substance use risk among sexual minority students

data from the 2005 NYC youth risk behavior survey

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acknowledgements

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background: youth risk behavioral survey

- Developed in 1990 to monitor priority health risk behaviors among 9-12 graders.

- Probability sample representative of all NYC High School students.

- Inclusion of sexual identity / sexual behavior
  - Currently included in 13 areas
  - First included in NYC in 2005

- NYC questions:
  - Q61. During your life, with whom have you had sexual contact (males, females or males and females)
  - Q62. Which of the following best describes you? (heterosexual/straight, gay or lesbian, bisexual, not sure)

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methods:
classification of sexual orientation/identity

Based on self-reported sexual behavior **and** identity:

- Females (N=3,982) were categorized into:
  - WSM (heterosexual) N= 3,561
  - WSW (lesbian) N= 188
  - WSW/M (bisexual) N= 233.

- Males (N=3,752) were categorized into:
  - MSW (heterosexual) N= 3,534
  - MSM (gay) N= 121
  - MSM/W (bisexual) N=97.

- Persons with discordant behavior and identity were classified as gay/lesbian if either identity or behavior were reported as such.

- Those who were missing gender or behavior and identity were excluded (N=406).

- For simplification, for this presentation we are referring to categories as Gay, Lesbian, Bisexual but this includes youth who are included in the categories based on sexual behavior only.

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sample – sexual identity / sexual behavior

	WSM	WSW	WSW/M	TOTAL GIRLS
N	3,561	188	233	3,982
N (weighted)	(121,457)	(6,177)	(7992)	(135,626)
%	89	5	6	51 (% of total sample)
	MSW	MSM	MSM/W	TOTAL BOYS
N	3,534	121	97	3,752
N (weighted)	(127,533)	(3,407)	(3,395)	(134,336)
%	94	3	3	49 (% of total sample)

NOTE:
22 Cases were dropped because they didn't identify their gender
151 females dropped because of no ID + no behavior
233 males dropped because of no ID + no behavior.

demographics

	MSW	MSM	MSM/W	WSM	WSW	WSW/M		% TOTAL of sample
Age (%)								
12-15	49	16	63	50	45	49		40
16-17	41	63	31	42	45	44		50
17+	10	21	5	8	10	8		10
Ethnicity (%)								
African-American	31	43	31	36	29	40		31
Asian	16	13	10	12	9	1		8
Hispanic	38	33	28	40	38	42		41
White	10	8	16	8	10	10		13
Other	5	2	15	4	13	8		6

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methods: analytic

- Statistical analyses were conducted on weighted data using SUDAAN software to account for complex sampling and SPSS for data editing and management.

- SUDAAN's crosstab procedure was used for weighted frequencies and percentage distribution.

- SUDAAN's logistic procedure was used to produce estimates of model parameters, standard errors, odds ratios and confidence intervals to model significance.

FINDINGS:
ALCOHOL & DRUG USE

Findings: smoke (daily)

% of boys

% of girls
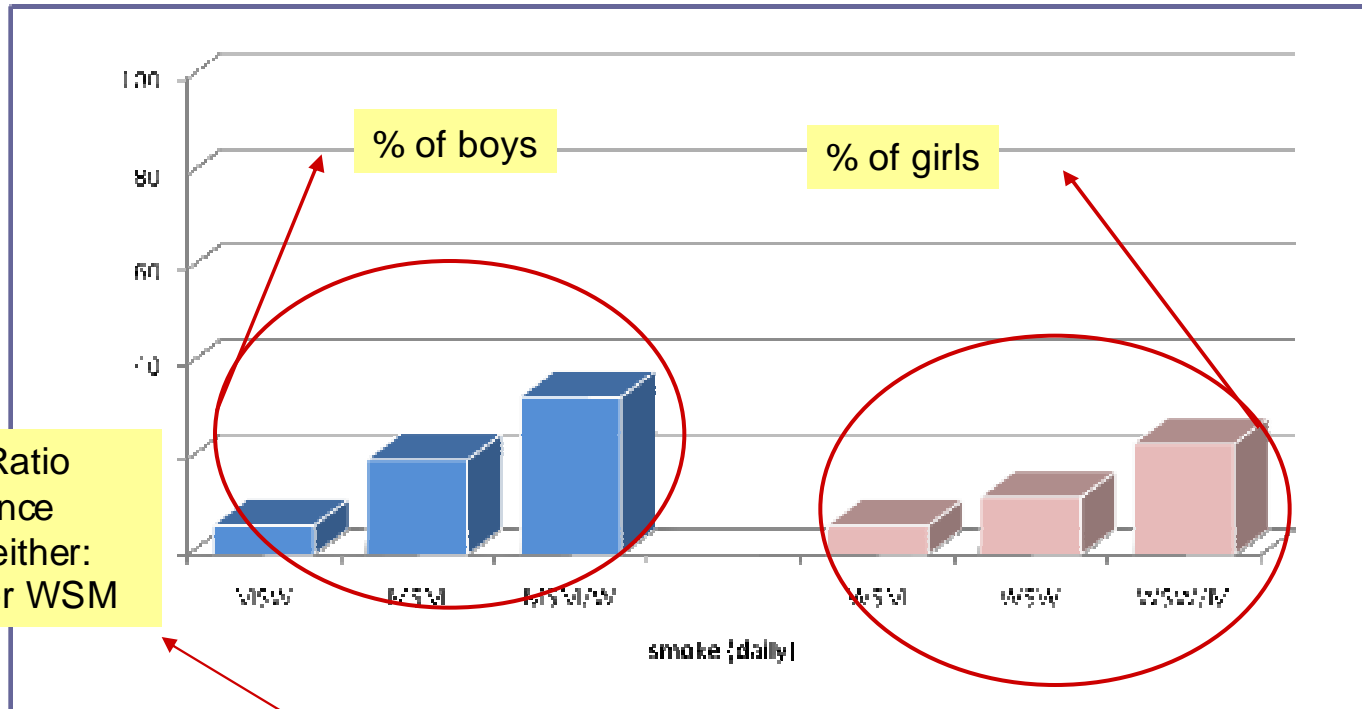
Odds Ratio Reference group either: MSW or WSM

