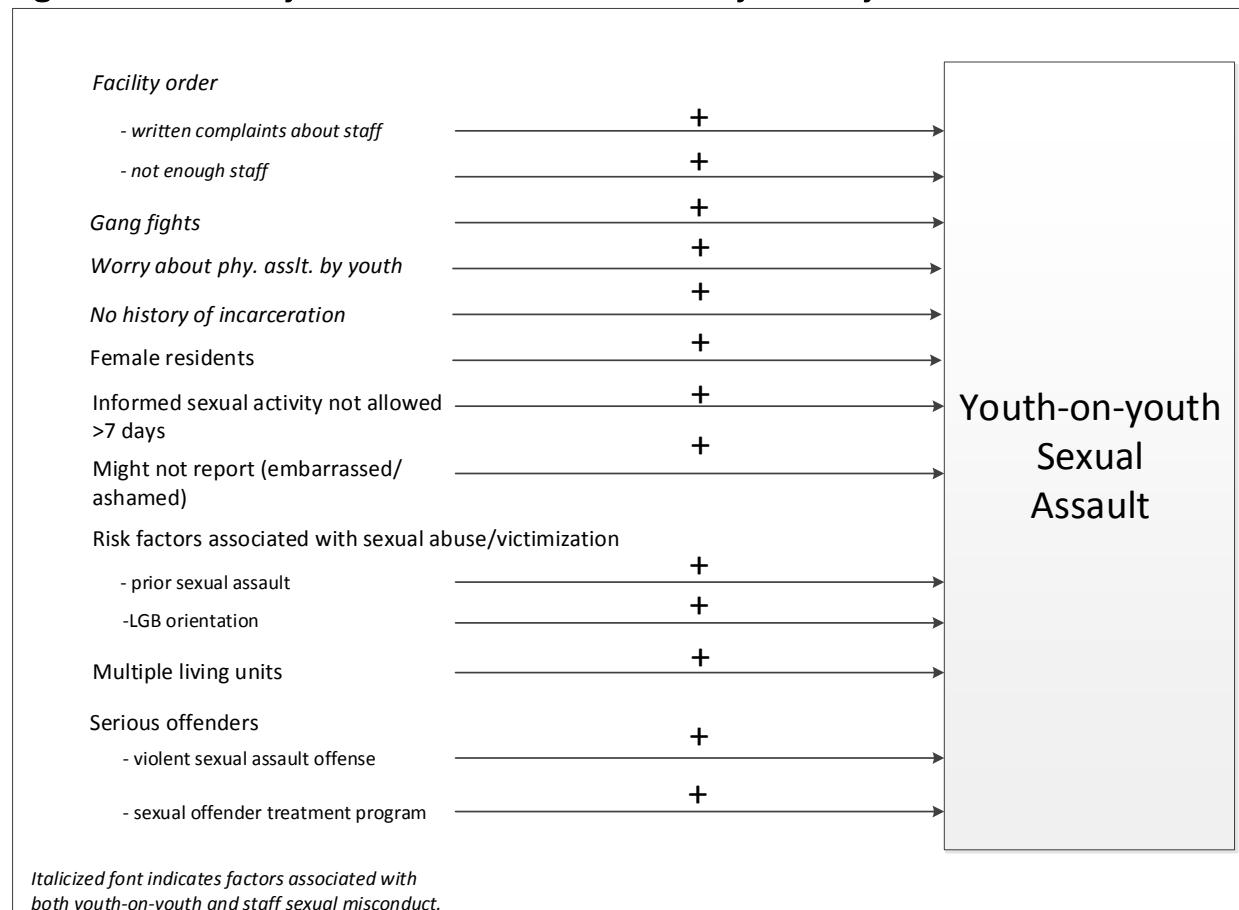
youth against other female youth while staff sexual misconduct is primarily committed by female staff against male youth. This general pattern is supported by the association between the gender composition of the facility and the type of assault that is most prevalent. All-male facilities have higher rates of staff sexual misconduct, while facilities that house only females have the highest rates of youth-on-youth sexual assaults.

Aside from gender, facility differences in victimization type are evident when and if youth are informed sexual activity is not allowed in the facility and the reasons why youth might not report rule breaking about sexual activity in the facility. Sexual assault by another youth is more prevalent in facilities when youth are informed that sexual activity is not allowed more than 7 days after their arrival. Conversely, staff sexual misconduct is more prevalent when youth are never told that sexual activity is not allowed. Rates of youth-on-youth sexual assault are highest in facilities when youth might not report rule breaking about sexual activity because they are embarrassed or ashamed; whereas, rates of staff sexual victimization are highest when youth might not report rule breaking about sexual activity because they are afraid of being punished by facility staff.

Youth-on-Youth Sexual Assault. Youth in facilities with high rates of youth-on-youth sexual assault are different in two other ways. This population is more likely to be lesbian, gay, or bisexual and have histories of prior sexual assault and rape victimization. These have all been found to be risk factors for sexual victimization in non-incarcerated populations, and sexual victimization history is more predominate in females.

The other difference is in the type of structural characteristics. Facilities with high prevalence of youth-on-youth sexual assault also house youth in multiple living units, and their youth populations are more likely to have a most serious offense of violent sexual assault. These facilities also are more likely to have a sex offender treatment program. These characteristics may be indicative of potential perpetrators of assault and make these youth more prone to be victimized while incarcerated.

Figure 1.   Facility characteristics associated with youth-on-youth sexual assault

Facility order

    - written complaints about staff   +

    - not enough staff   +

Gang fights   +

Worry about phy. asslt. by youth   +

No history of incarceration   +

Female residents   +

Informed sexual activity not allowed >7 days   +

Might not report (embarrassed/ashamed)   +

Risk factors associated with sexual abuse/victimization

    - prior sexual assault   +

    -LGB orientation   +

Multiple living units   +

Serious offenders

    - violent sexual assault offense   +

    - sexual offender treatment program   +

Youth-on-youth Sexual Assault

Italicized font indicates factors associated with both youth-on-youth and staff sexual misconduct.

Staff Sexual Misconduct. The distinguishing characteristics of facilities with high rates of staff sexual misconduct fall into three categories: (1) facility structural factors, (2) factors related to gangs and person offenses, and (3) relationships between youth and staff. Structural factors include the type and size of the facility, stability of staff within the facility, staff screening practices, and the age of the youth within the facility. Facilities with high rates of staff sexual misconduct are more likely to have 25 or more youth and their primary function is detention or a training/long-term secure facility. They are also less likely to house only minors. Facilities with staff turnover that leads to a reduction in staff size have a higher prevalence.

Second, high-rate facilities have particular difficulties related to gang membership and youth with most serious offense histories that include person offenses, such as assault. As noted above, both types of sexual assaults are positively related to gang activity and gang fights, but the occurrence of staff sexual misconduct has a greater association with gang membership within the facility. Facilities have elevated rates of staff sexual misconduct when a high proportion of youth report gang membership and/or feeling pressured by the gang to do things they normally would not do. Facilities housing more youth with person offenses as their most serious offense also have the highest prevalence.

Figure 2.   Facility characteristics associated with staff sexual misconduct

Facility order	+	
- written complaints about staff	+	
- not enough staff	+	
Gang fights	+	
Worry about phy asslt. by youth	+	
No history of incarceration	+	
Never informed, sexual activity not allowed		Staff Sexual Misconduct
Might not report (afraid of staff)	+	
Facility Type		
- large, long-term/detention	+	
- not exclusively minors	+	
Staff turnover (loss)	+	
Staff screening for drug use	+	
Gang membership/pressure	+	
Person offense	+	
Male residents	+	
Staff relations	−	
- positive perceptions	+	
- physical assault by staff	+	
- sanctions for fighting	+	
- staff grooming		
PREA compliance	+	
- know how to report rule breaking		
- would report sexual activity (face-to-face staff)	−	

Italicized font indicates factors are associated with youth-on-youth and staff sexual misconduct

A third distinguishing characteristic of facilities with high rates of staff sexual misconduct is the relationship between the staff and youth. Staff sexual misconduct is less prevalent in facilities where youth report positive perceptions of staff. Staff sexual misconduct is more prevalent in facilities where youth report being physically assaulted by staff, receiving sanctions for fighting, and staff grooming behavior. Rates are elevated when staff share personal information to youth in their care and when more youth are written up for threatening[9] or fighting with staff and/or other youth.

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[9] Threatening is specific to staff only and was not assessed for youth.

Finally, facilities with low rates of staff sexual misconduct have more indicators of PREA compliance, such as youth that would report sexual activity face-to-face to a facility staff member. These facilities may be more effective in preventing victimization because they create a climate where youth are more likely to report sexual activity because they trust staff. There is also some indication that youth knowing how to make a report if a staff member or youth is breaking the rules is associated with staff sexual misconduct; however, as previously noted, the results are inconclusive and need further research.

5.3   Summary of Facility Profiles of Sexual Victimization

As presented in the above profiles, facilities with high rates of sexual assault are distinguished by operational characteristics, such as staffing instability, youth-based written complaints against staff, staff grooming behavior, and the characteristics of the youth they serve and their impact on the environment (e.g., gang activity, gang membership, and pressure). There are also factors that might make youth more vulnerable to victimization, such as a history of sexual assault or rape and their sexual orientation. These profiles provide with a clear description of the types of facilities where youth are at highest risk of sexual assault.

However, some of these characteristics could be a function of who has been victimized within the facility, rather than a general characteristic of the facility. For example, it might be that individual youth who have experienced grooming on the part of the staff are the ones reporting victimization. Grooming might not be prevalent throughout the facility. While in this case grooming is still a problematic behavior, it could be individual staff that need targeting, rather than something that occurs among all the staff members. In order to further explore these distinctions, the next section discusses the correlates of individual reports of victimization.

6.   Individual-Level Findings

In addition to identifying facility-level characteristics, as presented in the above sections, this analysis explored individual-level factors to determine which characteristics placed youth at greatest risk. Individual demographic characteristics, risk factors known to be associated with sexual victimization (i.e., lesbian, gay, or bisexual orientation, sexual victimization history), and other factors identified through the facility-level analysis (e.g., offense history, gang involvement, fighting, and perceptions of facility order and disorder) were tested at the bivariate level to assess which best predicted individual reports of victimization. All individual-level factors were then entered into a final multivariate model to determine which characteristics place individual youth at greatest risk for sexual assault. All results are weighted and represent 17,469 youth. The following sections and tables describe each of the analytic steps.

6.1   Youth Demographic Characteristics

Youth demographic characteristics such as sex, age, race, and body mass index (BMI) were examined. Bivariate results showed that sex and race were associated with both types of sexual victimization (See table 33).

Table 33

Individual-level victimization rate, by type of incident and and youth demographic characteristics, 2012

Youth demographic characteristics	Total	Youth-on-youth victimization rate	Staff sexual misconduct victimization rate
	Percent	Percent Assaulted	Percent Assaulted
All youth	100 %	2.5 %	7.6 %
Sex of Youth			
Male	91.0 %	2.2 % **	8.1 % **
Female *	9.0	5.4	2.9
Youth Age			
14 and under	5.8 %	3.2 %	3.8 % **
15	11.3	2.2	6.7
16	22.2	2.3	7.1
17	28.3	2.3	8.1
18 and older *	32.3	2.8	8.6
Youth Race			
White, non-hispanic *	36.2 %	3.9 %	6.5 %
Black, non-hispanic	41.4	1.5 **	9.4 **
Hispanic	17.2	2.1 **	6.5
Other	3.2	2.8	4.6
Two or more races	2.0	2.2	6.1
BMI score			
1-22 *	29.7 %	3.0 %	8.4 %
23-24	23.9	2.2	7.0
25-27	25.7	2.1	7.9
28 and above	20.7	2.8	7.2

Note: Based on reports from 8518 adjudicated youth interviewed in 322 juvenile facilities and weighted to represent the number of adjudicated youth held in the nation.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

■ Rates of youth-on-youth sexual assault were significantly higher for females (5.4%) than males (2.2%) and higher for whites (3.9%) than for blacks (1.5%) and Hispanics (2.1%). Even though rates were greater among youth 14 and younger and those with a BMI score of 1 to 22, these factors were not significant.

■ Rates of staff sexual misconduct were counter to the youth-on-youth rates with males (8.1%) having significantly higher rates than females (2.9%) and black youth (9.4%) more at risk than whites (6.5%). Youth 14 and younger were at significantly lower risk (3.8%) than those 18 and older (8.6%). Youth with a BMI score of 1 to 22 had the highest rates but this factor was not significant.

6.2　Youth Risk Characteristics

The relationship between specific youth risk characteristics was assessed with sexual victimization, including sexual-assault history, whether their last grade completed was below their expected grade level, lesbian, gay, or bisexual orientation, previous detention history, and whether their time in the facility was less than 6 months (see table 34).

Table 34
Individual-level victimization rate, by type of incident and youth risk characteristics, 2012

Youth risk characteristics	Total Percent	Youth-on-youth victimization rate Percent Assaulted	Staff sexual misconduct victimization rate Percent Assaulted
All youth	100 %	2.5 %	7.6 %
Sexual assault history			
Yes	13.8 %	9.4 %**	9.8 %**
No *	86.2	1.4	7.2
Last grade completed is below expected			
Yes	23.7 %	1.7 %	8.1 %
No *	76.3	2.8	7.5
Sexual orientation			
Heterosexual *	87.8 %	1.4 %	7.7 %
Lesbian, gay, bisexual	12.2	10.5 **	7.8
Previous detention history			
No *	23.0 %	2.6 %	7.6 %
Less than 6 months	38.9	2.1	6.0
6 months or more	38.0	2.9	9.3
Time in the facility less than 6 months			
Yes	54.4 %	1.8 %**	6.1 %**
No *	45.6	3.3	9.4

Note: Based on reports from 8518 adjudicated youth interviewed in 322 juvenile facilities and weighted to represent the number of adjudicated youth held in the nation.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

- Youth-on-youth sexual assault was significantly more likely for youth with a history of sexual assault (9.4%), those reporting lesbian, gay, or bisexual orientation (10.5%), and those spending 6 months or more in the facility (3.3%). Expected grade level and previous detention history was not associated with assault by another youth.

- Similar patterns were also apparent for staff sexual misconduct. Rates were significantly higher for youth with a sexual assault history (9.8%) and for youth spending 6 months or more in the facility (9.4%). Expected grade level, previous detention history, and lesbian, gay, or bisexual orientation were not significant with staff sexual misconduct.

6.3   Most Serious Offense, Gang Involvement, and Fighting in the Facility

Most serious offense, reports of gang fighting and gang involvement, and fighting in the facility were examined with each type of victimization (see Table 35).

Table 35
Individual-level victimization rate, by type of incident and most serious offense history, gang involvement, and fighting in the facility, 2012

Most serious offense history, gang involvement, and fighting in the facility	Total		Youth-on-youth victimization rate	Staff sexual misconduct victimization rate
	Percent		Percent Assaulted	Percent Assaulted
All youth	100	%	2.5 %	7.6 %
Most serious offense responsible for current placement				
Violent sexual assault	12.2	%	7.2 %**	7.0 %
Non-violent sexual assault	2.3		3.1	6.1
Murder or person offense	36.3		2.0	8.8
Property offense	28.6		1.9	7.2
Drug offense	5.5		2.6	4.8
Other * [a]	15.1		1.3	8.1
Written up for fighting in the facility [b]				
Never *	55.7	%	1.8 %	4.2 %
1 time	27.7		3.3 **	9.4 **
2 times	11.7		2.3	13.4 **
3 or more times	4.9		7.0 **	22.0 **
Gang Involvement - pressure and safety				
Feels gang pressure, but not safer	1.5	%	5.3 %**	21.3 %**
Feels safer, but no pressure	4.8		5.5 **	19.8 **
Feels pressure and feels safer	1.6		6.2 **	36.2 **
Gang member, but feels neither safer nor pressure	13.8		2.3	13.5 **
Not a gang member	45.0		3.1 **	7.2 **
No gang activity in facility *	33.3		1.2	2.1
Gang fights				
Yes	49.6	%	3.8 %**	13.0 %**
No *	50.4		1.3	2.6

Note: Based on reports from 8518 adjudicated youth interviewed in 322 juvenile facilities and weighted to represent the number of adjudicated youth held in the nation.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

[a]Includes status offenses, probation/parole violations, public order offenses

[b]This measure is a construct and data represents an overall score across several survey items for each youth (see appendix 3 for a listing of these items)

- Youth with violent sexual assault (7.2%) as their most serious offense had significantly higher incidents of youth-on-youth sexual assault. Youth with a most serious offense of murder or person offenses (8.8%) and other (8.1%) crimes[10] had higher rates of staff sexual misconduct, but these associations were not significant.

- Reports combining gang involvement, gang pressure and feelings of safety were all significantly related to higher rates of youth-on-youth sexual assault, as was being written up for fighting one time (3.3%) or three or more times (7.0%) and reports of gang fighting (3.8%).

- Reports combining gang involvement, gang pressure, and feelings of safety were all significantly related to higher incidents of staff sexual misconduct, as was being written up for fighting three or more times (22.0%) and reports of gang fights (13.0%).

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[10] Includes status offenses, probation/parole violations, or public order offenses

6.4　　　Youth Reports of Facility Order and Disorder

Table 36

Individual-level victimization rate, by type of incident and youth reports of facility order and disorder, 2012

Youth reports of facility order and disorder	Total		Youth-on-youth victimization rate		Staff sexual misconduct victimization rate	
	Percent		Percent Assaulted		Percent Assaulted	
All youth	100	%	2.5	%	7.6	%
Well-defined structure [a]						
No *	3.1	%	6.3	%	32.4	%
Low	9.6		3.3	**	15.5	**
Medium	17.6		3.6		9.3	**
Medium high	28.2		2.9	**	7.5	**
High	41.6		1.4	**	3.4	**
Not easy to break rules						
Yes	52.8	%	2.0	%**	5.7	%**
No *	47.2		3.1		9.8	
Staff share personal information						
Yes	36.3	%	3.8	%**	15.2	%**
No *	63.7		1.8		3.3	
Staff provide special treatment						
Yes	29.2	%	4.7	%**	15.7	%**
No *	70.8		1.6		4.3	

Note: Based on reports from 8518 adjudicated youth interviewed in 322 juvenile facilities and weighted to represent the number of adjudicated youth held in the nation.

*Comparison group.

**Difference with comparison group is significant at the 95%- confidence level.

[a]This measure is a construct and data represents an overall score across several survey items for each youth (see appendix 3 for a listing of these items).

- Youth reports of a lack of a well-defined structure[11] in their facility had significantly higher rates of both types of assault—6.3% for youth-on-youth and 32.4% for staff sexual misconduct (see Table 36).

- Similar significant patterns are also evident for youth in facilities where it was easy to break rules (3.1% and 9.8%), where staff shared personal information (3.8% and 15.2%), and where staff provided special treatment (4.7% and 15.7%).