p-value & confidence intervals or OR

MSM: OR= 3.34,
p= 0.00, CI= 1.53-7.30

MSM/W: OR= 10.20
p= 0.00, CI= 4.87-21.38

WSW:OR= 1.96
p= 0.08, CI= 0.92-4.16

WSW/M: OR= 5.17
p= 0.00, CI= 2.86-9.34

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Findings: smoke (daily)
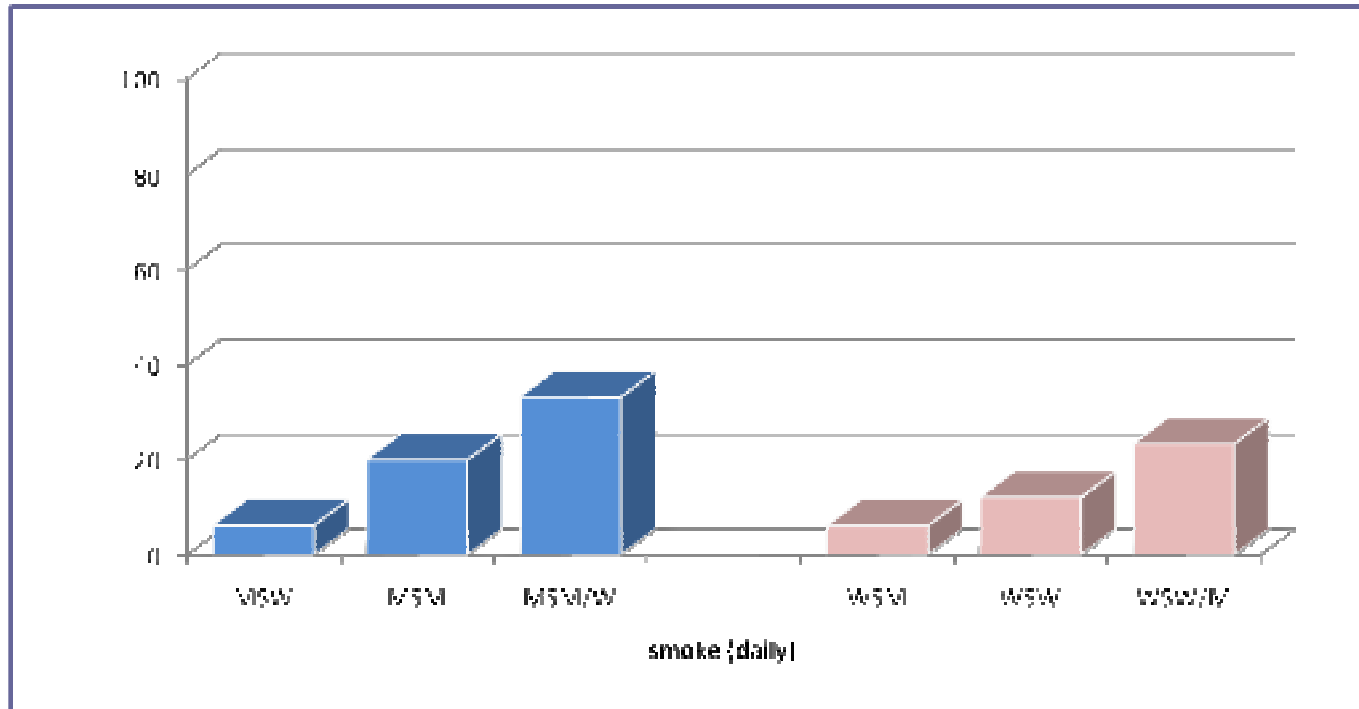
MSM: OR= 3.34,
p= 0.00, CI= 1.53-7.30