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[11] Since all the items related to PREA standards in the youth portion of the survey were assessed as facility-level indicators, most of these items were excluded from the individual-level analyses. However, there was a need to create a similar parallel measure that could be tested at the individual level. The well-defined indicator uses three items related to youth perceptions of PREA standards and the one item about enough staff to monitor what takes place in the facility. The four items were summed together to create a scale with higher scores indicating more structure (see Appendix C for item).

6.5   Youth Reports of Safety and Fairness

Table 37

Individual-level victimization rate, by type of incident and youth reports of safety and fairness, 2012

Youth reports of safety and fairness	Total	Youth-on-youth victimization rate	Staff sexual misconduct victimization rate
	Percent	Percent Assaulted	Percent Assaulted
All youth	100 %	2.5 %	7.6 %
Positive perceptions of staff [a]			
No *	16.5 %	3.5 %	21.4 %
Low	27.8	3.2	9.6 **
Medium	27.6	2.3	3.2 **
High	28.2	1.4 **	2.0 **
Lack of fairness in the facility [a]			
No *	19.3 %	1.2 %	1.0 %
Low	31.5	1.9	2.7 **
Medium	12.0	2.7	4.5 **
High	37.2	3.6 **	16.2 **
Physical assault by youth			
Yes	42.3 %	4.5 %**	12.5 %**
No *	57.7	1.1	4.0
Physically hurt by another youth			
Yes	30.6 %	6.2 %**	14.7 %**
No *	69.4	0.9	4.5
Physical assault by staff			
Yes	14.6 %	6.1 %**	27.3 %**
No *	85.4	1.9	4.3
Physically hurt by staff			
Yes	14.3 %	6.4 %**	28.3 %**
No *	85.7	1.9	4.1
Worry about physical assault by another youth			
Yes	31.8 %	5.5 %**	13.2 %**
No *	68.2	1.1	5.0
Worry about physical assault by staff			
Yes	19.1	5.8 %**	22.9 %**
No *	80.9 %	1.7	4.0

Note: Based on reports from 8518 adjudicated youth interviewed in 322 juvenile facilities and weighted to represent the number of adjudicated youth held in the nation.

*Comparison group.

**Difference with comparison group is significant at the 95%- confidence level.

[a]This measure is a construct and data represents an overall score across several survey items for each youth (see appendix 3 for a listing of these items).

■ Youth without positive perceptions of staff and those who reported an overall lack of fairness in the facility had the highest rates of both types of sexual assault, 3.5% and 3.6% for youth-on-youth and 21.4% and 16.2% for staff sexual misconduct (see table 37).

- Youth experiencing physical assault and/or worrying about physical assaults, either by youth or by staff, were also more likely to report incidences of sexual assault by another youth. Youth physically assaulted by another youth (4.5%), physically hurt by another youth (6.2%), physically assaulted by staff (6.1%), physically hurt by staff (6.4%), and those worrying about physical assault by another youth (5.5%), and/or worrying about physical assault by staff (5.8%) had elevated rates of youth-on-youth sexual assault.

- Similar results were also noted for staff sexual misconduct with youth physically assaulted by another youth (12.5%) and/or staff (27.3%), those physically hurt by another youth (14.7%) and/or staff (28.3%), and those worrying about physical assault by another youth (13.2%) and/or by staff (22.9%) with the highest rates.

6.6 Multivariate Findings for Youth-on-Youth Sexual Assault and Staff Sexual Misconduct

Individual-level youth characteristics and perceptions were entered into weighted multivariate logistic regression models to identify key predictors associated with each type of sexual victimization. The report presents the findings by individual demographics, risk factors, and other factors such as offense history, gang involvement, fighting, perceptions of facility order and disorder, etc. using the predicted probabilities based on observations (PPO) approach (see *Methodology* section for more information about the stepwise procedure and calculating predicted probabilities).[12]

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[12] Predictors used in the statistical analyses were tested for multicollinearity in various models. For some predictors, the correlation was significant, making it difficult to disentangle the separate effects. For example, females were much more likely to report a lesbian or bisexual orientation than males to report gay or bisexual orientation. This covariation makes the relative importance of sexual orientation in the final models less certain and likely to be interchangeable with gender.

Table 38

Final weighted multivariate logistic stepwise regression models, by type of incident and individual youth factors, 2012

Individual youth factors	Youth-on-youth victimization rate			Staff sexual misconduct victimization rate		
	Odds Ratio	95 Percent Confidence Interval	Predicted probabilities based on observations	Odds Ratio	95 Percent Confidence Interval	Predicted probabilities based on observations
Sex of youth						
Male	~			3.0 **	1.6 5.4	8.1 %**
Female *	~			~		3.5
Youth Age						
14 and under	~			~		
15	~			~		
16	~			~		
17	~			~		
18 and older *	~			~		
Youth Race						
White, non-hispanic *	~			~		
Black, non-hispanic	~			1.3 **	1.0 1.6	8.4 %**
Hispanic	~			~		7.1
Other	~			~		7.1
Two or more races				~		7.1
BMI score						
1-22 *	~			~		
23-24	~			~		
25-27	~			~		
28 and above	~			~		
Sexual assault history						
Yes	3.2 **	1.8 5.5	4.8 %**	1.7 **	1.2 2.3	10.5 %**
No *	~		1.8	~		7.3
Last grade completed is below expected						
Yes	~			~		
No *	~			~		
Sexual orientation						
Heterosexual *	~		1.6 %	~		
Lesbian, gay, bisexual	5.8 **	3.2 10.5	7.0 **	~		
Previous detention history						
No *	~			~		8.2 %
Less than 6 months	~			0.8 **	0.6 1.0	6.8 **
6 months or more	~			~		8.2

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Table 38

Final weighted multivariate logistic stepwise regression models, by type of incident and individual youth factors, 2012 (continued)

| Individual youth factors | Youth-on-youth victimization rate | | | Staff sexual misconduct victimization rate | | |
	Odds Ratio	95 Percent Confidence Interval	Predicted probabilities based on observations	Odds Ratio	95 Percent Confidence Interval	Predicted probabilities based on observations
Time in the facility less than 6 months						
Yes	~			~		
No *	~			~		
Most Serious Offense Responsible for Current Placement						
Violent sexual assault	2.9 **	2.0 4.3	5.0 %**	~		
Non-violent sexual assault	~		2.1	~		
Murder or Person offense	~		2.1	~		
Property offense	~		2.1	~		
Drug offense	~		2.1	~		
Other [a] *	~		2.1	~		
Written up for fighting in the facility [b]						
Never *	~			~		
1 time	~			~		
2 times	~			~		
3 or more times	~			~		
Gang Involvement - pressure and safety						
Feels gang pressure, but not safer	~			~		7.3 %
Feels safer, but no pressure	~			2.4 **	1.6 3.4	13.1 **
Feels pressure and feels safer	~			3.1 **	2.0 4.7	15.8 **
Gang member, but feels neither safer nor pressure	~			1.8 **	1.3 2.4	10.6 **
Not a gang member	~			~		7.3
No gang activity in facility *	~			~		7.3
Gang fights						
Yes	1.7 **	1.0 2.9	3.0 %**	1.6 **	1.1 2.3	8.4 %**
No *	~		1.9	~		5.8
Well-defined structure [b]						
No *	~		3.0 %	~		
Low	~		3.0	~		
Medium	~		3.0	~		
Medium high	~		3.0	~		
High	0.5 **	0.3 0.9	1.7 **	~		

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Table 38
Final weighted multivariate logistic stepwise regression models, by type of incident and individual youth factors, 2012 (continued)

Individual youth factors	Youth-on-youth victimization rate			Staff sexual misconduct victimization rate		
	Odds Ratio	95 Percent Confidence Interval	Predicted probabilities based on observations	Odds Ratio	95 Percent Confidence Interval	Predicted probabilities based on observations
Not easy to break rules						
Yes	~			~		
No *	~			~		
Staff share personal information						
Yes	~			2.4 **	1.8 3.2	10.0 %**
No *	~			~		5.1
Staff provide special treatment						
Yes	1.8 **	1.1 2.8	3.3 %**	2.0 **	1.5 2.5	9.8 %**
No *	~		2.0	~		6.0
Positive perceptions of staff [b]						
No *	~			~		8.3 %
Low	~			0.8 **	0.6 1.0	6.8 **
Medium	~			0.7 **	0.5 0.9	5.9 **
High	~			~		8.3
Lack of fairness in the facility [b]						
No *	~			~		4.6 %
Low	~			~		4.6
Medium	~			~		4.6
High	~			2.7 **	2.0 3.5	9.8 **
Physical assault by youth						
Yes	~			~		
No *	~			~		
Physically hurt by another youth						
Yes	3.7 **	2.5 5.4	4.0 %**	1.5 **	1.2 1.9	8.9 %**
No *	~		1.3	~		6.7
Physical assault by staff						
Yes	~			1.5 **	1.1 2.0	9.2 %**
No *	~			~		6.9
Physically hurt by staff						
Yes	~			2.0 **	1.4 2.8	10.4 %**
No *	~			~		6.3

Continued on next page

Table 38

Final weighted multivariate logistic stepwise regression models, by type of incident and individual youth factors, 2012 (continued)

Individual youth factors	Youth-on-youth victimization rate			Staff sexual misconduct victimization rate		
	Odds Ratio	95 Percent Confidence Interval	Predicted probabilities based on observations	Odds Ratio	95 Percent Confidence Interval	Predicted probabilities based on observations
Worry about physical assault by another youth						
Yes	~			~		
No *	~			~		
Worry about physical assault by staff						
Yes	2.4 **	1.4 4.2	4.1 %**	1.4 **	1.0 1.8	8.7 %**
No *	~		2.0	~		6.9

~Predictor deleted from the stepwise model when p>0.05 level.

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

aIncludes status offenses, probation/parole violations, public order offenses.

bThis measure is a construct and data represents an overall score across several survey items for each youth (see appendix 3 for a listing of these items).

After assessing the relevant strength and contribution of each predictor using the stepwise selection method, race and gender were associated with staff sexual misconduct (see Table 38).

- The rate of staff sexual misconduct was more than twice as high for males (8.1%) than for females (3.5%), and was significantly higher for black, non-Hispanic youth (8.4%) than all other racial groups (7.1%). Race and sex of youth were not significant factors in the youth-on-youth model.

After adjusting for other factors, several youth vulnerability characteristics were significantly associated with both types of sexual victimization.

- Youth with a history of sexual assault were more likely to experience youth-on-youth (4.8%) and/or staff sexual misconduct (10.5%) compared to youth without victimization history (1.8% and 7.3%).

- Lesbian, gay, or bisexual youth (7.0%) were more than four times more likely that heterosexual youth (1.6%) to be assaulted by another youth.

- Youth with a detention history of 6 months or more (8.2%) and youth with no previous detention history (8.2%) were more likely to experience staff sexual assault than youth with a previous history of less than 6 months (6.8%).

Based on the individual youth-level models, most serious offense and gang fighting in the facility were predictive of youth-on-youth assault while gang involvement and gang fighting were predictive of staff sexual misconduct.

- Youth with a history of violent sexual assault (5.0%) as their most serious offense were more than twice as likely to experience youth-on-youth sexual assault compared to youth with other types of most serious offense histories (2.1%). Offense history was not significant in the staff multivariate model.

- Youth reporting gang fighting in the facilities had elevated rates of youth-on-youth sexual assault (3.0%) and staff sexual misconduct (8.4%).

- Youth reporting gang involvement with pressure and feeling safer (15.8%) had the highest rates of staff sexual misconduct compared to other types of gang involvement.

A lack of structure in the facility, staff with poor boundaries, and youth perceptions of staff were related to elevated rates of sexual assault after controlling for other factors.

- Facilities with youth reports of high structure (1.7%) had significantly lower youth-on-youth sexual assault rates than all other levels of structure (3.0%). Conversely, rates were higher when staff provided special treatment (3.3%). Similar trends with significantly higher rates were also noted for staff sexual misconduct with staff sharing personal information (10.0%) and staff providing special treatment (9.8%).

- Youth reports of an overall lack of fairness in the facility (9.8%) and lack of positive perceptions of staff (8.3%) were also indicative of staff sexual misconduct.

Reports of being physically hurt and worrying about physical assault were predictive of both types of sexual assault in the logistic regression models.

- Youth physically hurt by another youth (4.0%) and worrying about physical assault by staff (4.1%) were indicators of youth-on-youth assault.

- Similarly, being physically hurt by another youth (8.9%), physically assaulted by staff (9.2%), physically hurt by staff (10.4%), and worrying about physical assault by staff (8.7%) were predictive of staff sexual misconduct.

7. Individual Profiles of Sexual Victimization

In this section, the report provides the results of the individual-level reports of assault, highlighting the most significant variables found in the multivariate models. The report presents two sets of youth characteristics: (1) those that are common to high incidence of both youth and staff perpetrated assaults and (2) those that are significant for one but not the other. Below, each of these sets is described.
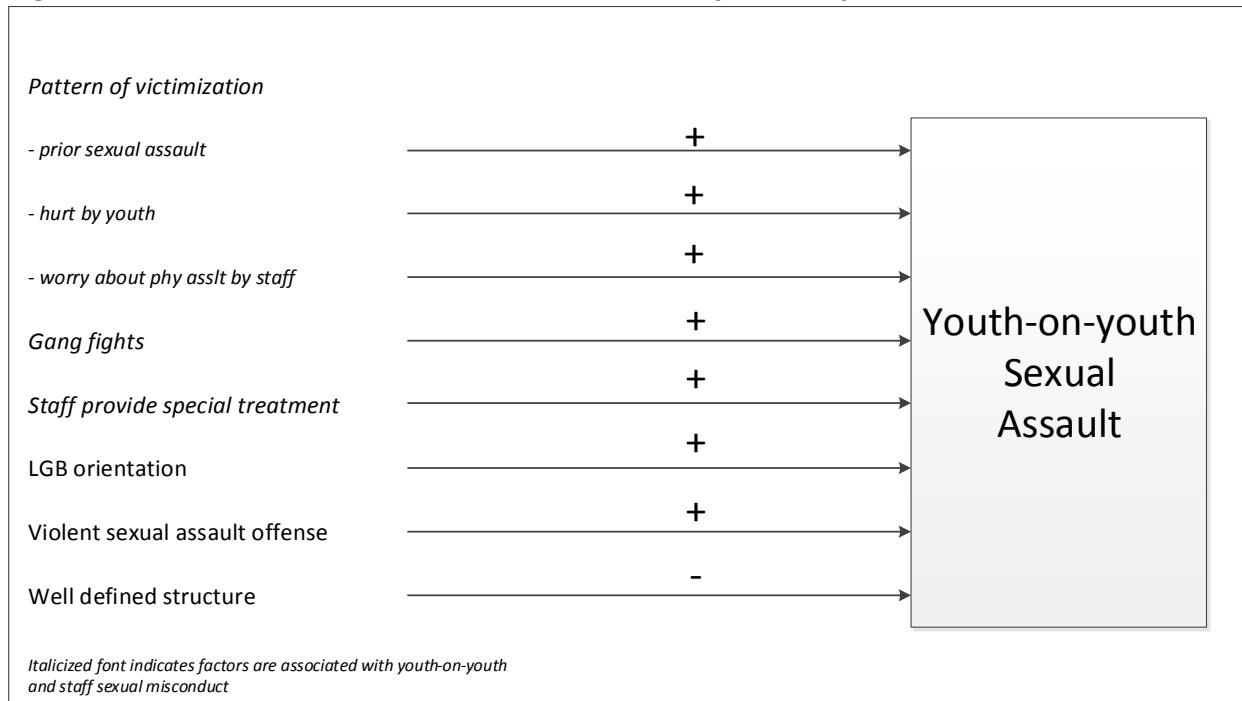
7.1 Youth Characteristics Associated With Both Types of Sexual Assault (Youth-on-Youth and Staff Sexual Misconduct)

There are several factors that placed youth at greater risk for all types of sexual assault. One such feature is a pattern of overall victimization. Youth at greatest risk for both types of assault have a history of prior sexual assault and are more likely to report a pattern of physical victimization while in the facility. This pattern includes being hurt by another youth and also worrying about physical assault by staff. Other features are related to the climate of the facility and staff boundaries. Youth reports of gang fights in the facility and staff providing special treatment were most at risk for both types of sexual victimization.

7.2 Youth Characteristics Exclusively Associated With Youth-on-Youth Sexual Assault

There are a number of differences between the types of youth with higher rates of sexual assault by another youth and those with higher rates of staff sexual misconduct. One such difference is related to sexual orientation (see figure 3). Youth-on-youth assault rates were highest for youth self-identifying as lesbian, gay, or bisexual. Other differences include youths' most serious offense history and youth perceptions of facility structure. Youth having violent sexual assault as their most serious offense were at greater risk for sexual assault by another youth. This characteristic may indicate a perpetrator profile, but it also places them at greater risk for victimization. Youth reporting lower levels of well-defined structure were also at greater risk, while those reporting the highest level of structure were at the lowest risk.