WSW: OR= 1.96
p= 0.08, CI= 0.92-4.16

MSM/W: OR= 10.20
p= 0.00, CI= 4.87-21.38

WSW/M: OR= 5.17
p= 0.00, CI= 2.86-9.34

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Findings: binge alcohol
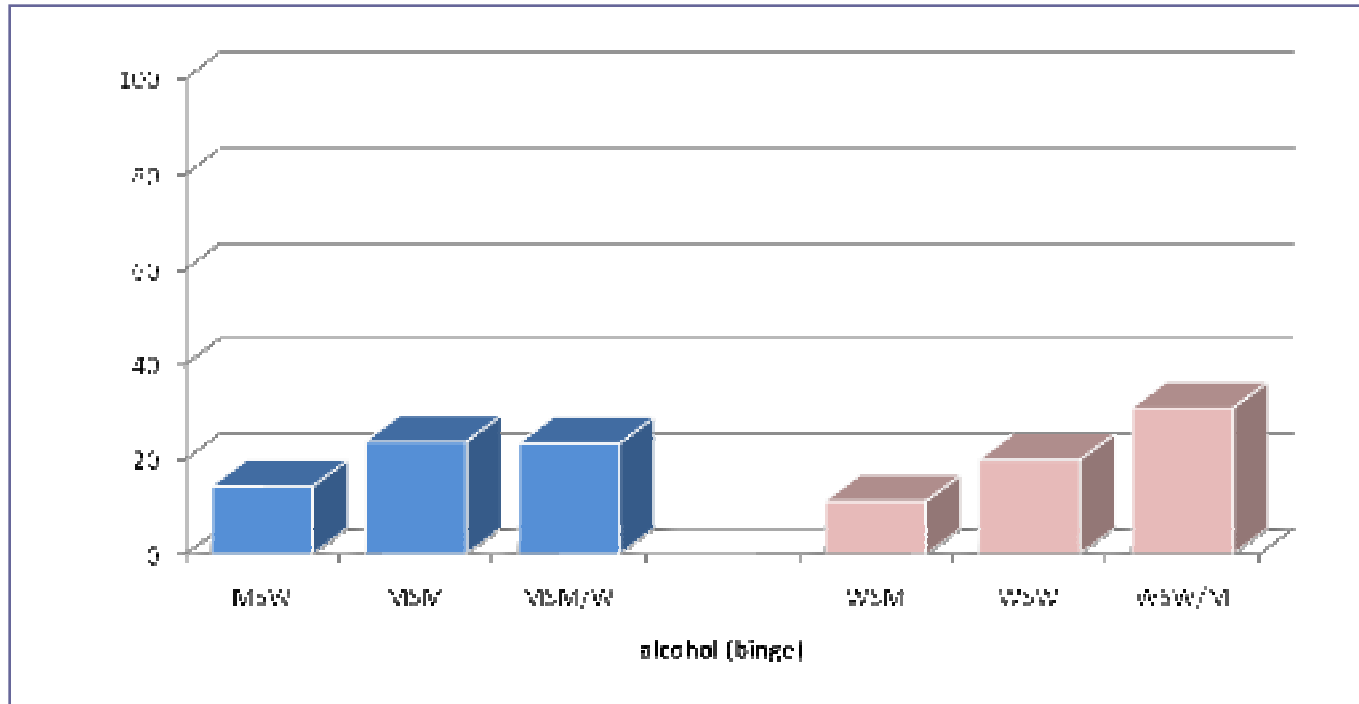
MSM: OR= 1.97
p= 0.12, CI= 0.83-4.66