Figure 3.   Youth characteristics associated with youth-on-youth sexual assault

Pattern of victimization

- *prior sexual assault* ——————————— + ——————————→

- *hurt by youth* ——————————— + ——————————→

- *worry about phy asslt by staff* —————— + ——————————→

Gang fights ——————————— + ——————————→

Staff provide special treatment ————— + ——————————→

LGB orientation ——————————— + ——————————→

Violent sexual assault offense ———————— + ——————————→

Well defined structure ——————————— - ——————————→

Youth-on-youth Sexual Assault

Italicized font indicates factors are associated with youth-on-youth and staff sexual misconduct
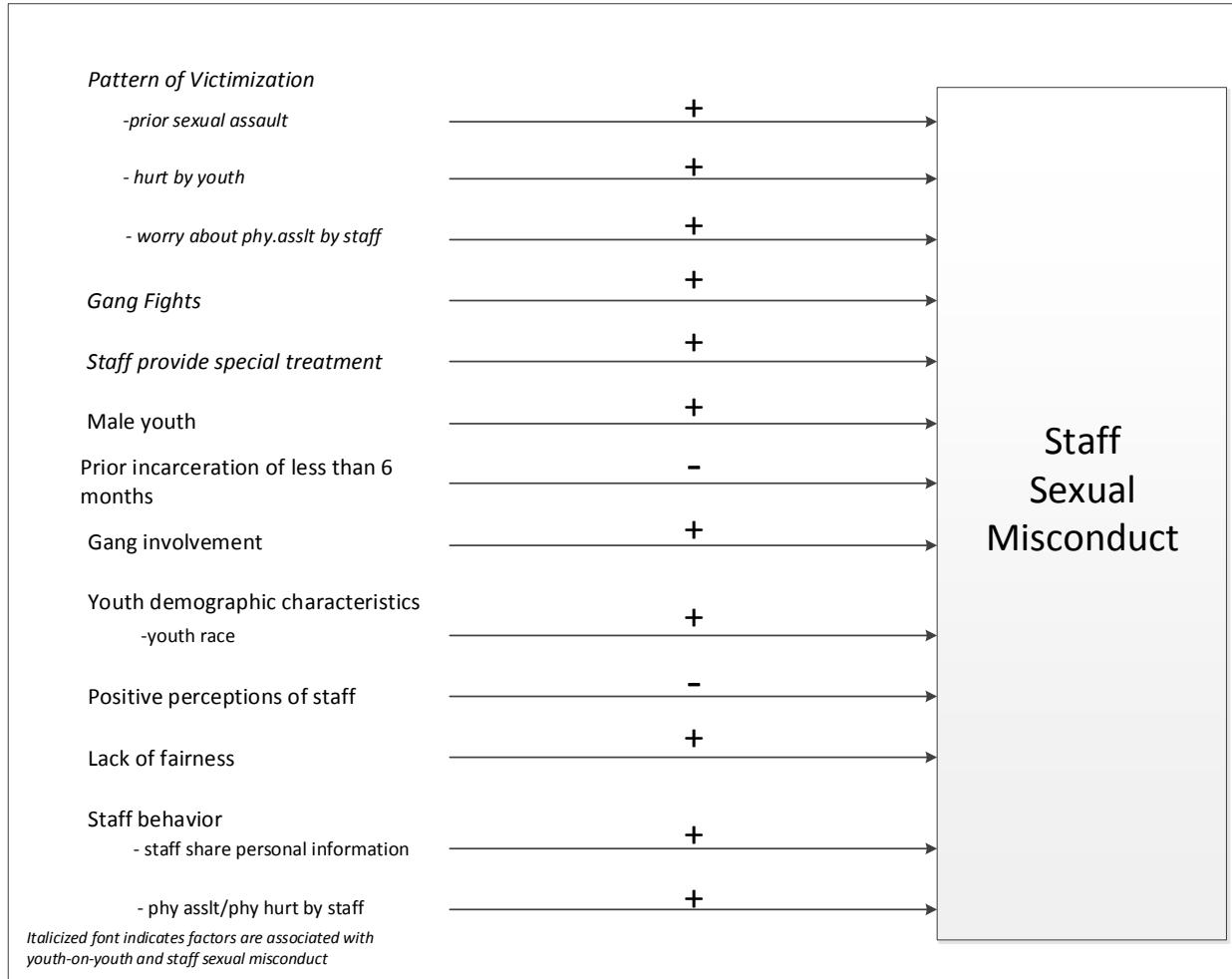
7.3   Youth Characteristics Exclusively Associated With Staff Sexual Misconduct

There are several distinguishing characteristics of youth who are at greater risk of staff sexual misconduct (see figure 4). One such characteristic is related to gender. Males are much more likely to be victims of staff sexual misconduct than females. Other characteristics include youth profiles that make them appear to be institutionalized or more adapted to facility environments. These include a history of prior incarceration lasting 6 months or more and active gang involvement in the facility. These types of characteristics may make these youth more vulnerable to inappropriate sexual relationships with female staff perpetrators.

Race was one unique characteristic that placed some youth at an increased risk for staff sexual misconduct. Black, non-Hispanic youth were more likely to experience staff sexual misconduct than other racial groups. One possible explanation for the higher rates among black youth may be related to race of the staff perpetrator. Staff may choose to have inappropriate sexual relationships with youth of the same race and many facilities may have more black staff placing youth of the same racial background at higher risk. Future exploration is recommended to thoroughly test the possibility of this explanation.

Finally, youth experiencing higher rates of staff sexual misconduct also report challenging facility environments that include little to no positive perceptions of staff, lack of fairness, and overall problematic staff behavior. Rates were highest for youth when they reported no positive perceptions of staff, high levels of a lack of fairness, and staff sharing personal information. These youth were also more likely to experience physical assault and being physically hurt by staff.

Figure 4.   Youth characteristics associated with staff sexual misconduct

7.4   Summary of Individual Profiles of Sexual Victimization

Youth most at risk for sexual assault by another youth are more likely to fit a victimization profile. They are lesbian, gay, or bisexual and are more likely to be physically hurt by another youth. Their offense history of violent sexual assault also places them at greater risk for victimization of other youth as a method of retaliation for their crime.

Conversely, youth at greatest risk for staff sexual misconduct fit a more institutionalized profile. These youth are more likely to have longer histories of prior incarceration and are involved in gang activity in the facility. They also report more problematic and chaotic facility environments. This type of climate, in addition to more antisocial behavior (i.e., gang involvement), may make them more likely to be susceptible to inappropriate sexual relationships with staff as a way to gain status or safety while in the facility. Because these youth may also be more institutionalized, they may be more likely to be targets for female staff. This information provides distinct profiles of youth most at risk for different types of sexual victimization.

8.   Discussion of Findings by Research Question

a.   Does the rate of youth sexual victimization vary across facilities?

Results show that there is significant variation in the rates of all types of sexual victimization across facilities. The average facility-level rate of sexual assault by another youth was 2.1% and was reported in a third of the facilities. This means that a third of all facilities account for all incidents of youth-on-youth sexual assault. Similar results were also evident for staff sexual misconduct. The average rate of staff sexual misconduct at the facility level was 5.2%, but about half of the facilities had any youth who reported incidents.

b.   What facility-level attributes are associated with sexual victimization?

The facility analyses demonstrated several facility-level attributes that are associated with sexual victimization. One of the strongest is the association between the gender composition of the facility and the type of assault. All-male facilities have higher rates of staff sexual misconduct, while facilities that house only females have the highest rates of youth-on-youth sexual assaults. Facilities with high rates of sexual assault are also distinguished by other attributes including operational characteristics, such as staffing instability, lack of order, and staff grooming behavior. Lastly, these attributes include the concentrated characteristics of the youth population and their impact on the environment through antisocial behavior such as gang activity, gang membership, and pressure, as well as other clustering of qualities that make youth more vulnerable to victimization, including a history of sexual assault or rape and sexual orientation.

c.   What youth characteristics are correlated with sexual victimization?

Youth at greatest risk for both types of assault have a history of prior sexual assault and are more likely to report a pattern of physical victimization while in the facility. This pattern includes being hurt by another youth and worrying about being hurt by staff. These youth also report gang fights in the facility and staff providing special treatment.

Youth targeted by other youth for assault are more likely to be lesbian, gay, or bisexual and are more likely to have a most serious offense history of violent sexual assault.

Youth victims of staff sexual misconduct seem to fit a different profile. For example, they are disproportionately male. These youth are more likely to have longer histories of prior incarceration and are the ones involved in gang activity in the facility. They also report more problematic facility environments such as high levels of lack of fairness, staff sharing personal information, and no positive perceptions of staff. These youth are also more likely to experience physical assault by staff and to be physically hurt by staff.

9.   Overall Discussion

These results separately analyzed facility and individual victimization rates. To get a complete picture of what characteristics are most associated with sexual assault, the second part of this report will combine these two levels of analysis into a single statistical model. Part II of this report will identify how these facility and individual characteristics interact together. This will clarify the role the facility factors in the occurrence of sexual victimization.

For example, the combined analysis will provide some perspective on the importance of facility structural characteristics (i.e. sex of youth housed and size and type of facility), controlling for the types of youth that reside in the facility. It might be that facilities that house females have higher rates of youth-on-youth victimization because females are also more likely to be lesbian or bisexual, an important individual risk factor. Similarly, larger facilities may have higher rates of both types of victimization because they tend to house youth who become members of gangs in the facility.

The above analysis also identified characteristics related to youth perceptions in both the facility and individual results. Higher rates of both types of sexual assault seem to be related to youth perceptions of facility environments that have lack of structure and safety. Staff sexual misconduct appears to be connected to negative interactions with staff. Facility victimization rates are characterized by youth reporting gang fights and worrying about being physically assaulted by another youth. These same characteristics are significantly related to individual reports of victimization. Youth with high rates of victimization are also more likely to report a pattern of assault in the facility such as being physically hurt by another youth and worrying about physical assault by staff.

Youth perceptions specifically related to staff sexual misconduct also included additional factors related to gangs. Facilities with higher rates of staff sexual misconduct have problems related to gangs. Youth in these facilities are also more likely to experience staff sharing personal information with youth in their care. Facilities with high rates of staff sexual misconduct have more youth who receive sanctions for threating or fighting with staff and/or other youth (e.g., written up for fighting). Similarly, high facility rates are also associated with youth having little to no positive perceptions of staff and perceiving high levels of lack of fairness, and believe they experience more physical assault and incidents of being physically hurt by staff. Many of these same factors are also related to individual victimization risk. Clearly the behavior of the staff, how youth perceive them, and the general climate of the facility are important correlates of victimization. The second part of this analysis will test whether these perceptions are primarily related to those who report being victimized, a prevalent characteristic of the facility, or both.

10.   Overview

Part I of this report examined separate facility and individual characteristics in order to identify a profile of places and individuals at highest risk of sexual assault. Facilities with high rates of both types of assault share characteristics such as perceptions of disorder within the facility. Similarly, high rates of individual risk of both types of sexual assault are characterized by reports of physical assaults within the facility, as well as the occurrence of grooming behavior where staff provide individuals with special treatment. Nonetheless, a number of characteristics are unique to either youth-on-youth or staff sexual misconduct. With respect to the youth-on-youth sexual assault, being female, being lesbian, gay, or bisexual, and having a history of sexual assault victimization are among the more significant correlates. With respect to staff sexual misconduct, being in larger facilities, having poor relationships with staff, and the occurrence of staff grooming in the form of sharing personal information are among the more significant correlates.

To more fully develop a risk profile of facilities and youth, this second part of this report examines both facility factors and individual youth characteristics in a single statistical model (see Methodology section for more detailed discussion of the modeling approach). This approach further clarifies the role of facility factors in predicting sexual victimization for individual youth. For example, staff sexual misconduct appears to be connected to negative interactions with staff. Facilities with high rates of staff sexual misconduct have youth with poor relationships with staff in the form of more grooming, physical assaults, and negative perceptions. However, many of these same characteristics also predict individual risk. Clearly the behavior of the staff, how youth perceive them, and the general climate of the facility are important correlates of victimization. This set of analyses tested whether these perceptions were primarily related to the youth who report being victimized, to general characteristics of the facility, or both.

11.   Research Questions

For this set of analyses, the report seeks to answer the following research question:

■   What are the most important predictors of victimization at any level–facility factors, youth characteristics, or both?

12.   Highlights and Key Findings

Individual youth characteristics are more important than facility factors in the prediction of sexual victimization in juvenile facilities.

■   **Youth characteristics associated with all types of sexual assault. Youth with the highest rates of sexual victimization:**

    —   have a history of prior sexual assault victimization

    —   are more likely to report a pattern of non-sexual assault victimization while in the facility that includes being hurt by another youth and worrying about being hurt by staff

    —   report gang fights in the facility

    —   report staff providing special treatment to them.

■   **Important individual youth characteristics associated with youth-on-youth sexual assault:**

    —   Lesbian, gay, or bisexual youth have higher rates of youth-on-youth sexual victimization compared to heterosexual youth.

    —   Youth that have a most serious offense history of violent sexual assault are more likely to experience sexual assault by another youth compared to youth without this type of most serious offense.

    —   Youth reporting high structure in the facility were less likely to experience youth-on-youth sexual assault compared to youth reporting lower levels of structure.

■   **Important individual youth characteristics associated with staff sexual misconduct:**

    —   Males are more likely to be victims of staff sexual misconduct than females.

    —   Youth with the highest rates of staff sexual misconduct report being a member of a gang in the facility, high levels of a lack of fairness among staff, and staff sharing personal information.

– Youth experiencing higher rates of staff sexual misconduct are more likely to experience physical assault by staff, be physically hurt by staff, and do not have positive perceptions of staff.

There are more facility factors that are important correlates of staff sexual misconduct when compared to youth-on-youth sexual assault.

■ **There was one significant facility factor associated with youth-on-youth sexual assault victimization.**

– Youth in facilities with larger proportions of youth with a prior history of sexual assault victimization had higher rates of youth-on-youth sexual victimization.

■ **There are multiple facility factors that are important correlates of staff sexual misconduct.**

– Youth in facilities that test staff for current drug use have higher rates of staff sexual misconduct.

– Youth in facilities that have higher proportions of youth filing written complaints against a staff member have higher rates of staff sexual misconduct.

– Youth in facilities that have higher proportions of youth with a most serious offense of a person offense (e.g., assault) are more likely to have incidents of staff sexual misconduct.

– Youth in facilities with higher proportions of youth with no previous detention history are more likely to experience staff sexual misconduct.

– Youth who first learned sexual activity not allowed between 1 and 7 days of their arrival at the facility have lower rates of staff sexual misconduct.

13.   Multilevel Predictor Section

13.1   Individual-Level Predictors

Individual-level predictors for the multilevel models were selected based on the findings of the final individual-level multivariate logistic regression models (see table 38). All significant individual-level predictors for each type of sexual assault were included as level 1 predictors in the multilevel models.[13]

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[13] Variable label is bolded for emphasis

For the youth-on-youth, significant predictors included:

- Individual reports of **sexual assault history**;

- Individual reports of lesbian, gay, or bisexual **orientation**;

- Individual youth's **most serious offense responsible for current placement**;

- Individual reports of **gang fights in facility**;

- Individual reports of a **well-defined structure** within the facility;

- Individual reports that **staff provide special treatment** to the youth;

- Individual reports that the youth was **physically hurt by another youth**; and

- Individual reports that the youth **worries about physical assault by staff**.

For staff sexual misconduct, significant predictors included:

- **Sex of youth (male)**;

- Individual reports of **sexual assault history**;

- Individual youth's **previous detention history** status;

- Individual reports of **being a gang member in facility**;[14]

- Individual report of **gang fights in facility**;

- Individual reports that **staff share personal information** with the youth;

- Individual reports that **staff provide special treatment** to the youth;

- Individual reports of **positive perceptions of staff**;

- Individual reports of **lack of fairness in the facility**;

- Individual reports that the youth was **physically hurt by another youth**;

- Individual reports that the youth was **physically assaulted by staff**;

- Individual reports that the youth was **physically hurt by staff**; and

- Individual reports that the youth **worries about physical assault by staff**.

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[14] One update was applied to the weighted logistic regression models (level 1) for staff sexual misconduct (see table 38). To aid in interpretability of the results the multilevel "gang involvement-pressure and safety" predictor was collapsed into two dichotomous predictor "gangs in facility"(not significant) and "gang member in facility" and the model re-estimated to verify the results. Consequently, "youth race" became non-significant in the weighted logistic regression model and was excluded from all multilevel models.

13.2 Facility-Level Predictors

The identification and selection of facility-level predictors were conducted using a series of steps.

13.2.1 Step 1: Block-by-Block, Facility-Level Predictor Selection

The analysis in Part I divided the variables into blocks based on their content. Step 1 selected the facility-level predictors and involved using the same content groupings of predictors found in the facility-level analyses (see Part I, page 6 for a full explanation of these content areas).[15] To decide which facility variables would be included in the multilevel model, a series of logistic regressions were estimated for each block predicting individual-level victimization status. To find the significant predictors in each block, stepwise procedures were used. First, all predictors listed in each block were entered into the logistic regression. All predictors with a $p < 0.1$ were retained. Next, all of the significant predictors with a $p < 0.1$ from each block were entered and predictors retaining significance at the $p < 0.05$ level are shown with an odds ratio[16] and two asterisks in each table. Results of the block-by-block analyses are presented below in tables 39 through 48.

13.2.1.1 Structure of Juvenile Facilities

Several key facility-level structural characteristics were correlated with the individual-level rate of victimization (see tables 39 and 40)[17,18] and are listed below by incident type.

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[15] Variations between the number/types of predictors presented in this report (Part II) versus Part I are discussed in the footnotes throughout this report

[16] Odds ratios greater than 1.0 represent a statistically higher rate of victimization, while an odds ratio less than 1.0 represents a statistically lower rate

[17] Two structural predictors, "size of the facility by number of youth" and "size of the facility by number of adjudicated youth," were highly correlated and could not be entered into the same model. For consistency with Part I results, "size of the facility by number of adjudicated youth" was included in the model and shown in table 1.

[18] Table 39 and 40 findings are presented together because they are facility structural characteristics but each table illustrates a separate model that includes only the predictors listed in the table.

Table 39

Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of structure of Juvenile Facilities, 2012

Structure of Juvenile Facilities	Youth-on-youth victimization rate	Staff sexual misconduct victimization rate
	Odds Ratio	Odds Ratio
Type of Living Unit		
Single *	~	~
Multiple	~	~
Number of adjudicated youth		
1 - 25 *	~	~
26 - 50	~	2.0 **
51 - 100	~	2.3 **
101 or more	~	3.2 **
Facility over capacity [a]		
Yes	0.5 **	0.7 **
No *	~	~
Primary facility type		
Detention	2.3 **	2.5 **
Training/long-term secure	1.6 **	1.7 **
Group home	~	~
Residential treatment *	~	~
Other [b]	~	~
Operating agency		
State *	~	~
Non-state	1.6 **	~
Sex of youth housed		
Males only	0.3 **	2.8 **
Both males and females	~	2.7 **
Females only *	~	~

Note: "size of the facility by number of youth" and "size of the facility by number of adjudicated youth" were highly correlated and could not be entered into the same model. For consistency with Part I results, "size of the facility by number of adjudicated youth" was selected

*Comparison group.

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

**Difference with comparison group is significant at the 95%- confidence level.

[a] Facilities with at least one unit housing more youth than standard beds

[b] Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

Table 40

Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of type of treatment and assignment factors used in juvenile facilities, 2012

Type of treatment and assignment factors used in juvenile facilities	Youth-on-youth victimization rate	Staff sexual misconduct victimization rate
	Odds Ratio	Odds Ratio
Type of treatment provided		
Mental health		
Yes	~	~
No *	~	~
Substance abuse		
Yes	~	~
No *	~	~
Sex offender		
Yes	1.7 **	0.7 **
No *	~	~
Arson		
Yes	~	~
No *	~	~
Violent offenders		
Yes	~	1.6 **
No *	~	~
Other specialized [a]		
Yes	~	~
No *	~	~
Assignment factors to units [b]		
Offense history		
Yes	~	~
No *	~	~
Risk of escape		
Yes	0.5 **	~
No *	~	~
Danger to self		
Yes	2.2 **	~
No *	~	~
Danger to others		
Yes	~	~
No *	~	~
Age		
Yes	~	1.6 **
No *	~	~

Table 40

Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of type of treatment and assignment factors used in juvenile facilities, 2012 (continued)

Type of treatment and assignment factors used in juvenile facilities	Youth-on-youth victimization rate	Staff sexual misconduct victimization rate
	Odds Ratio	Odds Ratio
Assignment factors to units (cont.)		
Sex		
Yes	1.8 **	
No *	~	~
Sexual orientation		
Yes	~	~
No *	~	~
Special needs		
Yes	~	~
No *	~	~
Other [c]		
Yes	~	~
No *	~	~

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

*Comparison group.

**Difference with comparison group is significant at the 95%- confidence level.

[a]22 facilities indicating treatment but did not indicate which type and are included with "other"

[b]Tested with and without single unit facilities but model only includes multiple unit facilities due multicollinearity

[c]Other includes assignment factors of diagnosis/assessment, gang history, predatory/victim typology, pregnancy, physical size, and space available

■   For youth-on-youth sexual assault:

—   Facility over capacity (lower rates);

—   Primary facility type—detention or training/long-term secure (higher rates);

—   Operating agency—non-state (higher rates);

—   Sex of youth housed—males only (lower rates);

—   Sex offender treatment program (higher rates);and

—   Assignment factors to units—risk of escape (lower rates), danger to self (higher rates), and gender (higher).