WSW: OR=1.70
p=0.26, CI=0.68-4.28

MSM/W: OR= 2.08
p= 0.14, CI= 0.79-5.50

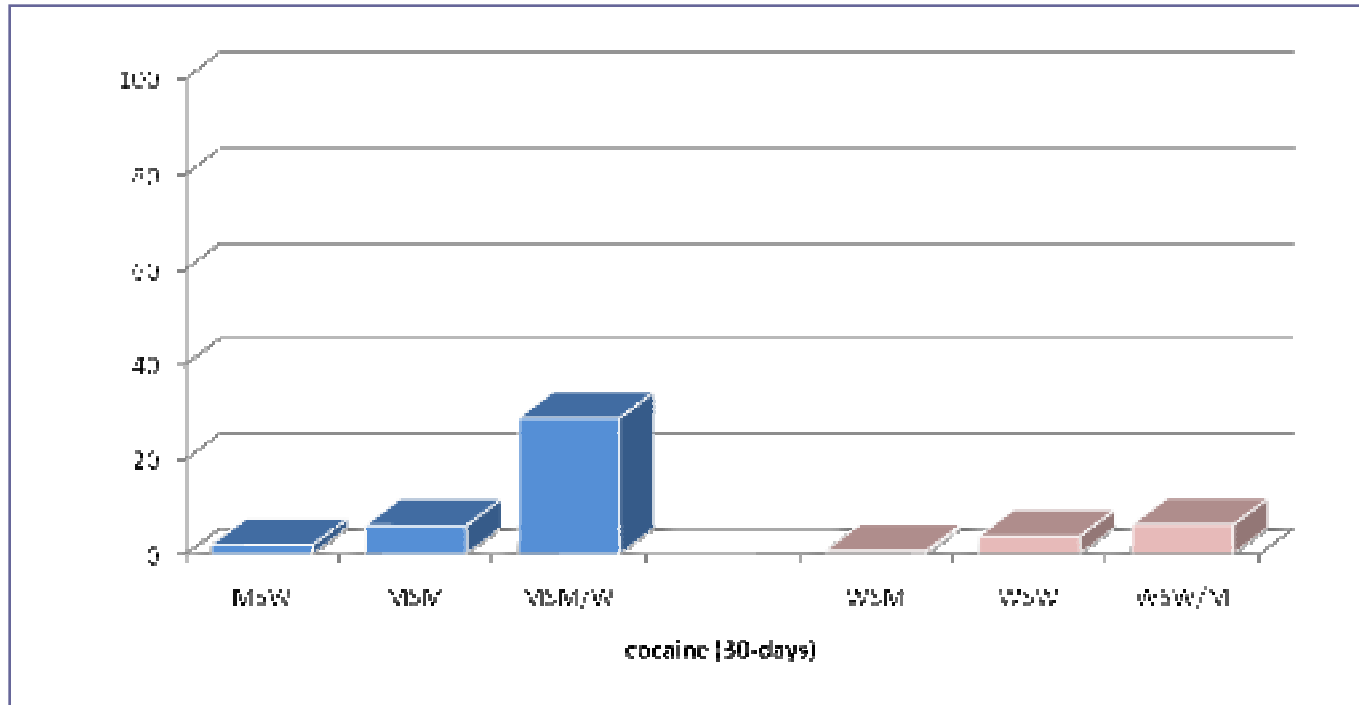WSW/M: OR= 3.14
p=0.00, CI=1.86-5.31

Findings: marijuana

marijuana (30-days)
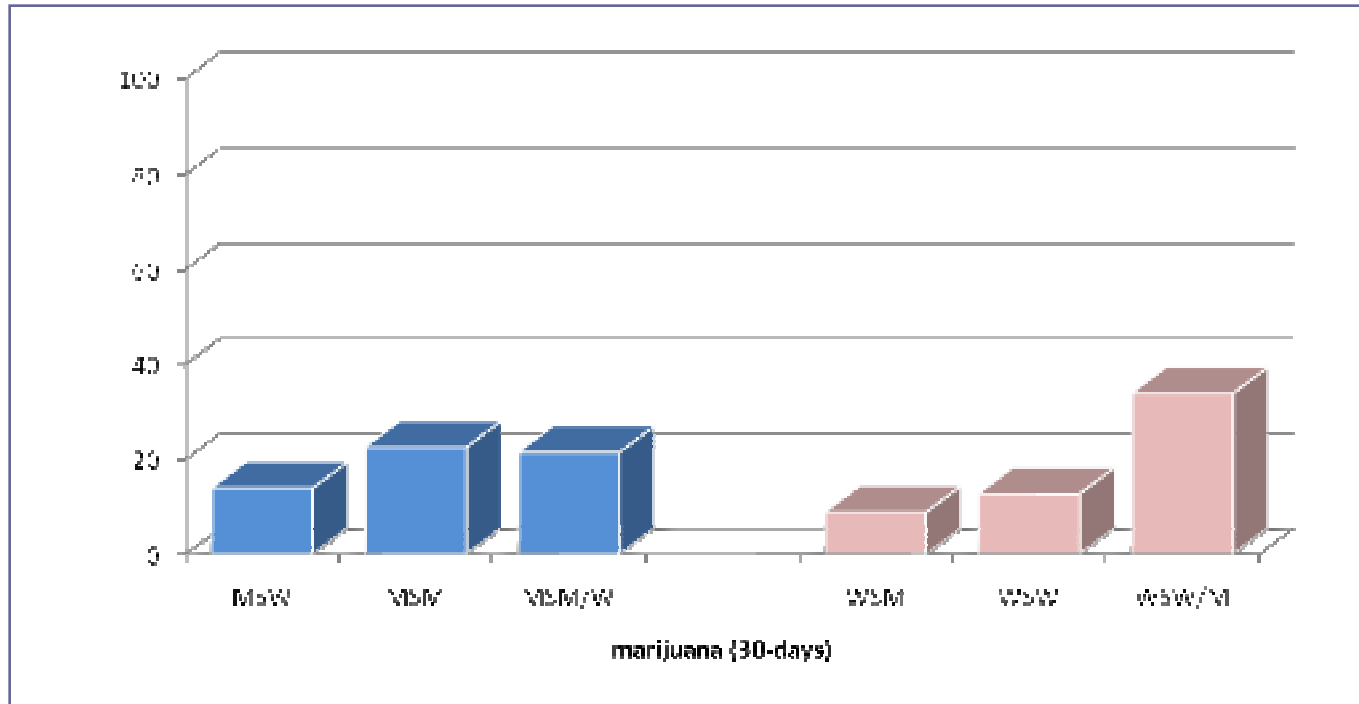
MSM: OR=1.68
p=0.33, CI=0.59-4.74