■ For staff sexual misconduct:

    – Size of the facility by number of adjudicated youth (higher rates);

    – Facility over capacity (lower rates);

    – Primary facility type—detention or training/long-term secure (higher rates);

    – Sex of youth housed—males only and both (higher rates);

    – Sex offender treatment program (lower rates);

    – Violent offender treatment program (higher rates); and

    – Assignment factors to unit—age (higher rates).

13.2.1.2 Staff Characteristics

A single staff characteristic for each type of assault was associated with individual-level victimization.

Table 41
Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of staff characteristics, 2012

Staff characteristics	Youth-on-youth victimization rate Odds Ratio	Staff sexual misconduct victimization rate Odds Ratio
Staff changes in past 12 months		
Type of change		
No change *	~	~
Added staff only [a]	~	~
Added and lost staff [b]	~	1.8 **
Lost staff only [c]	~	2.4 **
Youth-to-staff ratio - All staff	~	~
Youth-to-staff ratio - frontline staff only	~	~
Total proportion of frontline female staff [d]	3.1 **	~
Staff years of experience		
Less than one year	~	~
Frontline staff years of experience		
Less than one year	~	~

Note: "any staff changes," "staff years of experience-more than one year," "frontline staff years of experience- more than one year" were excluded from model since they are variations of other predictors in the model. "Total proportion of female staff" and the "total proportion of frontline female staff" were highly correlated so the "total proportion of frontline female staff" was kept in the model to maintain consistency with Part I results.

*Comparison group.

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

**Difference with comparison group is significant at the 95%- confidence level.

[a]New Hire/replacement hire/added staff/additional positions

[b]Includes both added and loss of staff

[c]Reassigned/transferred/promotion/terminated/left/resigned/retired/layoffs, loss of promotions/reorganizations/frozen positions/unspecified turnover/other

[d]Frontline staff includes: all correctional officers and any frontline staff member with direct supervision responsibilities over youth

- For staff sexual misconduct: Staff changes in the past 12 months—added and lost, lost staff only (higher rates) [19]

- For youth-on-youth: Total proportion of frontline female staff (higher rates)[20]

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[19] "Location of monitoring" predictors were excluded from the model since these were highly correlated with overall "monitoring." "Staff to youth ratios compliance—secure facilities only" was excluded since it is a subset of all facilities.

[20] The "total proportion of female staff" and the "total proportion of frontline female staff" were highly correlated so the "total proportion of frontline female staff" was kept in the model to maintain consistency with Part I results.

13.2.1.3 Compliance With PREA Standards

Several facility-level factors related to compliance with PREA standards were associated with individual-level victimization.

Table 42
Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of compliance with PREA standards, 2012

Compliance with PREA standards	Youth-on-youth victimization rate Odds Ratio	Staff sexual misconduct victimization rate Odds Ratio
Types of Screening		
Testing for current drug use		
Yes	1.5 **	1.5 **
No*	~	~
Psychological evaluation		
Yes	~	~
No*	~	~
Monitoring		
Video surveillance		
Yes	1.7 **	~
No*	~	~
Staff to youth ratios compliance [a] - all facilities		
1:8 Compliance day		
Yes	~	~
No*	~	~
1:8 Compliance evening		
Yes	~	1.6 **
No*	~	~
1:16 Compliance night		
Yes	~	0.6 **
No*	~	~
Proportion of youth told how to report staff/youth breaking rules	~	~
Proportion of youth told they would not get into trouble if report staff/youth breaking rules[a]	~	~
Proportion of youth first learned sexual activity not allowed		
In the first 24 hours	~	0.1 **
Between 1 - 7 days	~	0.1 **
More than 7 days	877.2 **	~
Never told	~	~
Proportion of youth learned how sexual activity not allowed		
One-on-one session staff	~	2.5 **
One-on-one session youth mentor	~	~
Small group session with 6 or fewer youth	~	~
Group session with more than 6 youth	~	0.4 **
Written materials posters/handbooks	~	~
Some other way	~	~

Continued on next page

Table 42

Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of compliance with PREA standards, 2012 (continued)

Compliance with PREA standards	Youth-on-youth victimization rate	Staff sexual misconduct victimization rate
	Odds Ratio	Odds Ratio
Proportion of youth who would report sexual activity in the following way		
Face-to-face with staff member	~	0.2 **
Face-to-face with someone works/visits outside the facility	~	~
Make a written report to facility staff/administrators	~	~
Use a phone to call someone	~	2.3 **
Use some other way	~	~
Proportion of youth willing to report breaking rules about sexual activity - definitely	8.4 **	~
Proportions of youth reasons for not reporting breaking rules about sexual activity		
Afraid of youth involved	~	~
Afraid of being punished by staff involved	~	18.3 **
Embarrassed/ashamed	243.3 **	~
Didn't think staff would investigate	~	~
Didn't think youth involved would be punished	~	~
Didn't think would be believed	~	~
Didn't want to be a snitch or tattletale	~	0.3 **
Not something cared about	~	~
Youth might have some other reason	~	~

Note: "Location of monitoring" predictors were excluded from the model since these were highly correlated with overall "monitoring". "Staff to youth ratios compliance – secure facilities only" was excluded since it is a subset of all facilities

**Difference with comparison group is significant at the 95%- confidence level.

*Comparison group.

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

[a]PREA staffing standard definition: Each secure facility shall maintain 1:8 during waking hours and 1:16 during resident sleeping hours- only security staff shall be included in the ratios

- Staff screening—testing current drug use was correlated with higher rates of both types of individual-level victimization.

- For youth-on-youth sexual assault:

  - Facilities using video surveillance (higher rates);

  - Proportion of youth who first learned sexual activity was not allowed—more than 7 days (higher rates);

  - Proportion of youth willing to report breaking rules about sexual activity—definitely (higher rates); and

  - Proportion of youth whose reason not reporting breaking rules about sexual activity—embarrassed/ashamed (higher rates).

- For staff sexual misconduct:

  - Staff to youth ratios compliance—1:8 evening (higher rates);

  - Staff to youth ratios compliance—1:16 night (lower rates);

  - Proportion of youth who first learned sexual activity was not allowed—within first 24 hours (lower rates);

  - Proportion of youth who first learned sexual activity was not allowed—between 1 and 7 days (lower rates);

  - Proportion of youth who learned how sexual activity not allowed—one-on-one with session staff (higher rates);

  - Proportion of youth who learned how sexual activity not allowed—group session with more than 6 youth (lower rates);

  - Proportion of youth who would report sexual activity in the following way—face-to-face with staff member (lower rates);

  - Proportion of youth who would report sexual activity in the following way—use a phone to call someone (higher rates);

  - Proportion of youth whose reasons for not reporting breaking rules about sexual activity—afraid of being punished by staff involved (higher rates); and

  - Proportion of youth whose reason for not reporting breaking rules about sexual activity—did not want to be a snitch or tattletale (lower rates).

13.2.1.4 Youths' History

Several facility-level youth history problems, conditions, patterns of behavior, and most serious offense leading to current placement were associated with individual-level victimization.

Table 43

Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of youths' history, 2012

Youths' history	Youth-on-youth victimization rate Odds Ratio	Staff sexual misconduct victimization rate Odds Ratio
Types of youth in the facility		
Self injury/suicidal		
0%-25% *	~	~
26%-50%	~	~
51%-75%	~	~
76%-100%	~	~
Violent toward others		
0%-25% *	~	~
26%-50%	~	~
51%-75%	~	0.7 **
76%-100%	~	~
Abused by parents		
0%-25% *	~	~
26%-50%	~	~
51%-75%	~	~
76%-100%	~	1.7 **
Predatory sexual behavior		
0%-25% *	~	~
26%-50%	~	~
51%-75%	~	2.1 **
76%-100%	~	~
Rape victimization		
0%-25% *	~	~
26%-50%	~	~
51%-75%	~	~
76%-100%	~	~
Prostitution		
0%-25% *	~	~
26%-50%	2.9 **	~
51%-100%	~	~
Gang membership/affiliation		
0%-25% *	~	~
26%-50%	~	1.5 **
51%-75%	~	1.9 **
76%-100%	~	2.7 **
Psychiatric condition		
0%-25% *	~	~
26%-50%	~	~
51%-75%	~	~
76%-100%	~	0.4 **
Developmental disability		
0%-25% *	~	~
26%-50%	~	~
51%-75%	~	~
76%-100%	~	~

Note: Categories were based on original items in the Facility Questionnaire.
*Comparison group.
~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.
**Difference with comparison group is significant at the 95%- confidence level.

Table 44

Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of youth offense history, 2012

Youth offense history	Youth-on-youth victimization rate Odds Ratio	Staff sexual misconduct victimization rate Odds Ratio
Most serious offense responsible for current placement [a]		
Murder (mean = 1%)	64.8 **	28.9 **
Violent sex assault (mean = 10%)	9.5 **	7.7 **
Non-violent sex offense (mean = 2%)	~	~
Person offense (mean = 32%)	~	11.3 **
Property offense (mean = 29%)	~	3.5 **
Drug offense (mean = 6%)	~	~
Other (mean = 17%) [b]	~	5.2 **

**Difference with comparison group is significant at the 95%- confidence level.

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

[a]Proportion of youth in the facility with the identified most serious offence , mean of the proportion in parentheses

[b]Includes status offenses, probation/parole violations, public order offenses

- For youth-on-youth sexual assault:[21]
  - — Percentage of youth in the facility with history of prostitution (higher rates);

  - — Proportion of youth with a most serious offense of murder (higher rates); and

  - — Proportion of youth with a most serious offense of violent sexual assault (higher rates).

- For staff sexual misconduct:

  - — Percentage of youth in the facility with a history of violence toward others (lower rates);

  - — Percentage of youth in the facility with a history of abuse by parents (higher rates);

  - — Percentage of youth in the facility with a history of predatory sexual behavior (higher rates);

  - — Percentage of youth in the facility with a history of gang membership/affiliation (higher rates);

  - — Percentage of youth in the facility with a history of a psychiatric condition (lower rates);

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[21] Table 43 and 44 findings are presented together because they are part of youths' history, but each table illustrates a separate model that includes only the predictors listed in the table.

–   Proportion of youth with a most serious offense of murder (higher rates);

–   Proportion of youth with a most serious offense of violent sexual assault (higher rates);

–   Proportion of youth with a most serious offense of a person offense (higher rates);

–   Proportion of youth with a most serious offense of a property offense (higher rates); and

–   Proportion of youth with a most serious offense as other offense[22] (higher rates).

13.2.1.5   *Youth Reports of Involvement With Gangs and Fighting*

The proportion of youth reporting gangs in facility (higher rates) was the only facility-level predictor significantly correlated with youth-on-youth sexual assault. The proportion of youth written up for fighting and the proportion of youth reporting gang membership in the facility (higher rates) were related to staff sexual misconduct.

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[22] Includes status offenses, probation/parole violations, public order offenses

Table 45

Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of youth reports of involvement with gangs and fighting, 2012

Youth reports of involvement with gangs and fighting	Youth-on-youth victimization rate	Staff sexual misconduct victimization rate
	Odds Ratio	Odds Ratio
Proportion of youth written up for fighting [a]	~	3.3 **
Proportion of youth reporting gang activity		
Gangs in facility	2.6 **	~
Gang fights in facility	~	~
Gang member in facility [b]	~	7.2 **
Gang pressure	~	~
Safer in Gang	~	~

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

**Difference with comparison group is significant at the 95%- confidence level.
[a]This measure is a construct and the data represents an overall score across several survey items (see appendix 2, Part 1 for a listing of the items). The score was generated by summing all positive responses by each individual youth in a facility, and then computing an average score for all youth within a facility.

[b]Youth report gang activity in the facility and that they are a member of the gang

13.2.1.6 Youth Reports of Vulnerability

Several facility-level predictors were correlated with individual-level sexual victimization.

Table 46
Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of youth reports of vulnerability, 2012

Youth reports of vulnerability	Youth-on-youth victimization rate	Staff sexual misconduct victimization rate
	Odds Ratio	Odds Ratio
Proportion of youth within a facility reporting lesbian, gay, bisexual orientation	4.0 **	~
Proportion of youth within a facility reporting prior sexual assault	7.5 **	0.2 **
Proportion of youth within a facility who are two or more grade levels below age expectation	~	~
Age mixture of youth in the facility		
Young minors & adults mix [<15 and 18+] *	--	--
Older minors & adults mix [15,16,17 and 18+] & only adults [only 18+]	~	~
Only Minors [Only <18]	~	0.4 **
Proportion of youth 14 and younger within a facility	~	0.1 **
Proportion of youth 18 and older within a facility	~	~
Proportion of youth with no previous detention history	5.9 **	5.4 **
Proportion of youth less than 6 months time in the facility	0.3 **	0.5 **

**Difference with comparison group is significant at the 95%- confidence level.

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

*Comparison group.

- For youth-on-youth sexual assault:

  — Proportion of youth reporting lesbian, gay, or bisexual orientation (higher rates);

  — Proportion of youth reporting prior sexual assault (higher rates);

  — Proportion of youth with no previous detention history (higher rates); and

  — Proportion of youth in the facility for less than 6 months (lower rates).

- For staff sexual misconduct:

  — Proportion of youth reporting prior sexual assault (lower rates);

  — Age mixture of youth in the facility—only minors (lower rates);

—   Proportion of youth 14 and younger (lower rates);

—   Proportion of youth with no previous detention history (higher rates); and

—   Proportion of youth length in the facility for less than 6 months (lower rates).

13.2.1.7   Youth Reports of Facility Order and Disorder

Youth reports of facility order and disorder were associated with both types of individual-level victimization.

Table 47
Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of youth reports of facility order and disorder, 2012

Youth reports of facility order and disorder	Youth-on-youth victimization rate Odds Ratio	Staff sexual misconduct victimization rate Odds Ratio
Proportion of youth filed a written complaint against staff member	6.1 **	5.5 **
Proportion of youth reporting enough staff to monitor what is going on	~	
Proportion of youth reporting not easy to break rules	0.1 **	~
Proportion of youth reporting staff boundaries		
Staff share personal information	0.2 **	~
Staff provide special treatment	6.2 **	5.3 **

**Difference with comparison group is significant at the 95%- confidence level.

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

■   For youth-on-youth sexual assault:

—   Proportion of youth who filed a written complaint against staff member (higher rates);

—   Proportion of youth reporting that it was not easy to break rules (lower rates);

—   Proportion of youth reporting staff shared personal information (lower rates); and

—   Proportion of youth reporting staff provided special treatment (higher rates).

■   For staff sexual misconduct:

—   Proportion of youth who filed a written complaint against a staff member (higher rates); and

—   Proportion of youth reporting staff provided special treatment (higher rates).

13.2.1.8   Youth Reports of Facility Safety and Fairness

The only facility-level predictor significantly associated with youth-on-youth sexual assault was the proportion of youth worrying about physical assault by another youth (higher rates). Several predictors were correlated with staff sexual misconduct.

Table 48
Multivariate logistic regression models of sexual victimization, by incident type and facility predictor selection of youth reports of facility safety and fairness, 2012

Youth reports of facility safety and fairness	Youth-on-youth victimization rate Odds Ratio	Staff sexual misconduct victimization rate Odds Ratio
Proportion of youth who report positive perceptions of staff [a]	~	0.8 **
Proportion of youth who report lack of fairness [a]	~	~
Proportion of youth who report facility safety		
Physical assault by youth [a]	~	1.5 **
Physical assault by staff [a]	~	2.1 **
Worry about physical assault by another youth	15.3 **	~
Worry about physical assault by staff	~	~

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

**Difference with comparison group is significant at the 95%- confidence level.

[a]This measure is a construct and the data represents an overall score across several survey items (see appendix 2, Part 1 for a listing of the items). The score was generated by summing all positive responses by each individual youth in a facility, and then computing an average score for all youth within a facility.

- For staff sexual misconduct:

    — Proportion of youth reporting positive perceptions of staff (lower rates);

    — Proportion of youth reporting a physical assault by youth (higher rates); and

    — Proportion of youth reporting a physical assault by staff (higher rates).

13.2.2   Step 2: Level 2 One-by-One Predictor Selection

Step 2 involved testing each significant facility-level predictor found in step 1 (e.g., the block-by-block selection) with all individual-level predictors (level 1). This was completed by entering each facility predictor individually[23] (level 2) with all individual-level predictors (level 1) and assessing if significance was retained. This procedure maximized the possibility of retaining significant facility-level predictors with individual-level predictors. Tables 49 and 50 provide the results when each of the level 2 predictors were entered into the equation without any other level 2 predictors, but included all level 1 predictors (see tables 49 and 50).

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[23] In step 2, all levels of categorical predictors were entered into the model if at least one of the categories was statistically significant in step 1.

Table 49

Weighted multilevel logistic regression models, by youth-on-youth sexual victimization and level 2 one-by-one predictor selection, 2012

Level 1: Individual youth level predictors - constant in all models	Selection
Sexual assault history	+
Lesbian, gay, bisexual orientation	+
Most serious offense responsible for current placement	
Violent sexual assault	+
Non-violent sexual assault	:
Murder or Person offense	:
Property offense	:
Drug offense	:
Other [a] *	~
Gang fights in facility	+
Well-defined structure [b]	
No *	~
Low	:
Medium	:
Medium High	:
High	-
Staff provide special treatment	+
Physically hurt by another youth	+
Worry about physical assault by staff	+
Level 2: facility level predictors - entered one by one	
Facility over capacity [c]	
Yes	~
No *	~
Primary facility type	
Detention	~
Training/long-term secure	~
Group home	~
Residential treatment *	~
Other [d]	~
Operating agency	
State *	~
Non-state	~
Sex of youth housed	
Males only	~
Both males and females	~
Females only *	~

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Table 49
Weighted multilevel logistic regression models, by youth-on-youth sexual victimization and level 2 one-by-one predictor selection, 2012 (continued)

Level 2: facility level predictors - entered one by one (continued)	Selection
Sex offender treatment	~
Assignment factors to units - risk of escape	~
Assignment factors to units - danger to self	~
Assignment factors to units - Sex	~
Total proportion of frontline female staff	~
Staff screening - testing current drug use	~
Proportion of youth first learned sexual activity not allowed - more than 7 days	~
Proportion of youth willing to report breaking rules about sexual activity - definitely	~
Proportion of youth whose reasons for not reporting breaking rules about sexual activity - embarrassed/ashamed	~
Percentage of youth in the facility with history - prostitution	
0%-25% *	~
26%-50%	~
51%-100%	~
Proportion of youth with most serious offense as murder	~
Proportion of youth with most serious offense as violent sex assault	~
Proportion of youth reporting gangs in facility	~
Proportion of youth reporting lesbian, gay, bisexual orientation	~
Proportion of youth reporting prior sexual assault	+
Proportion of youth with no previous detention history	~
Proportion of youth less than 6 months time in the facility	~
Proportion of youth filed a written complaint against staff member	~
Proportion of youth reporting not easy to break rules	~
Proportion of youth reporting staff providing special treatment	~
Proportion of youth worrying about physical assault by another youth	~

Note: To acquire better accuracy, adaptive quadrature estimation method (with 5 quadrature points) was used.

+Significant at the p<0.05 and coefficient is in the positive direction.

:Excluded from model based on prior results.

*Comparison group.

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

-Significant at the p<0.05 and coefficient is in the negative direction.

[a]Includes status offenses, probation/parole violations, public order offenses.

[b]This measure is a construct and data represents an overall score across several survey items for each youth (see appendix 3, Part 1 for a listing of the items).

[c]Facilities with at least one unit housing more youth than standard beds.

[d]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers.

For youth-on-youth sexual assault, the only facility-level predictor retaining significance (e.g., p<0.05) in the multilevel modeling one-by-one selection procedure was the proportion of youth with a history of prior sexual assault victimization. All individual youth (level 1) predictors remained significant throughout the one-by-one level 2 selection process.

Table 50

Weighted multilevel logistic regression models, by staff sexual misconduct and level 2 one-by-one predictor selection, 2012

Level 1: Individual youth level predictors - constant in all models	Selection
Sex of youth - male	+
Sexual assault history	+
Previous detention history [a]	
No *	~
Less than 6 months	~
6 months or more	:
Gang member in facility [b]	+
Gang fights in facility	+
Staff share personal information	+
Staff provide special treatment	+
Positive perceptions of staff [c]	
No *	~
Low	-
Medium	-
High	:
Lack of fairness in the facility [c]	
No *	~
Low	:
Medium	:
High	+
Physically hurt by another youth	+
Physical assault by staff	+
Physically hurt by staff	+
Worry about physical assault by staff	+
Level 2: facility level predictors - entered one by one	
Number of adjudicated youth	
1-25 *	~
26-50	+
51-100	+
101 or more	+
Facility over capacity [d]	
Yes	~
No *	~

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Table 50
Weighted multilevel logistic regression models, by staff sexual misconduct and level 2 one-by-one predictor selection, 2012 (continued)

Level 2: facility level predictors - entered one by one (continued)	Selection
Primary facility type	
Detention	+
Training/ long-term secure	+
Group home	~
Residential treatment *	~
Other [e]	~
Sex of youth housed	
Males only	~
Both males and females	~
Females only *	~
Sex offender treatment	-
Violent offender treatment	~
Assignment factors to units - age	~
Staff changes in past 12 months	
No change *	~
Added staff only[f]	~
Added and lost staff[g]	~
Lost staff only[h]	+
Staff screening - testing current drug use	+
Staff to youth ratios compliance in all facilities - 1:8 evening	~
Staff to youth ratios compliance in all facilities - 1:16 night	~
Proportion of youth first learned sexual activity not allowed - in the first 24 hours	-
Proportion of youth first learned sexual activity not allowed - between 1 and 7 days	-
Proportion of youth learned how sexual activity not allowed - one-on-one session staff	~
Proportion of youth learned how sexual activity not allowed -group session with more than 6 youth	~
Proportion of youth who would report sexual activity in the following way - face-to-face with staff member	-
Proportion of youth who would report sexual activity in the following way - use a phone to call someone	~
Proportion of youth whose reasons for not reporting breaking rules about sexual activity - afraid of being punished by staff involved	+
Proportion of youth whose reasons for not reporting breaking rules about sexual activity - didn't want to be a snitch or tattletale	~
	Continued on next page

Table 50

Weighted multilevel logistic regression models, by staff sexual misconduct and level 2 one-by-one predictor selection, 2012 (continued)

Level 2: facility level predictors - entered one by one (continued)	Selection
Percentage of youth in the facility with history - violent toward others	
0%-25% *	~
26%-50%	~
51%-75%	~
76%-100%	~
Percentage of youth in the facility with history - abused by parents	
0%-25% *	~
26%-50%	~
51%-75%	~
76%-100%	~
Percentage of youth in the facility with history - predatory sexual behavior	
0%-25% *	~
26%-50%	~
51%-75%	~
76%-100%	~
Percentage of youth in the facility with history - gang membership/affiliation	
0%-25% *	~
26%-50%	~
51%-75%	~
76%-100%	~
Percentage of youth in the facility with history - psychiatric condition	
0%-25% *	~
26%-50%	~
51%-75%	~
76%-100%	~
Proportion of youth with most serious offense as murder	~
Proportion of youth with most serious offense as violent sex assault	~
Proportion of youth with most serious offense as person offense	+
Proportion of youth with most serious offense as property offense	~
Proportion of youth with most serious offense as other offense [i]	~
Proportion of youth written up for fighting [j]	+
Proportion of youth reporting gang member in facility [k]	~
Proportion of youth reporting prior sexual assault	~
Age mixture of youth in the facility	
Young minors & adults mix [<15 and 18+] *	~
Older minors & adults mix [15,16,17 and 18+] & only adults [only 18+]	~
Only minors [only <18]	-
Proportion of youth 14 and under	~
Proportion of youth with no previous detention history	+
Proportion of youth less than 6 months time in the facility	~

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Table 50
Weighted multilevel logistic regression models, by staff sexual misconduct and level 2 one-by-one predictor selection, 2012 (continued)

Level 2: facility level predictors - entered one by one (continued)	Selection
Proportion of youth filed a written complaint against staff member	+
Proportion of youth reporting staff sharing personal information	~
Proportion of youth reporting staff providing special treatment	~
Proportion of youth reporting positive perceptions of staff [j]	-
Proportion of youth reporting physical assault by youth [j]	~
Proportion of youth reporting physical assault by staff [j]	~

Note: To acquire better accuracy, adaptive quadrature estimation method (with 5 quadrature points) was used

+Significant at the p<0.05 and coefficient is in the positive direction.

*Comparison group.

~Characteristic deleted from the stepwise model when p>0.05 and not significant at the 95%-confidence level.

:Excluded from model based on prior results.

-Significant at the p<0.05 and coefficient is in the negative direction.

[a]Predictor consistently non-significant across models and was deleted from the final model process.

[b]The multilevel gang involvement predictor was collapsed into two dichotomous predictors "gang activity in the facility" (not significant) and "gang member in facility". Consequently, youth race became non-significant in the weighted logistic regression models and was excluded from all multilevel models.

[c]This measure is a construct and data represents an overall score across several survey items for each youth (see appendix 3, Part 1 for a listing of the items).

[d]Facilities with at least one unit housing more youth than standard beds

[e]Facilities listing their primary function as boot camp, ranch/forestry camp/wilderness/marine program/farm, runaway & homeless shelter, or other nonspecific were combined due to small numbers

[f]New Hire/replacement hire/added staff/additional positions

[g]Includes both added and loss of staff

[h]Reassigned/transferred/promotion/terminated/left/resigned/retired/layoffs, loss of promotions/reorganizations/frozen positions/unspecified turnover/other

[i]Includes status offenses, probation/parole violations, public order offenses

[j]This measure is a construct and the data represents an overall score across several survey items (see appendix 2, Part 1 for a listing of the items). The score was generated by summing all positive responses by each individual youth in a facility, and then computing an average score for all youth within a facility.

[k]Youth report gang activity in the facility and that they are a member of the gang

For staff sexual misconduct, several facility-level predictors retained significance in the multilevel model one-by-one selection procedure. There were:

- Size of the facility by number of adjudicated youth;

- Primary facility type;

- Sex offender treatment;

- Staff changes in the past 12 months;

- Staff screening—testing for current drug use;

- Proportion of youth who first learned sexual activity not allowed in the first 24 hours;

- Proportion of youth who first learned sexual activity not allowed between 1 and 7 days;

- Proportion of youth who would report sexual activity face-to-face with staff member;

- Proportion of youth whose reason for not reporting breaking rules about sexual activity—afraid of being punished by staff involved;

- Proportion of youth with most serious offense as person offense;

- Proportion of youth written up for fighting;

- Age mixture of youth in the facility;

- Proportion of youth with no previous detention history;

- Proportion of youth who filed a written complaint against a staff member; and

- Proportion of youth reporting positive perceptions of staff.

All individual-level (level 1) predictors remained significant throughout the one-by-one facility selection process (level 2) with the exception of no previous detention history, which was consistently non-significant throughout all models. Consequently, it was eliminated from the analyses.

13.2.3 Step 3: Level 2 Stepwise Predictor Selection

In Part I of this report, the stepwise selection method was applied to all multivariate models to eliminate non-significant predictors and estimate parsimonious models. For consistency, this approach was also applied to the Part II multilevel analysis using the following stages:

a. All significant individual-level predictors (level 1) from step 2 were entered all at once into the model.

b. Significant facility-level predictors (level 2) identified in step 2 were entered sequentially. based on the p-values generated in the multilevel one-by-one testing phase.[24]

c. In each model, level 2 predictors with smaller p-values[25] were tested first, while predictors with larger p-values were entered later. As each was added, all predictors with a p-value of 0.05 or less were retained while all predictors with a p-value of >0.05 were excluded.

The order of entry and the results are shown in table 51, and the findings are summarized below.

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[24] This part of the analysis was only applicable to staff sexual misconduct because there was only one significant level 2 predictor in the youth-on-youth model.

[25] For all categorical predictors, the level with the smallest p value was used to determine order of entry. All levels of categorical predictors were tested first, but only significant levels were included in subsequent models.

Table 51

Weighted multilevel logistic regression models, by staff sexual misconduct and level 2 stepwise predictor selection, 2012

Level 2: Facility level predictors - sequential entry	model 1 p-value	model 2 p-value	model 3 p-value
Proportion of youth who would report sexual activity - face-to-face with staff member	<0.001 ✓	0.00 ✓	0.013 ✓
Staff screening – testing current drug use		0.006 ✓	0.011 ✓
Proportion of youth with most serious offense as person offense			0.018 ✓
Proportion of youth filed a written complaint against staff member			
Proportion of youth written up for fighting			
Number of adjudicated youth			
1-25 *			
26-50			
51-100			
101 or more			
Proportion of youth whose reasons for not reporting breaking rules about sexual activity - afraid of being punished by staff involved			
Primary facility type			
Detention			
Training/long-term secure			
Group home			
Residential treatment *			
Other			
Proportion of youth who have positive perceptions of staff in a facility			
Staff changes in past 12 months			
No change *			
Added staff only			
Added and lost staff			
Lost staff only			
Sex offender treatment			
Proportion of youth first learned sexual activity not allowed - between 1 and 7 days			
Age mixture of youth in the facility			
Young minors & adults mix [<15 and 18+] *			
Older minors & adults mix [15,16,17 and 18+] & only adults [only 18+]			
Only minors [only <18]			
Proportion of youth with no previous detention history in a facility			
Proportion of youth first learned sexual activity not allowed - in the first 24 hours			

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Table 51

Weighted multilevel logistic regression models, by staff sexual misconduct and level 2 stepwise predictor selection, 2012 (continued)

Level 2: Facility level predictors - sequential entry	model 4 p-value	model 5 p-value	model 6 p-value
Proportion of youth who would report sexual activity - face-to-face with staff member	0.068 x		
Staff screening – testing current drug use	0.008 ✓	0.00 ✓	0.008 ✓
Proportion of youth with most serious offense as person offense	0.026 ✓	0.017 ✓	0.028 ✓
Proportion of youth filed a written complaint against staff member	0.005 ✓	0.00 ✓	<0.001 ✓
Proportion of youth written up for fighting		0.709 x	
Number of adjudicated youth			
1-25 *			
26-50			0.047 ✓
51-100			0.064 x
101 or more			0.033 ✓
Proportion of youth whose reasons for not reporting breaking rules about sexual activity - afraid of being punished by staff involved			
Primary facility type			
Detention			
Training/long-term secure			
Group home			
Residential treatment *			
Other			
Proportion of youth who have positive perceptions of staff in a facility			
Staff changes in past 12 months			
No change *			
Added staff only			
Added and lost staff			
Lost staff only			
Sex offender treatment			
Proportion of youth first learned sexual activity not allowed - between 1 and 7 days			
Age mixture of youth in the facility			
Young minors & adults mix [<15 and 18+] *			
Older minors & adults mix [15,16,17 and 18+] & only adults [only 18+]			
Only minors [only <18]			
Proportion of youth with no previous detention history in a facility			
Proportion of youth first learned sexual activity not allowed - in the first 24 hours			

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Table 51

Weighted multilevel logistic regression models, by staff sexual misconduct and level 2 stepwise predictor selection, 2012 (continued)

Level 2: Facility level predictors - sequential entry	model 7 p-value	model 8 p-value	model 9 p-value
Proportion of youth who would report sexual activity - face-to-face with staff member			
Staff screening – testing current drug use	0.00 ✓	0.005 ✓	0.00 ✓
Proportion of youth with most serious offense as person offense	0.012 ✓	0.016 ✓	0.013 ✓
Proportion of youth filed a written complaint against staff member	<0.001 ✓	0.00 ✓	0.00 ✓
Proportion of youth written up for fighting			
Number of adjudicated youth			
1-25 *			
26-50	0.332 x		
51-100	:		
101 or more	0.256 x		
Proportion of youth whose reasons for not reporting breaking rules about sexual activity - afraid of being punished by staff involved		0.352 x	
Primary facility type			
Detention			0.54 x
Training/long-term secure			0.12 x
Group home			0.581 x
Residential treatment *			
Other			0.836 x
Proportion of youth who have positive perceptions of staff in a facility			
Staff changes in past 12 months			
No change *			
Added staff only			
Added and lost staff			
Lost staff only			
Sex offender treatment			
Proportion of youth first learned sexual activity not allowed - between 1 and 7 days			
Age mixture of youth in the facility			
Young minors & adults mix [<15 and 18+] *			
Older minors & adults mix [15,16,17 and 18+] & only adults [only 18+]			
Only minors [only <18]			
Proportion of youth with no previous detention history in a facility			
Proportion of youth first learned sexual activity not allowed - in the first 24 hours			

Continued on next page

Table 51

Weighted multilevel logistic regression models, by staff sexual misconduct and level 2 stepwise predictor selection, 2012 (continued)

Level 2: Facility level predictors - sequential entry	model 10 p-value	model 11 p-value	model 12 p-value
Proportion of youth who would report sexual activity - face-to-face with staff member			
Staff screening – testing current drug use	0.00 ✓	0.005 ✓	0.00 ✓
Proportion of youth with most serious offense as person offense	0.007 ✓	0.014 ✓	0.017 ✓
Proportion of youth filed a written complaint against staff member	0.00 ✓	0.00 ✓	<0.001 ✓
Proportion of youth written up for fighting			
Number of adjudicated youth			
1-25 *			
26-50			
51-100			
101 or more			
Proportion of youth whose reasons for not reporting breaking rules about sexual activity - afraid of being punished by staff involved			
Primary facility type			
Detention			
Training/long-term secure			
Group home			
Residential treatment *			
Other			
Proportion of youth who have positive perceptions of staff in a facility	0.547 x		
Staff changes in past 12 months			
No change *			
Added staff only		0.132 x	
Added and lost staff		0.458 x	
Lost staff only		0.059 x	
Sex offender treatment			0.10 x
Proportion of youth first learned sexual activity not allowed - between 1 and 7 days			
Age mixture of youth in the facility			
Young minors & adults mix [<15 and 18+] *			
Older minors & adults mix [15,16,17 and 18+] & only adults [only 18+]			
Only minors [only <18]			
Proportion of youth with no previous detention history in a facility			
Proportion of youth first learned sexual activity not allowed - in the first 24 hours			
			Continued on next page

Table 51
Weighted multilevel logistic regression models, by staff sexual misconduct and level 2 stepwise predictor selection, 2012 (continued)

Level 2: Facility level predictors - sequential entry	model 13 p-value	model 14 p-value	model 15 p-value
Proportion of youth who would report sexual activity - face-to-face with staff member			
Staff screening – testing current drug use	0.00 ✓	0.00 ✓	0.00 ✓
Proportion of youth with most serious offense as person offense	0.016 ✓	0.013 ✓	0.047 ✓
Proportion of youth filed a written complaint against staff member	<0.001 ✓	<0.001 ✓	<0.001 ✓
Proportion of youth written up for fighting			
Number of adjudicated youth			
1-25 *			
26-50			
51-100			
101 or more			
Proportion of youth whose reasons for not reporting breaking rules about sexual activity - afraid of being punished by staff involved			
Primary facility type			
Detention			
Training/long-term secure			
Group home			
Residential treatment *			
Other			
Proportion of youth who have positive perceptions of staff in a facility			
Staff changes in past 12 months			
No change *			
Added staff only			
Added and lost staff			
Lost staff only			
Sex offender treatment			
Proportion of youth first learned sexual activity not allowed - between 1 and 7 days	0.022 ✓	0.011 ✓	0.009 ✓
Age mixture of youth in the facility			
Young minors & adults mix [<15 and 18+] *			
Older minors & adults mix [15,16,17 and 18+] & only adults [only 18+]		0.176 x	
Only minors [only <18]		0.232 x	
Proportion of youth with no previous detention history in a facility			0.019 ✓
Proportion of youth first learned sexual activity not allowed - in the first 24 hours			

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Table 51

Weighted multilevel logistic regression models, by staff sexual misconduct and level 2 stepwise predictor selection, 2012 (continued)

Level 2: Facility level predictors - sequential entry	model 16 p-value	final model p-value
Proportion of youth who would report sexual activity - face-to-face with staff member		
Staff screening – testing current drug use	0.00 ✓	0.00 ✓
Proportion of youth with most serious offense as person offense	0.094 x	0.047 ✓
Proportion of youth filed a written complaint against staff member	<0.001 ✓	<0.001 ✓
Proportion of youth written up for fighting		
Number of adjudicated youth		
1-25 *		
26-50		
51-100		
101 or more		
Proportion of youth whose reasons for not reporting breaking rules about sexual activity - afraid of being punished by staff involved		
Primary facility type		
Detention		
Training/long-term secure		
Group home		
Residential treatment *		
Other		
Proportion of youth who have positive perceptions of staff in a facility		
Staff changes in past 12 months		
No change *		
Added staff only		
Added and lost staff		
Lost staff only		
Sex offender treatment		
Proportion of youth first learned sexual activity not allowed - between 1 and 7 days	0.00 ✓	0.009 ✓
Age mixture of youth in the facility		
Young minors & adults mix [<15 and 18+] *		
Older minors & adults mix [15,16,17 and 18+] & only adults [only 18+]		
Only minors [only <18]		
Proportion of youth with no previous detention history in a facility	0.039 ✓	0.019 ✓
Proportion of youth first learned sexual activity not allowed - in the first 24 hours	0.088 x	

Note: All significant level 1 predictors were entered first and held constant throughout all the level 2 sequential stepwise modeling process. The level 1 predictors included sex of youth - male, sexual assault history, gang member in facility, gang fights in facility, staff share personal information, staff provide special treatment, positive perceptions of staff, lack of fairness in the facility, physically hurt by another youth, physical assault by staff, physically hurt by staff, and worry about physical assault by staff. To acquire better accuracy, adaptive quadrature estimation method (with 5 quadrature points) was used.