WSW: OR= 1.44
p=0.36, CI=0.66-3.16

MSM/W:OR= 1.71
p=0.31, CI=0.60-4.85

WSW/M: OR= 4.58
p=0.00, CI=2.85-7.37

Findings: cocaine

MSM: OR=3.46
p=0.06, CI=0.93-12.80

WSW: OR= 4.84
p=0.01, CI=1.47-15.94

MSM/W: OR= 25.26
p=0.00, CI=7.66-83.36

WSW/M: OR=9.34
p=0.00, CI=3.38-25.81

Findings: methamphetamine
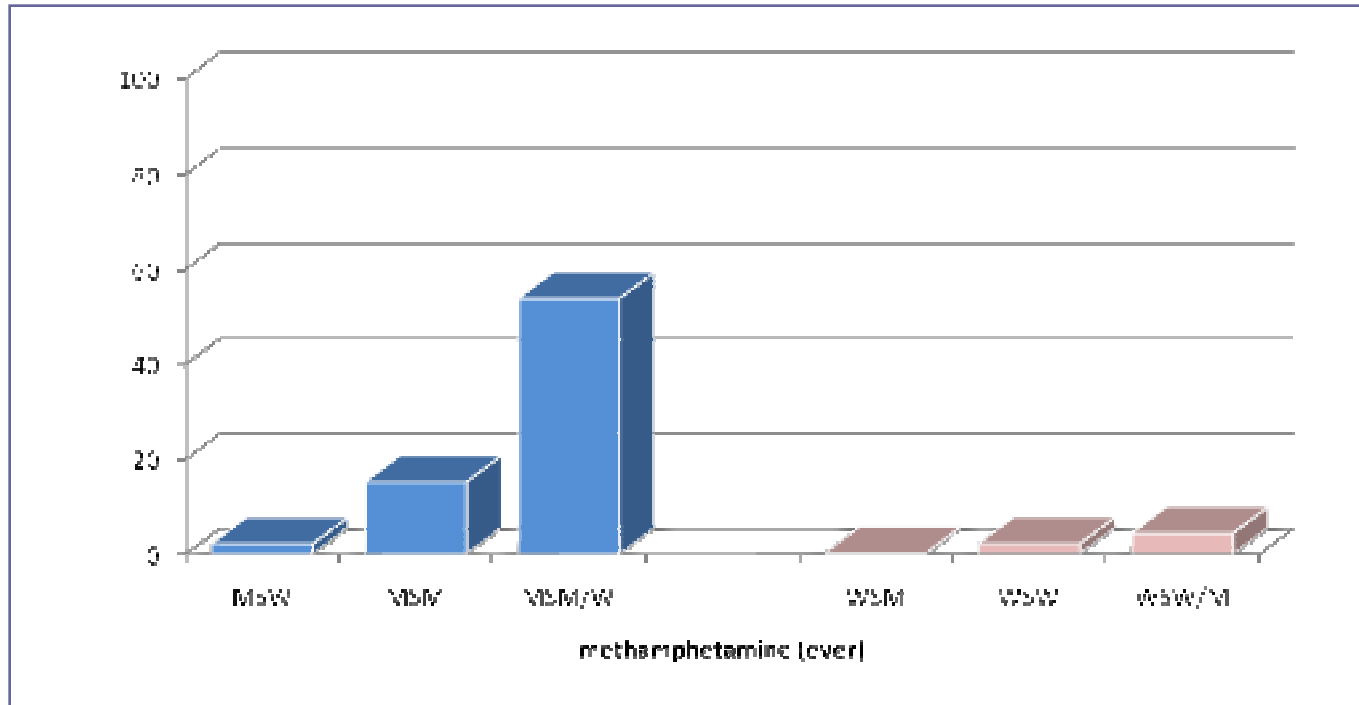
MSM: OR= 8.28
p=0.00, CI=2.05-33.41

WSW: OR=3.69
p=0.06, CI=0.97-14.01

MSM/W: OR=52.72
p=0.00, CI=16.25-170.99

WSW/M: OR= 4.96
p=0.00, CI=2.29-10.75

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Findings: ecstasy (ever)
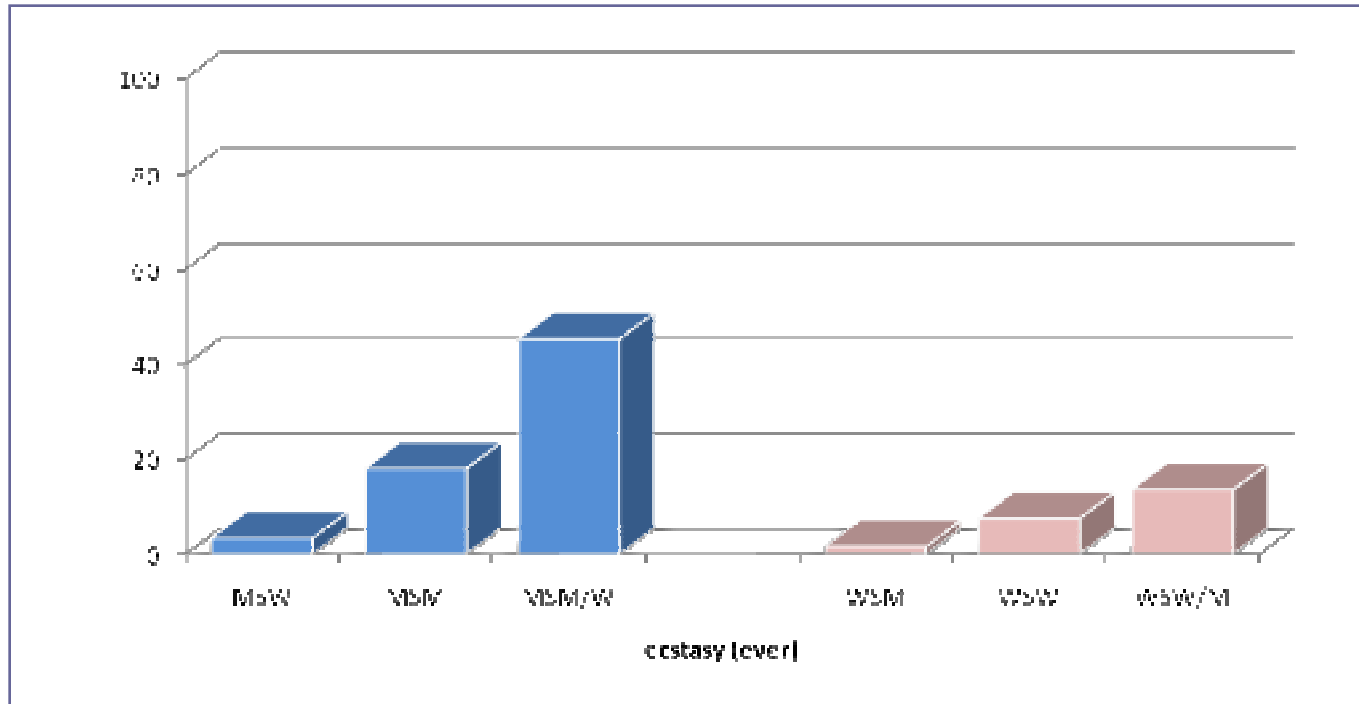
MSM: OR= 6.24
p=0.00, CI=2.45-15.85