✓ Significant at the p<0.05 and selected to remain in model.

*Comparison group.

xNot significant p>0.05 and eliminated from the model.

:Excluded from model based on prior results.

1. Proportion of youth who would report sexual activity face-to-face with staff member had the lowest p-value and was tested first in model 1. Significance was retained until model 4, where it was not significant and subsequently eliminated.

2. Staff screening—testing for current drug use was tested next in model 2. Significance was retained throughout all models.

3. Proportion of youth with a most serious offense as a person offense was tested next in model 3. Significance was retained throughout all models, except in model 16 due to entry of the proportion of youth who first learned sexual activity was not allowed in the first 24 hours, which was not significant. Therefore, it was advanced to the final model where significance was retained.

4. Proportion of youth that filed a written complaint against staff member was tested in model 4. Significance was retained throughout all models.

5. Proportion of youth written up for fighting was tested in model 5. It was not significant and was eliminated.

6. Size of the facility was tested in model 6. A size of 26 to 50 and 101 or more were significant and were tested separately in model 7. In model 7, size of facility was not significant and was eliminated.

7. Proportion of youth whose reason for not reporting breaking rules about sexual activity—afraid of being punished by staff involved was tested in model 8. It was not significant and was eliminated.

8. Primary facility type was tested in model 9. It was not significant and was eliminated.

9. Proportion of youth reporting positive perceptions of staff in a facility was tested in model 10. It was not significant and was eliminated.

10. Staff changes in past 12 months was tested in model 11. It was not significant and was eliminated.

11. Sex offender treatment was tested in model 12. It was not significant and was eliminated.

12. Proportion of youth who first learned sexual activity not allowed between 1 and 7 days was tested in model 13. Significance was retained throughout the remaining models.

13. Age mixture of youth in the facility was tested in model 14. It was not significant and was eliminated.

14. Proportion of youth with no previous detention history was tested in model 15. Significance was retained throughout the remaining models.

15. Proportion of youth who first learned sexual activity was not allowed in the first 24 hours was tested in model 16. It was not significant and was eliminated.

13.2.4   Step 4: Final Model Predictor Selection

Step 4 included final model estimation of all individual-level predictors (level 1) and the significant facility-level predictors (level 2) identified in steps 1 through 3. For youth-on-youth sexual assault, there was one significant level 2 predictor (proportion of youth reporting prior sexual assault) (see table 52). For staff sexual misconduct, the following level 2 predictors remained significant with individual-level victimization (see table 53) and were included in the final multilevel model:

- Staff screening—testing for current drug use;

- Proportion of youth with a most serious offense of person offense;

- Proportion of youth with no previous detention history;

- Proportion of youth who first learned sexual activity not allowed between 1 and 7 days; and

- Proportion of youth who filed a written complaint against a staff member.

Table 52

Final weighted multilevel logistic stepwise regression models, by youth-on-youth sexual victimization and combined individual youth and facility factors, 2012

Fixed Effects:

Level 1: Individual youth factors	Odds Ratio	95 Percent Confidence Interval	
Sexual assault history			
Yes	2.4	1.7	3.5
No *			
Sexual orientation			
Heterosexual *			
Lesbian, gay, bisexual	5.5	3.8	7.7
Most serious offense responsible for current placement			
Violent sexual assault	2.6	1.8	3.6
Non-violent sexual assault	:		
Murder or Person offense	:		
Property offense	:		
Drug offense	:		
Other [a]			
Gang fights in facility			
Yes	1.8	1.2	2.7
No *			
Well-defined structure [b]			
No *			
Low	:		
Medium	:		
Medium High	:		
High	0.7	0.5	1.0
Staff provide special treatment			
Yes	1.4	1.0	2.0
No *			
Physically hurt by another youth			
Yes	3.1	2.2	4.3
No *			
Worry about physical assault by staff			
Yes	2.7	1.9	3.8
No *			
Level 2: Facility factors			
Proportion of youth reporting prior sexual assault	3.8	1.2	11.6

Random Effect:

	Variance [c]	Standard error	Intra-class correlation [d]
Youth-on-youth assault rates across facilities	0.12	0.12	3.5%

Note: To acquire better accuracy, adaptive quadrature estimation method (with 5 quadrature points) was used.

*Comparison group.

:Excluded from model based on prior results.

[a]Includes status offenses, probation/parole violations, public order offenses.

[b]This measure is a construct and data represents an overall score across several survey items for each youth (see appendix 3, Part 1 for a listing of the items).

[c]Variance stands for the variation in the mean facility youth-on-youth assault rates.

[d]Intra-class correlation (ICC) was calculated as (0.12)/(0.12+3.29)=3.5%, indicating that after including the youth-level and facility-level predictors, approximately 3.5% youth-on-youth assault rate can be attributed to variability across facilities.

Table 53

Final weighted multilevel logistic stepwise regression models, by staff sexual misconduct and combined individual youth and facility factors, 2012

Fixed effect:			
		95 Percent Confidence	
Level 1: Individual youth factors	Odds Ratio	Interval	
Sex of youth			
Male	3.8	2.3	6.2
Female *			
Sexual assault history			
Yes	1.6	1.2	2.0
No *			
Gang member in facility			
Yes	1.8	1.5	2.2
No *			
Gang fights in facility			
Yes	1.4	1.1	1.8
No *			
Staff share personal information			
Yes	2.6	2.1	3.2
No *			
Staff provide special treatment			
Yes	2.2	1.8	2.7
No *			
Positive perceptions of staff [a]			
No *			
Low	0.8	0.6	0.9
Medium	0.7	0.5	0.9
High	:		
Lack of fairness in the facility [a]			
No *			
Low	:		
Medium	:		
High	2.1	1.7	2.7
Physically hurt by another youth			
Yes	1.6	1.3	2.0
No *			
Physical assault by staff			
Yes	1.5	1.1	2.1
No *			
Physically hurt by staff			
Yes	1.8	1.4	2.5
No *			
Worry about physical assault by staff			
Yes	1.3	1.1	1.7
No *			

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Table 53
Final weighted multilevel logistic stepwise regression models, by staff sexual misconduct and combined individual youth and facility factors, 2012 (continued)

Fixed effect:

Level 2: Facility factors (continued)	Odds Ratio	95 Percent Confidence Interval	
Staff screening - testing current drug use			
Yes	1.5	1.2	2.0
No *			
Proportion of youth with most serious offense as person offense	1.9	1.0	3.8
Proportion of youth with no previous detention history	2.7	1.2	6.2
Proportion of youth first learned sexual activity not allowed - between 1 and 7 days [b]	0.1	0.0	0.5
Proportion of youth filed a written complaint against staff member	3.0	1.7	5.3

Random effect:

	Variance [c]	Standard error	Intra-class correlation [d]
Staff sexual misconduct assault rates across facilities	0.02	0.04	0.6%

Note: To acquire better accuracy, adaptive quadrature estimation method (with 5 quadrature points) was used.

 *Identified reference group for categorical variables.

:Excluded from model based on prior results.

[a]This measure is a construct and data represents an overall score across several survey items for each youth (see appendix 3, Part 1 for a listing of the items).

[b]The coefficient for this variable is highly unstable, due to a small number of youth who reported being in this particular circumstance (see Table 14 for the mean rate and proportional distribution for this variable). For example, the odds ratio of 0.1 has a lower confidence bound that is very close to 0. We have retained this variable in the equation because it is significant.

[c]Variance stands for the variation in the mean facility staff sexual misconduct assault rate across facilities.

[d]Intra-class correlation (ICC) was calculated (i.e. (0.02)/(0.02+3.29)=0.6%), indicating that after including the youth-level and facility-level predictors, approximately 0.6% of staff sexual misconduct assault rate can be attributed to variability across facilities.

14.   Results of the Final Multilevel Model Estimation by Incident Type

One final model was estimated for each type of victimization (youth, staff) and the results are presented below.[26]

14.1   Youth-on-Youth Sexual Assault

14.1.1   Individual Youth Characteristics

After adjusting for facility-level factors, the following youth characteristics were predictive of youth-on-youth sexual assault (see table 14).

- **Youth vulnerability characteristics:** Youth with a prior history of sexual assault victimization were more than twice as likely to experience youth-on-youth sexual assault as youth without a history of sexual victimization.

- **Sexual orientation:** Lesbian, gay, or bisexual youth were more than five times as likely as heterosexual youth to be assaulted by another youth.

- **Youths' documented history of most serious offense:** Youth with violent sexual assault as their most serious offense were more than twice as likely to experience youth-on-youth sexual assault as youth with other types of most serious offense histories.

- **Youth reports of gang fights in the facility:** Youth reporting gang fights in the facility were almost twice as likely to be victims of youth-on-youth assault as youth who did not report gang fights.

- **Youth reports of well-defined facility structure:** Youth reporting high structure were less likely to experience youth-on-youth sexual assault than youth reporting lower levels of structure.

- **Youth reports of poor staff boundaries:** Youth-on-youth sexual assault rates were 1.4 times higher for youth reporting that staff provided special treatment than youth who did not report staff providing special treatment.

- **Youth reports of being physically hurt and worrying about physical assault:** Youth reporting being physically hurt by another youth and worrying about physical assault by staff were more than twice as likely to be victims of youth-on-youth sexual assault than youth without these experiences.

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[26] For categorical predictors, only significant levels were included in the model and non-significant levels were excluded.

14.1.2   Facility Factors

After adjusting for individual-level characteristics, one level 2 predictor was predictive of youth-on-youth sexual assault:

■   **Facilities with higher numbers of vulnerable youth:** Facilities with larger proportions of youth with a prior history of sexual assault victimization had an assault rate more than three times greater than facilities with lower proportions of youth with sexual assault histories.

14.2   Staff Sexual Misconduct

14.2.1   Individual Youth Characteristics

After adjusting for facility-level factors, the following youth characteristics were predictive of staff sexual misconduct (see table 15):

■   **Youth gender:** Males were almost four times more likely to be victims of staff sexual misconduct than females.

■   **Youth vulnerability characteristics:** Youth with a prior history of sexual assault victimization were 1.6 times more likely to experience staff sexual misconduct than youth without sexual victimization history.

■   **Youth reports of gang membership and gang fighting:** Youth reporting being a member of a gang in the facility (1.8 times) and gang fights in the facility (1.4 times) were more likely to be victims of staff sexual misconduct than youth who did not report these events.

■   **Youth reports of lack of fairness in the facility and staff with poor boundaries:** Youth reports of an overall lack of fairness in the facility were more than twice as likely to experience staff sexual misconduct as youth who did not report this. Similar trends were also noted for youth reports of staff sharing personal information and staff providing special treatment.

■   **Youth reports of positive perceptions of staff:** Youth reporting positive perceptions of staff had significantly lower rates of staff sexual misconduct than youth who had no positive perceptions.

■   **Youth reports of being physically hurt and worrying about physical assault:** Youth reporting being physically hurt by another youth (1.6 times), physically assaulted by staff (1.5 times), physically hurt by staff (1.8 times), and worrying about physical assault by staff (1.3 times) were more likely to report staff sexual misconduct than youth without these experiences.

14.2.2   Facility Factors

After adjusting for significant individual-level characteristics, four facility-level factors (level 2) were predictive of staff sexual misconduct:

- **Facility compliance with PREA standards:** Youth in facilities that test staff for current drug use were 1.5 times more likely to experience staff sexual misconduct than facilities that do not. Conversely, youth in facilities that first learned sexual activity was not allowed between 1 and 7 days of their arrival[27] at the facility were less likely to experience staff sexual misconduct that those in facilities that did not learn within this time frame.

- **Facilities with a high proportion of youth filing written complaints against a staff member:** Youth in facilities that have higher proportions of youth filing written complaints against a staff member were more than three times more likely to experience staff sexual misconduct than those in facilities with lower numbers of youth filing complaints.

- **Facilities with high proportions of youth with no previous detention histories:** Youth in facilities with higher proportions of youth with no previous detention history were almost three times more likely to experience staff sexual misconduct than youth in facilities with greater numbers of youth with detention histories.

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[27] The coefficient for this variable is highly unstable, due to a small number of youth who reported being in this particular circumstance (see table 14 for the mean rate and proportional distribution for this variable). For example, the odds ratio of 0.1 has a lower confidence bound that is close to 0. The authors have retained this variable in the equation because it is significant, but do not interpret it below.

15.   Discussion of Findings and Limitations

This report sought to answer the question "what are the most important correlates of victimization at any level—facility factors, youth characteristics, or both?" The results indicate that individual characteristics are more important than facility factors in the prediction of sexual victimization in juvenile facilities. Youth at greatest risk for both types of assault have a history of prior sexual assault victimization and are more likely to report a pattern of non-sexual assault victimization while in the facility. This pattern includes being hurt by another youth and worrying about being hurt by staff. These youth also report gang fights in the facility and staff providing special treatment to youth who are victimized.

Youth with higher rates of youth-on-youth sexual victimization are more likely to be lesbian, gay, or bisexual, are more likely to have a most serious offense history of violent sexual assault, and are more likely to report lower levels of facility structure. Youth victims of staff sexual misconduct are disproportionately male. They report more problematic facility environments, including gang activity, high levels of lack of fairness, and staff sharing personal information with them. These youth are also more likely to experience physical assault by staff, be physically hurt by staff, and have negative perceptions of staff.

Characteristics that place youth at greater risk include previous sexual victimization history, lesbian, gay, or bisexual orientation, a most serious offense of violent sexual assault, and gender. Moreover, youth who have higher rates of victimization perceive their environment as one that is unsafe, as demonstrated by reports of being physically hurt by other youth and worrying about assault by youth and/or staff. It might be that the same traits that place them at greater risk for sexual victimization also place them at increased risk for other types of victimization. Alternatively, youth who are sexually victimized could perceive their environments as unsafe because of the sexual victimization. For example, youth who have been violated sexually while in a facility might view staff and conditions of that facility less favorably due to the sexual violation. In either scenario, individual youth characteristics, the behavior of individual staff, how individual youth perceive them, and the individual victim's perception of the climate of the facility are important correlates of individual-level sexual victimization.

Facility factors appear to have a reduced role in the prediction of sexual victimization as evidenced by the reduced number of significant correlates after accounting for individual-level factors. For youth-on-youth sexual assault, the only significant facility factor was increased proportions of youth with a prior history of sexual assault victimization. This is also a significant predictor at the individual level. This means that individual youth in a facility with a high proportion of youth with a prior history of sexual assault victimization are at elevated risk for sexual assault by another youth.

Facility factors are more important in incidents of staff sexual misconduct. Facilities that house greater proportions of youth with a person offense as their most serious offense, greater proportions of youth with no previous detention history, greater proportions of youth filing written complaints against a staff member, and facilities that test their staff for current drug use have higher rates of staff sexual misconduct than facilities that do not have these features. There is also some suggestion that informing youth that sexual activity is not allowed in the facility soon after their arrival reduces victimization risk. However, as noted above, the coefficient for this variable is unstable and needs further research.

Having established that characteristics of youth seem most important in explaining sexual victimization, the above analysis did find selected facility characteristics to be important. The importance of these characteristics vary by incident type. For youth-on-youth sexual assault, facility factors have little role. The only significant factor relies on the composition of youth in the facility (e.g., high numbers of youth reporting prior sexual assault) rather than a general operating characteristic of the facility.

Facilities most at risk for sexual assault are distinguished by a combination of operational characteristics and the composition of youth within the facilities. Operational characteristics such as those that test staff for current drug use and those with large numbers of youth filing written complaints against staff are at much higher risk than other facilities without these features. These might be indicators of facilities experiencing problems. These difficulties increase the likelihood of inappropriate sexual behavior by staff. Other facility factors contributing to staff sexual misconduct pertain to the composition of youth in the facility, such as high proportions of violent youth and those lacking previous detention histories.

Facilities with the lowest risk are those that inform youth relatively soon after arrival that sexual activity is not allowed. This process could provide a clear message to youth and to staff that there is no tolerance of sexual misconduct thereby reducing the risk to youth. However, as noted above, this particular result needs further research.

There are several limitations of the above analyses. Perhaps the most important is that the study might not have captured the most important facility characteristics, operational procedures, and facility climate related to the risk of sexual assault. A second limitation is the cross-sectional nature of the analysis. This makes it difficult to disentangle the causal relationship between victimization and the correlates. For example, youths' opinion that there is a lack of fairness is positively related to staff sexual misconduct. The above analysis cannot disentangle whether youth who have been victimized view the facility as unfair because they have been victimized or if the lack of fairness leads to victimization risk.

A final limitation is that the predictors used in the statistical analysis were correlated with each other. The analysis did test for multicollinearity at various stages, but inherent in any observational analysis like this, it is difficult to disentangle characteristics that are highly correlated. For example, sexual orientation was highly correlated with gender. Females were much more likely to report a lesbian or bisexual orientation. While the above models found sexual orientation to be highly significant, another data-set might have found gender to be more significant. Future analyses are needed to further explore how these two characteristics interact when explaining youth-on-youth victimization.

16.   Methodology

16.1   Facility-Level Methodology

16.1.1   Facility Aggregates

The facility-level analysis use responses to specific items on the facility questionnaire (FQ) and youth survey. Data were aggregated for each facility to create distinct facility-level predictors. To create the aggregates, the proportion of youth indicating a positive response for an individual item were summed together and divided by the total number of youth in the facility who provided a response to the item. Youth with missing data or with a response of "don't know" or "refusal" on an item were excluded from aggregate procedure. For example, in the survey youth were asked "is there gang activity in this facility?" (see predictor "gangs in the facility," table 21). All youth in a facility responding positively to this item were given a value of 1 then summed together to create a value for the numerator. All youth responding "yes" or "no" to the item were also given a value of 1 and summed together to create the denominator. This way the total number of youth in a facility reporting gang activity in a facility could be divided by the total number of youth responses. For a facility with seven total youth responses and three out of the seven reporting gang activity the calculation would be:

$$Proportion\ youth = \frac{\#\ youth\ endorsing\ facility\ characteristic}{\#\ youth\ responding\ to\ survey\ item} =$$

$$\frac{1 + 1 + 1}{1 + 1 + 1 + 1 + 1 + 1 + 1} = \frac{3}{7} = 0.43$$

Each facility then has an assigned proportional value for the condition (gangs in the facility) or youth characteristic (e.g., proportion of youth with previous sexual assault history) between 0 and 1, creating a continuous predictor of the item. A categorical version of each of these continuous predictors was created by defining equal quartiles based on 0-25, 26-50, 51-75, and 76-100. This was done to better understand the distribution of the predictors and the bivariate relationship with sexual victimization. Using the same example of "gangs in the facility," facilities in the lowest quartile (0-25) had no youth through 0.29 (e.g., 0 to 29%) of the population reporting gang activity. Conversely, facilities in the highest quartile (76-100) had .82 to 100 (82 to 100%) of their youth reporting gang activity.