WSW: OR=4.92
p=0.00, CI=2.40-10.07

MSM/W: OR=28.79
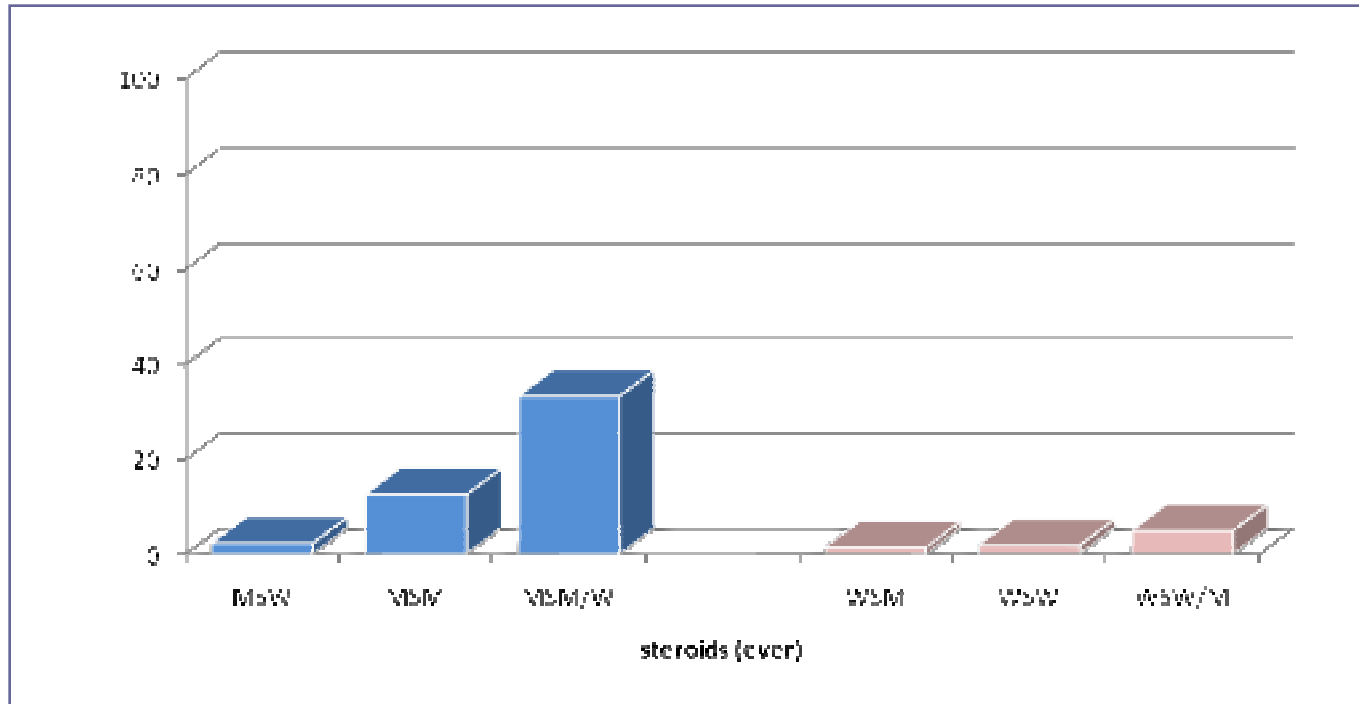p=0.00, CI=8.87-94.34

WSW/M: OR= 8.72
p=0.00, CI=4.67-16.28

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Findings: heroin (ever)
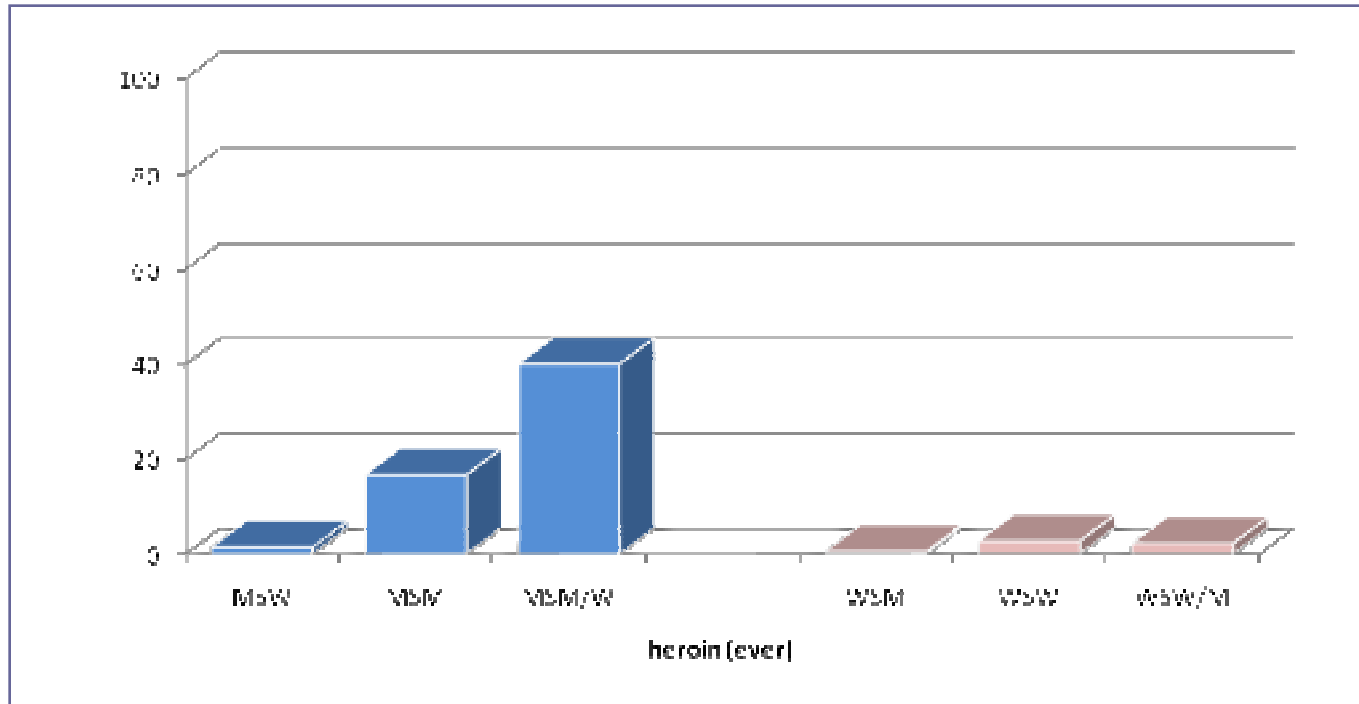
MSM: OR=16.31
p=0.00, CI=4.82-55.23