Facility staffing proportions were created using the same aggregated method based on the staffing totals provided by facility administrators in the facility questionnaire (FQ). Using table 6 as an illustration, the predictor "total proportion of female staff" was calculated for each facility by taking the total number of all female staff and dividing it by the total of all staff. Likewise, youth-to-staff ratios were calculated taking the total number of youth in a facility and dividing it by the total number of staff. Ratios less than 1 represent more staff than youth while ratios greater than 1 mean there are more youth than staff.

16.1.2   Facility-Level Bivariate Tests of Significance

The rate of sexual victimization for each facility was calculated by taking the total number of youth reporting each incident type (e.g., youth-on-youth or staff sexual misconduct) and then dividing it by the total number of youth in the facility (excluding missing, "don't know," and "refusal"). The proportion was then multiplied by 100 to create a percentage rate. Mean assault rates and standard errors for each type of victimization were calculated for each facility predictor. Bivariate tests of significance were performed using the SAS 9.3 general linear model (GLM) least square means procedure. This procedure analyzes data within the framework of general linear models and was selected because the facility assault rate is a proportional measure (e.g., continuous). Models were estimated using each type of assault as the continuous dependent variable and one facility predictor as the independent variable. This method allows for classification of the predictor variables (e.g., class statement) so that multiple assault rate comparisons between the discrete groups within each categorical variable could be performed. Significant differences between discrete groups were identified comparing t-statistics on the means, using a minimum criteria of $p < 0.05$. For example, in table 1, the mean youth-on-youth assault rate for training/long-term secure facilities (3.2%) is significantly different than group homes (0.4%) and residential treatment facilities (1.7%). Predictors identified as significant in bivariate tests were included in the multivariate models. Non-significant predictors were excluded from further analyses. Note that significant predictors varied between the two types of victimization, so that some predictors were included in the youth-on-youth models and excluded from the staff sexual misconduct models and vice versa.

16.1.3   Facility-Level Multivariate Stepwise Regression Models

Multivariate regression estimation was used to determine what facility-level factors were significant in predicting sexual victimization. This particular analysis method was chosen because the outcome is continuous. The stepwise selection procedure was used in SAS 9.3 regression procedure to reduce the number of predictors in each model. SAS adds predictors one by one to the model, and assesses the F-statistic to determine if it should be selected (entry criteria was specified at 0.1). After each predictor is added, the procedure continues to assess all predictors already included in the model and deletes any predictor that does not produce an F-statistic significant at the $p<0.05$ or exit level. Only after this check is made and the necessary deletions are accomplished can another predictor be added to the model. The stepwise process ends when none of the predictors outside the model has an F-statistic significant at the 0.1 level for entry and every predictor in the model is significant at the $p<0.05$ level.[28]

All categorical predictors were dummy coded by assigning each discrete level a value of 1 or 0. This resulted in only significant discrete levels remaining in the model and created the most parsimonious and best-fitting models. When feasible, the continuous version of all proportional variables was included in the modeling phase (as opposed to the quartile categorical version) to increase overall model fit. Goodness of model fit was assessed by the adjusted R square value which calculates the percentage of variation explained by the independent variables (e.g., facility predictors) in predicting each type of facility assault. A weighted least-square adjustment was applied to each stepwise regression model to account for the differences in facility size in the multivariate analyses. This was calculated by (step 1) taking the square root of the total number of completed interviews for each facility, (step 2) summing these together across all the responding facilities, then (step 3) dividing 322 (the total number of facilities) by the summed total and then multiplied by the value created in step 1. This adjustment weights each facility for two reasons: (1) weighting by the square root of the number of completed interviews accounts for the unequal sample sizes within each facility and reduces the possibility of heteroscedasticity in the regression estimates, and (2) it multiplies each weight by a constant so that the weights sum to the original sample size of 322.

16.1.4   Facility-Level Conditional Predicted Rates

In each of the regression models, the conditional predicted rate represents the rate of sexual victimization (e.g., youth-on-youth, staff sexual misconduct) of a facility, with a specific characteristic conditional on the mean value for all the other predictors in the model. More

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[28] http://support.sas.com/documentation/cdl/en/statug/63033/HTML/default/viewer.htm#statug_reg_sect030.htm

specifically, the conditional predicted rate is defined as the estimator of the expected response of a facility, conditional on its belonging to a particular group and having the mean values of the rest of predictors. The conditional predicted rates can be calculated as:

$$\hat{p} = \exp(\hat{\alpha} + x_1 \hat{\beta}_1 + \bar{x}^* \hat{\beta}^*)$$

In this equation, x_1 is the particular characteristic of interest, $\bar{x}^*$ is a vector of mean values of the remaining predictors in the model. $\hat{\alpha}$, $\hat{\beta}_1$, and $\hat{\beta}^*$ stand for the corresponding estimate intercept and slopes of the model. Predicted rates can be calculated for both categorical and continuous predictors.

For example, viewing the categorical predictor multiple living units in table 3, the value of the multiple living unit predictor x_1, (i.e., 1 vs. 0) is used directly in the calculation. The predicted facility youth-on-youth sexual assault rate for facilities with multiple living units is around 2.5 percent (x_1=1) and it is 1 percent (x_1=0) for a facilities with a single living unit, given that the facility is at the mean of the joint distribution of the other three predictors $\bar{x}^*$ (e.g., primary facility type, sex of youth housed, and sex offender treatment program).

When x_1 is a continuous predictor, the proportion of youth are divided into two levels (e.g., high vs. low) based on the weighted median (for example, the proportion of youth in a facility reporting gang fights, as is shown in table 22). Dividing at the median creates two equally distributed groups of facilities. The facility youth-on-youth assault rate for those higher than the median is 2.8 percent (x_1 = mean value of the high category) and for those lower than the median the rate is 1.8 percent (x_1 = mean value of the low category) given that the facility is at the mean of the joint distribution of the other two predictors $\bar{x}^*$ (i.e., sex of youth housed and sex offender treatment program).

16.2   Individual-Level Methodology

16.2.1   Individual-Level Bivariate Tests of Significance
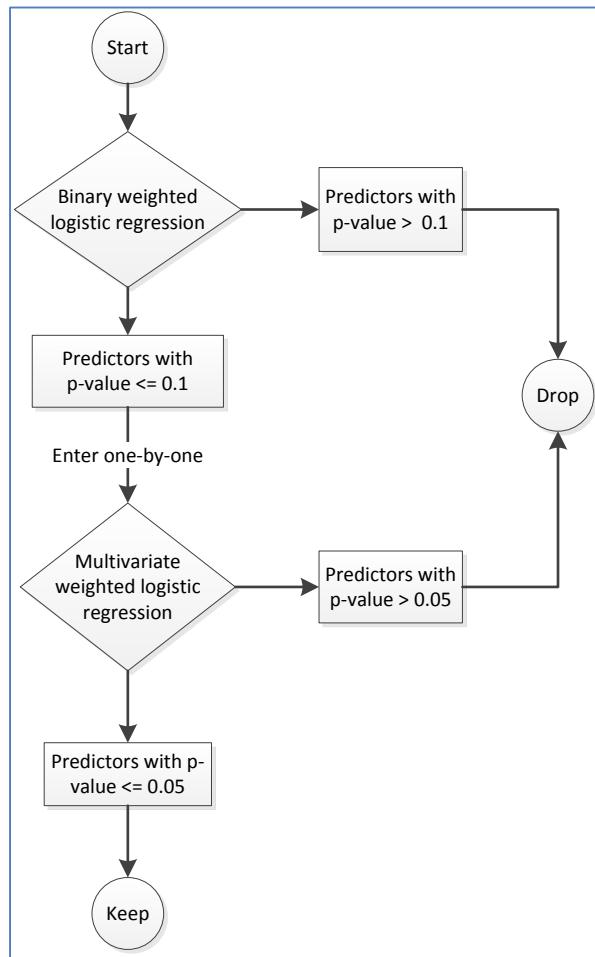
For the individual-level analyses, sexual assault rates were calculated for each individual-level predictor and each type of victimization. These were performed using crosstabular analyses in SAS 9.3 using the weighted youth level data. Significance testing was performed using logistic regression modeling techniques since the outcome variable (e.g., individual-level victimization) is dichotomous. Models were estimated using each type of assault as the dependent variable and one individual-level predictor as the independent variable. This method also allows for classification of the predictor variables (e.g., class statement) so that multiple assault rate comparisons between the discrete groups within each categorical variable could be performed. All models were computed with weights in SAS 9.3 survey logistic regression procedure using the Jackknife variance estimation method. Wald F-statistics ($p<0.05$) were calculated to test the effects of each discrete group within each categorical variable with each type of victimization.

16.2.2   Individual-Level Stepwise Logistic Regression Models

Multivariate logistic regression estimation was used to determine what individual-level factors were significant in predicting sexual victimization. This analysis method was chosen because the outcome is dichotomous. For the individual-level models, all individual-level predictors were included in the logistic regression models (regardless of significance in the bivariate tests). A manual stepwise selection procedure was used to reduce the number of predictors in each model. This procedure was replicated manually because the models were estimated using the weights in the survey logistic procedure and the stepwise procedure was not available. The manual stepwise procedure applied the steps below. Figure 5 illustrates this process.

1.   First, bivariate sets of weighted logistic regressions were conducted for each of the two outcomes (youth-on-youth sexual assault rate and staff sexual misconduct) with each of the predictors. The Jackknife estimation method was used. Predictors with p-value ≤ 0.1 were kept and ordered ascending by the p-value.

2.   The predictors from step 1 were then entered into the weighted logistic regression one by one based on the order generated in step 1. If the predictor remained significant (i.e., p-value≤ 0.05) it was retained in the model.

3.   All significant predictors in step 2 were entered simultaneously into one final weighted logistic model to ensure all predictors were still significant.

Figure 5.   Stepwise selection process for weighted logistic regression models

16.2.3   Predicted Probabilities for the Individual-Level Analyses

Two approaches are commonly used to calculate predicted probabilities at the individual level: (1) the predicted probability based on the conditional means (PPCM), similar to that in the facility-level analysis; and (2) the predicted probability based on observations approach (PPO).[29] For the individual-level models, both PPCM and PPO were calculated to demonstrate the differences between the two methods. The PPCM approach represents the probability that a youth with a particular characteristic has experienced sexual victimization (youth-on-youth and staff sexual misconduct) conditional on the youth having the mean value for all the other predictors in the model. The mathematical equation is:

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[29] Research Triangle Institute (2008). SUDAAN Language Manual Release 10.0. Research Triangle Park, NC, Section 4.8.3, pp. 209-211.

$$PPCM = \frac{\exp(\hat{\alpha} + x_1\hat{\beta}_1 + \bar{x}^* \hat{\beta}^*))}{1 + \exp(\hat{\alpha} + x_1\hat{\beta}_1 + \bar{x}^* \hat{\beta}^*))}$$

where x_1 is the particular characteristic of interest, $\bar{x}^*$ is a vector of mean values of the rest predictors. $\hat{\alpha}$, $\hat{\beta}_1$, and $\hat{\beta}^*$ stand for the corresponding estimate intercept and slopes of the model.

On the other hand, the PPO approach is defined as the average predicted response, if all the observations have been in a given group or are at a specified value for a continuous variable.

$$PPO = \frac{1}{w_{++++}} \sum_{h=1}^{H} \sum_{i=1}^{I_h} \sum_{j=1}^{J_{hi}} \sum_{k=1}^{K_{hij}} \frac{\exp(\hat{\alpha} + x_{hijk}^* \hat{\beta})}{1 + \exp(\hat{\alpha} + x_{hijk}^* \hat{\beta})}$$

where w_{++++} is equal to $\sum_{h=1}^{H} \sum_{i=1}^{I_h} \sum_{j=1}^{J_{hi}} \sum_{k=1}^{K_{hij}} w_{hijk}$. x_{hijk}^* represents the vector of covariates for a given observation in the dataset. For a categorical predictor, the vector has a "1" corresponding to the group of interest and a "0" for all other groups of that variable. For a continuous variable, it is the user-specified value of interest for that variable such as the median. $\hat{\alpha}$ and $\hat{\beta}$ stand for the corresponding estimate intercept and slopes of the model. In this approach, each observation's predicted probabilities is generated first and then a weighted mean is calculated across all observations.

PPCM is not the most suitable approach in nonlinear models (i.e., logistic regression).[30] In certain cases, PPCM will result in predictions that are not logical (e.g., means that are significantly below or above the observed means). For example, when using the PPCM for the model with gang fights as a predictor (see table 36) the predicted probability of youth-on-youth sexual assault for youth who report gang fights (e.g., gang fights=1) is 1%, and for those who report no gang fights (e.g., gang fights=0), it is 0.6%. These predictions are lower than the overall average assault rate (e.g., 2.5%) even though gang fights is significant in the model. On the other hand, when the PPO approach is used, each youth's individual predicted probability is generated first, and then a weighted average is calculated across the individual predicted probabilities for those youth in the group of interest. The predicted probabilities are then distributed across the mean assault rate (e.g., 2.5%) with the assault rate at 3.0% for youth reporting gang fights and 1.9% for youth not reporting gang fights. This pattern is evident for other predictors across both the youth-on-youth and staff sexual misconduct models. The disadvantage of the PPO approach is that it does not hold the other variables in the

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[30] Muller, C. J. and MacLehose, R. F. (2014). Estimating predicted probabilities from logistic regression: different methods correspond to different target populations. International Journal of Epidemiology, 43(3), 962-970.

model constant the same way as the PPCM approach does. Nonetheless, it does provide estimates one would expect from the interaction of all the variables that are found to be important in predicting victimization.

16.3   Multilevel Methodology

16.3.1   Block-by-Block Predictor Section

The second report analyses used two different sets of modeling techniques. In the block-by-block facility predictor selection phase, multivariate logistic regression estimation was used to identify significant facility-level factors in predicting each type of sexual victimization. All models were computed with the final survey weights in SAS 9.3 survey logistic regression procedure using the Jackknife variance estimation method. A manual stepwise selection procedure was used to reduce the number of predictors in each model (see Section 4.2.1 for a more extensive explanation of the stepwise selection process).

16.3.2   One by One, Stepwise, and Final Model Estimation

In order to examine both facility factors and individual youth characteristics together in a single statistical model, a series of multilevel logistic regression models were estimated. Multilevel modeling can simultaneously test for the significance of individual characteristics (level 1) and facility factors (level 2) in the prediction of sexual victimization.[31] If the statistical model does not explicitly account for the different levels, it is possible that the conclusions may not be correct. Multilevel linear modeling allows intercepts (means) and slopes to vary between higher level units so that "independence of errors is not required."[32] This analytic technique is of particular relevance since youth in facilities are more likely to be similar than youth in different facilities. For instance, youth in training/long-term secure facilities are likely to have similar criminal offenses and are likely to differ from youth in group homes. Likewise, staff in the same facility is likely to behave in certain ways that may influence the attitudes and behaviors of youth in comparable ways. Therefore, attitudes of youth and behavior of staff are prone to be similar within facilities but different across facilities.

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[31] Tabachnick, B.G. & Fidell, L.S (2007). Using multivariate statistics (5th ed.). Boston, MA: Pearson Education, Inc.

[32] Tabachnick, B.G. & Fidell, L.S (2007). Using multivariate statistics (5th ed.). Boston, MA: Pearson Education, Inc. pg. 782.

Multilevel analysis takes this into account so that interpretations of grouped data are more likely to be accurate.

Multilevel logistic regression was selected because the sexual victimization outcome is binary.[33] The full model with a binary outcome is expressed as:

$$\text{Level 1: } \eta_{ij} = \text{logit}[\pi_{ij}(\underline{x})] = \ln[\frac{\pi_{ij}(\underline{x})}{1-\pi_{ij}(\underline{x})}] = \beta_{0j} + \beta_{1j}X_{1ij} + \beta_{2j}X_{2ij} + ...\beta_{Qj}X_{Qij}$$

$$\text{Level 2: } \beta_{qj} = \gamma_{q0} + \sum_{s=1}^{S_q}\gamma_{qs}W_{sj} + u_{qj}$$

where η_{ij} represents the logit of the outcome variable (i.e., "youth-on-youth sexual assault" or "staff sexual misconduct"), X_{Qij} stands for the Qth individual-level predictor, and W_{sj} stands for the Wth facility-level predictor. γ_{q0} and γ_{qs} represent the fixed effects of the intercept and slopes. u_{qj} indicates the random effects which can be either fixed or random. To acquire better accuracy, an adaptive quadrature estimation method (with 5 quadrature points) (AQ) was used as the estimation method instead of the penalized quasi-likelihood (PQL) method or the Laplace method.[34] The PQL method is an approximation to maximum likelihood estimation to optimize a quasi-likelihood with a penalty term on the random effects while the AQ method is a numeric method for evaluating multi-dimensional integrals. Many studies have shown that AQ preforms considerably better than PQL and provides more accurate fixed and random effect coefficients,[35] therefore the AQ method was used in this analysis.

Missing cases were list-wise deleted and all multilevel analyses were performed in the Hierarchical Linear Modeling (HLM v. 7) software package. The HLM program was chosen because it offers the option to apply weights in the multilevel model. The weighting procedure uses a method of computation devised by Pfeffermann and colleagues[36] for hierarchical data and is based on the information of each case in the framework of maximum likelihood.

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[33] Raudenbush, S. W., & Bryk, A. S. (2002). Hierarchical linear models: Applications and data analysis methods (2nd ed.). Newbury Park, CA: Sage.

[34] O'Connell, A. A., Reed, S., Ren, W., & Li, J. (2010). Estimation methods and software comparison for hierarchical generalized linear models. Presented at the 2010 American Educational Research Association Annual Meeting in Denver, CO.

[35] Raudenbush, S. W., Yang, M.l., & Yosef, M. (2000). Maximum likelihood for hierarchical models via high order, multivariate LaPlace approximation. Journal of Computational and Graphical Statistics, 9(1), 141-157.

[36] Pfefferman, D., Skinner, C.J., Homes, D.J., Goldstein, H., & Rasbash, J. (1998). Weighting for unequal selection models in multilevel models. Journal of the Royal Statistical Society, Series B, 60, 1, 23-40.

In these analyses, two sets of weights (level 1 and level 2) were constructed and applied in all multilevel model estimations.

The level 2 weights were computed as the inverse of the probability that facility j was selected (P_j) from the sampling frame $l2wt_j = \frac{1}{P_j}$. The level 1 weights were computed as the inverse of the probability that youth i was selected given that facility j was selected $l1wt_{i|j} = \frac{1}{P_{i|j}} = \frac{1/P_i}{1/P_j}$, where P_i is the probability that youth i was selected. The two sets of weights are automatically scaled in the HLM v.7 software.[37]

For final models (youth-on-youth sexual assault and staff sexual misconduct), the fixed and random effects were estimated. Both level 1 and level 2 predictors were assumed to be fixed, and the level 1 intercepts were assumed to vary randomly across facilities. The fixed effects assess each predictor's average relationship with the outcome. The significant fixed effect results were presented in odds ratios and corresponding confidence intervals. The random effects assess the variation of each facility's mean predicted assault rates across facilities, and the results were presented showing a total value of variance with a standard error term. An intra-class correlation (ICC) was also calculated to demonstrate how much of the variation of the outcome (i.e., youth-on-youth assault rate and staff sexual misconduct assault rate) can be attributed to variability across facilities.[38]

For youth-on-youth sexual assault, the odds ratios of the significant fixed effects were presented in table 52. For example, lesbian, gay, or bisexual youth were about 5.5 times more likely to experience youth-on-youth sexual assault than heterosexual youth after controlling for other level 1 and level 2 predictors. The intercept random effect is 0.12 with a standard error term of 0.12. This indicates that a small non-significant amount of variance remains in the intercept of the youth-on-youth model (see table 52), and it is reasonable to assume that the model is fully explained by the included predictors.[39]

The ICC suggests that 3.5% of the youth-on-youth assault rate is a result of variability across facilities. The ICC for the model was calculated as the level 2 variance divided by the sum of the level 2 variance and the level 1 variance or (0.12)/(0.12+3.29)=3.5%. In this equation, the

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[37] Chantala, K & Suchindran, C. (2006) Adjusting for Unequal Selection Probability in Multilevel Models: A Comparison of Software Packages. Proceedings of the American Statistical Association, Seattle, WA: American Statistical Association.

[38] The ICC is not technically applicable for binary data. Nonetheless, it provides a sense of the mount of variance in the data that is attributable to between facilities.

[39] Significance test of the random effects was calculated by an approximate chi-square test of the deviation of group means from the grand mean as discussed in Raudenbush, S. W., & Bryk, A. S. (2002). Hierarchical linear models: Applications and data analysis methods (2nd ed.). Newbury Park, CA: Sage.

dichotomous outcome can be considered as a dichotomization of an unknown latent continuous variable with a level 1 residual following the logistic distribution of mean equals to 0, and variance equals to $\frac{\pi^2}{3}$ (i.e., 3.29) respectively.[40]

Similarly, the fixed effects in table 53 show that male youth are 3.8 times more likely to experience staff sexual misconduct than female youth after controlling for other level 1 and level 2 predictors. For the random effects, the variance is 0.02 with a standard error term of 0.04 demonstrating little variance left in the staff sexual misconduct model (see table 53) and that the model is fully explained by the current predictors. The ICC was calculated as (0.02)/(0.02+3.29)=0.6%. Therefore, 0.6% of the staff sexual misconduct assault rate can be attributed to variability across facilities.

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[40] Evans, M., Hastings, N., & Peacock, B. (2000). Statistical distributions (3rd ed.). New York: Wiley.

Appendices

FORM APPROVED
O.M.B. No.: 1121-0319
EXPIRATION DATE: 07/31/2014

National Survey of Youth in Custody

Facility Questionnaire

Facility name:

<Name of Facility>

NSYC researchers are scheduled to visit your facility on **<date1>**.

This questionnaire asks about staffing and youth in this facility as of
<date2>,
the Wednesday before the NSYC visit.

1. PERSON COMPLETING THIS QUESTIONNAIRE				
Name		Email Address		
Title				
Facility name		Telephone		
		Area code	Number	Extension
Facility address – *Number and street/or P.O. Box/Route number*				
		Fax Number		
City	State	ZIP Code	Area code	Number

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 1121-0319. The time required to complete this information collection regarding the facility (Q1-Q17) is estimated to average 30 minutes per response and information collection for each living unit is estimated to average 10 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. Send comments regarding this burden estimate or any aspect of this survey, including suggestions for reducing this burden, to the Director, Bureau of Justice Statistics, 810 Seventh Street, NW, Washington, DC 20531. Do not send your completed form to this address.

MUFQ 9999

FACILITY STATISTICS

1. Please provide the number of staff members working at the facility as of Wednesday, <date2>. Include full and part-time payroll and non-payroll staff. *(Examples of non-payroll staff: personnel of a parent agency or those paid under contractual agreements/grants.)*

	TOTAL	GENDER		LENGTH OF SERVICE IN FACILITY	
		Male	Female	Less than 1 year	1 year or more
a. All staff	____	____	____	____	____

2. For each category, please provide the number of staff members working at the facility as of Wednesday, <date2>.

   - Include full and part-time payroll and non-payroll staff.

   - Include each staff person in <u>only one category</u>. If a staff member serves in more than one capacity, categorize the person based on his or her primary role.

	TOTAL	GENDER		LENGTH OF SERVICE IN FACILITY	
		Male	Female	Less than 1 year	1 year or more
a. Front line supervision staff / correctional officers	____	____	____	____	____
b. Program staff *(instructors, teachers, librarians, education assistants and other program staff)*	____	____	____	____	____
c. Medical or health care staff *(certified counselors, doctors, dentists, psychologists, psychiatrists, social workers, nurses, and medical assistants)*	____	____	____	____	____
d. Administrative staff *(wardens, superintendents, assistants, office clerical, and others in administrative positions)*	____	____	____	____	____
e. Other staff	____	____	____	____	____

3. During the past 12 months, has there been change in the number of staff?

   ☐ Yes → *(Please describe the change.)* _____
   _____
   _____

   ☐ No

4. Please provide the number of volunteers working at the facility as of Wednesday, <date2>. Include full and part-time volunteers working in the facility who receive no compensation of any type.

	TOTAL	GENDER	
		Male	Female
a. Volunteers	_____	_____	_____

5. Please provide the start and end times for each shift and the numbers of front line staff and other direct care staff that worked each shift on <u>Wednesday, <date2></u>. *(If staff in your facility do not work standard shifts (e.g., the facility operates "rolling shifts"), please approximate the number of staff by category working during the following time periods: Day = 6:00am-2:00pm; Evening = 2:00pm-10:00pm; Overnight = 10:00pm-6:00am.)*

	Day	Evening	Overnight
a. Start and end times for each shift	_____ to _____ Start End	_____ to _____ Start End	_____ to _____ Start End
	or	or	or
	Check here if no standard shifts ☐, and define the shift as 6:00am-2:00pm.	Check here if no standard shifts ☐, and define the shift as 2:00pm-10:00pm.	Check here if no standard shifts ☐, and define the shift as 10:00pm-6:00am.
b. Number of front line supervision staff / correctional officers from Question 2, row a, working by shift on Wednesday, <date2>	_____	_____	_____
c. Number of other staff from Question 2, rows b-e, providing direct care by shift on Wednesday, <date2>. This would include program staff, medical and health care staff, administrative staff, and any other staff with direct care responsibility during the shift.	_____	_____	_____

6. This question asks about all youth in this facility on Wednesday, <date2>.

6a.   On Wednesday, <date2>, how many youth had assigned beds in this facility?

_____ youth with assigned beds

6b.   How many of these youth were adjudicated?

_____ adjudicated youth with assigned beds

PERSONNEL SCREENING

7. Screening involves procedures that go beyond asking someone to self-disclose information. Examples of screening include checking police records and records of other public agencies.

    Please indicate whether or not any of the following are considered when screening new hires (full or part-time payroll and non-payroll positions) and volunteers involved in direct care of youth.

Subject	Considered for new hires		Considered for volunteers (N/A=no volunteers)		
	Yes	No	Yes	No	N/A
a. Criminal record	☐	☐	☐	☐	☐
b. Conviction for drug use	☐	☐	☐	☐	☐
c. Conviction for child abuse or sexual abuse	☐	☐	☐	☐	☐
d. Test for current drug use	☐	☐	☐	☐	☐
e. Psychological evaluation	☐	☐	☐	☐	☐

8. In the past 12 months, has there been a change in this practice?

    ☐ Yes → *(Please describe the change and note whether it was in response to PREA Standards or Guidelines.)* _____

    ☐ No

VIDEO SURVEILLANCE

9. Currently, how many of the following areas in your facility use video surveillance?

	All	Some	None
a. Classrooms/Library	☐	☐	☐
b. Entrances to sleeping areas	☐	☐	☐
c. Sleeping areas	☐	☐	☐
d. Entrances to bathrooms/showers	☐	☐	☐
e. Bathrooms/Showers	☐	☐	☐
f. Other indoor areas	☐	☐	☐
g. Outdoor recreation areas	☐	☐	☐
h. Other outdoor areas	☐	☐	☐

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10. If your facility does not use video surveillances (i.e., all areas in Question 9 were answered "None"), check this box ☐ and go to Question 11.

How does your facility use the video surveillance in each of these areas?

	Live monitoring		Recording for investigation		Other purpose		No video surveillance
	Yes	No	Yes	No	Yes	No	
a. Classrooms/Library	☐	☐	☐	☐	☐	☐	☐
b. Entrances to sleeping areas	☐	☐	☐	☐	☐	☐	☐
c. Sleeping areas	☐	☐	☐	☐	☐	☐	☐
d. Entrances to bathrooms/showers	☐	☐	☐	☐	☐	☐	☐
e. Bathrooms/Showers	☐	☐	☐	☐	☐	☐	☐
f. Other indoor areas	☐	☐	☐	☐	☐	☐	☐
g. Outdoor recreation areas	☐	☐	☐	☐	☐	☐	☐
h. Other outdoor areas	☐	☐	☐	☐	☐	☐	☐

11. During the past 12 months, have there been any changes in video surveillance?

☐ Yes → *(Please describe the change.)* _____
_____
_____
_____

☐ No

5

MUFQ 9999

Facility-level and Individual-level Correlates of Sexual Victimization in Juvenile Facilities, 2012   A5

FACILITY CHARACTERISTICS

12. **What type of facility is this?**

		Yes	No
a.	Detention center	☐	☐
b.	Training School/Long-term secure facility	☐	☐
c.	Reception or diagnostic center	☐	☐
d.	Group home/Halfway house	☐	☐
e.	Residential treatment center	☐	☐
f.	Boot camp	☐	☐
g.	Ranch, forestry camp, wilderness or marine program, or farm	☐	☐
h.	Runaway and homeless shelter	☐	☐
i.	Other type of shelter	☐	☐
j.	Other → *(Please describe the type of facility.)*	☐	☐

_____
_____
_____

13. **If Question 12 has only one type marked, check this box ☐ and go to Question 14.**

    If Question 12 has more than one type marked, please select the primary function of this facility? *(Mark only one answer.)*

    ☐ Detention center
    ☐ Training School/Long-term secure facility
    ☐ Reception or diagnostic center
    ☐ Group home/Halfway house
    ☐ Residential treatment center
    ☐ Boot camp
    ☐ Ranch, forestry camp, wilderness or marine program, or farm
    ☐ Runaway and homeless shelter
    ☐ Other type of shelter
    ☐ Other → *(Please describe the type of facility.)* _____

14. We would like your estimate of the percent of youth in residence who have a history or currently have any of these problems, conditions, or patterns of behavior.

Please think about each of the categories separately in relation to your total population. Some youth may be represented in more than one category.

		0%	1-25%	26-50%	51-75%	76-100%
a.	Self-injury/suicidal	☐	☐	☐	☐	☐
b.	Violent to others	☐	☐	☐	☐	☐
c.	Abused by parents (physical, emotional, and/or sexual abuse)	☐	☐	☐	☐	☐
d.	Predatory sexual behavior	☐	☐	☐	☐	☐
e.	Rape victimization	☐	☐	☐	☐	☐
f.	Prostitution	☐	☐	☐	☐	☐
g.	Gang membership/affiliation	☐	☐	☐	☐	☐
h.	Psychiatric condition	☐	☐	☐	☐	☐
i.	Developmental disability	☐	☐	☐	☐	☐

15. During the past 12 months, how many youth have left the facility? Include youth who have been discharged, transferred to another facility, or had some other type of exit from the facility.

_____
Youth

16. What was the average length of stay for youth who left the facility in the past 12 months? Consider the average length of time youth spent <u>in this facility</u> from admission through discharge, transfer, or other type of exit from the facility.

_____ . ___ OR _____
Months   Days

7

MUFQ 9999

Facility-level and Individual-level Correlates of Sexual Victimization in Juvenile Facilities, 2012   A7

17. **Within your facility, are any of the following factors considered when assigning youth to living units?** *(Living units are places where youth are housed such as wings, floors, pods, dorms, barracks, or cottages. Do not include time-out or recreation rooms, classrooms, infirmary, isolation, or any location unless it is the only area in which a youth has an assigned bed.)*

		Yes	No
a.	Offense history	☐	☐
b.	Risk of escape	☐	☐
c.	Danger to self	☐	☐
d.	Danger to others	☐	☐
e.	Age	☐	☐
f.	Gender	☐	☐
g.	Sexual orientation	☐	☐
h.	Special needs	☐	☐
i.	Other → *(Please describe the factor.)*	☐	☐

8

MUFQ 9999

LIVING UNIT CHARACTERISTICS OF <NAME OF UNIT1>

Please use this form to describe the unit named above.

If youth are not assigned to this unit, please check this box ☐ and leave the remaining questions blank.

A. Does the unit specialize in a particular treatment?

☐ Yes
☐ No → *(Go to Question D)*

B. What kind of treatment does this unit specialize in?

	Yes	No
a. Mental health treatment	☐	☐
b. Substance abuse treatment	☐	☐
c. Sex offender treatment	☐	☐
d. Treatment for arsonists	☐	☐
e. Treatment for specifically violent offenders	☐	☐
f. Other → *(Please describe.)*	☐	☐

_____
_____

C. If Question B has only one type marked, check this box ☐ and go to Question D.

If Question B has more than one type marked *Yes*, please select the primary treatment specialization of this unit. *(Mark only one answer.)*

☐ Mental health treatment
☐ Substance abuse treatment
☐ Sex offender treatment
☐ Treatment for arsonists
☐ Treatment for specifically violent offenders
☐ Other → *(Please describe the specialization.)*

_____
_____
_____

D. Considering the youth assigned to this unit during the past 12 months, what was the average length of time they stayed in the unit? If a youth was assigned to the unit multiple times, count the length of each stay separately.

Example: One youth stayed in the unit for 6 months and another youth stayed in the unit twice, once for 5 months and once for 3 months. These count as three separate stays: one for 6 months, one for 5 months, and one for 3 months. The average length of stay in this example would be 4.7 months [i.e., (6+5+3 months)/3 stays].

_____ . ___ OR _____
Months   Days

E. On Wednesday, <date2>, how many of the youth in this unit were:

a. Male   _____
b. Female   _____

F. On Wednesday, <date2>, what was the age range of youth assigned to this unit?

_____ to _____
minimum age   maximum age

G. On Wednesday, <date2>, how many standard and makeshift beds were in this unit?

Makeshift beds are those used when the number of standard beds is insufficient for the number of youth assigned to the unit.

_____
Beds

H. On Wednesday, <date2>, how many of each type of bed were assigned and how many were not assigned? *(The total number of beds reported in this question should match the number reported in Question G.)*

	Assigned	Not assigned
a. Standard beds	_____	_____
b. Makeshift beds	_____	_____

I. What are the arrangements of the sleeping rooms in this unit? *(Mark only one answer.)*

☐ 1 youth per sleeping room
☐ 2 youth per sleeping room
☐ 3 youth per sleeping room
☐ 4 youth per sleeping room
☐ 5 to 10 youth per sleeping room
☐ 11 to 25 youth per sleeping room
☐ More than 25 youth per sleeping room
☐ Other → *(Please describe the arrangements.)*

_____
_____
_____

J. On Wednesday, <date2>, how many of the youth with assigned beds in this unit were court-adjudicated for an offense?

_____
Youth

1   LUC 9999

COMMENTS SECTION

Please add any additional comments or notes in the area below.

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Appendix B
Facility-Level Construct Measures

Construct name [a]	Item number	Item text
Written up for fighting	B15	Have you ever been written up or charged with physically fighting with youth here?
	B23	Have you ever been written up or charged with physically fighting with a facility staff member?
	B24	Have you ever been written up or charged with threatening a facility staff member?
Positive perceptions of staff	B1a	Are facility staff good role models?
	B1b	Are the facility staff friendly?
	B1c	Do the staff seem to genuinely care about you?
	B1d	Are the staff helpful?
	B1e	Are the staff disrespectful (reversed)?
	B1f	Are the staff hard to get along with (reversed)?
	B1g	Are the staff mean (reversed)?
	B1h	Are the staff fun to be with?
Lack of fairness	B2a	Youth here are punished even when they don't do anything wrong.
	B2b	Facility staff use force when they don't really need to.
	B2c	Problems between facility staff and youth here can be worked out (reversed).
	B2d	Something bad might happen to me if I file a complaint against a staff member.
	B2e	I usually deserve any punishment that I receive (reversed).
	B2f	Punishments given are fair (reversed).
	B2g	The staff treat youth fairly (reversed).
Physical assault by youth	B9	Have you ever been hit, punched, or assaulted by another youth here?
	B11	Has another youth here physically hurt you on purpose?
	B14	Did you see a doctor, nurse, or other health care person for any of these injuries?
Physical assault by staff	B17	Have you ever been hit, punched, or assaulted by facility staff here?
	B19	Has a staff member physically hurt you on purpose?
	B22	Did you see a doctor, nurse, or other health care person for any of these injuries?

[a] Constructs were developed by summing all positive responses by each individual youth in a facility, and then computing an average score for all youth within a facility.

6/5/2015

Appendix C
Individual-Level Construct Measures

Construct name [a]	Item number	Item text
Written up for fighting	B15	Have you ever been written up or charged with physically fighting with youth here?
	B23	Have you ever been written up or charged with physically fighting with a facility staff member?
	B24	Have you ever been written up or charged with threatening a facility staff member?
		Never=never written up for fighting, 1 time= 1 positive response, 2 times= 2 positive responses, 3 times=3 positive responses
Well-defined structure	B2i	There are enough staff to monitor what is going on in this facility.
	B26	Were you told how to report if a staff member or youth is breaking the rules?
	B27	Were you told that you would not get into trouble if you report that a staff member or youth is breaking the rules?
	B28	After you got to the facility (this time), when did you first learn that sexual activity is not allowed? Was it.. (all options vs. never)
		No=no response to all items, Low=1 positive response, Medium=2 positive responses, Medium High=3 positive responses, High=all positive responses
Positive perceptions of staff	B1a	Are facility staff good role models?
	B1b	Are the facility staff friendly?
	B1c	Do the staff seem to genuinely care about you?
	B1d	Are the staff helpful?
	B1e	Are the staff disrespectful (reversed)?
	B1f	Are the staff hard to get along with (reversed)?
	B1g	Are the staff mean (reversed)?
	B1h	Are the staff fun to be with?
		No=no response to all items, Low=1-4 positive responses, Medium=5-7 positive responses, High=all positive responses
Lack of fairness	B2a	Youth here are punished even when they don't do anything wrong.
	B2b	Facility staff use force when they don't really need to.
	B2c	Problems between facility staff and youth here can be worked out (reversed).
	B2d	Something bad might happen to me if I file a complaint against a staff member.
	B2e	I usually deserve any punishment that I receive (reversed).
	B2f	Punishments given are fair (reversed).
	B2g	The staff treat youth fairly (reversed).
		No=no response to all items, Low=1-3 positive responses, Medium=4 positive responses, High=5-7 positive responses

[a] Constructs were developed by summing all positive responses by each individual youth in a facility and creating categories based on the number of responses.