WSW: OR= 4.59
p=0.02, CI=1.22-17.29

MSM/W: OR=53.95
p=0.00, CI=14.28-203.74

WSW/M: OR= 4.14
p=0.01, CI=1.50-11.41

findings: steroids

MSM: OR= 6.61
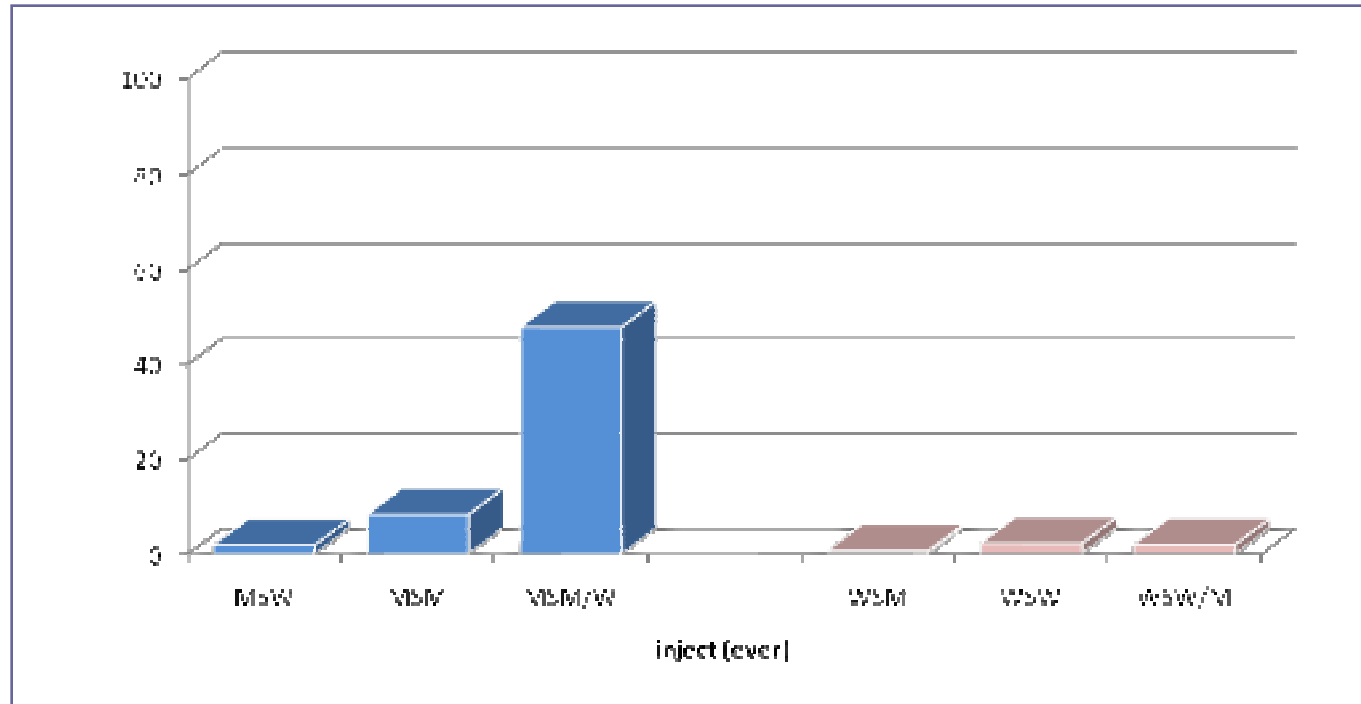p=0.00, CI=2.92-14.98

WSW: OR= 2.23
p=0.23, CI=0.59-9.17

MSM/W: OR= 24.27
p=0.00, CI=8.94-65.91

WSW/M: OR=7.49
p=0.00, CI=2.91-19.28

Findings: injection

MSM: OR=5.01
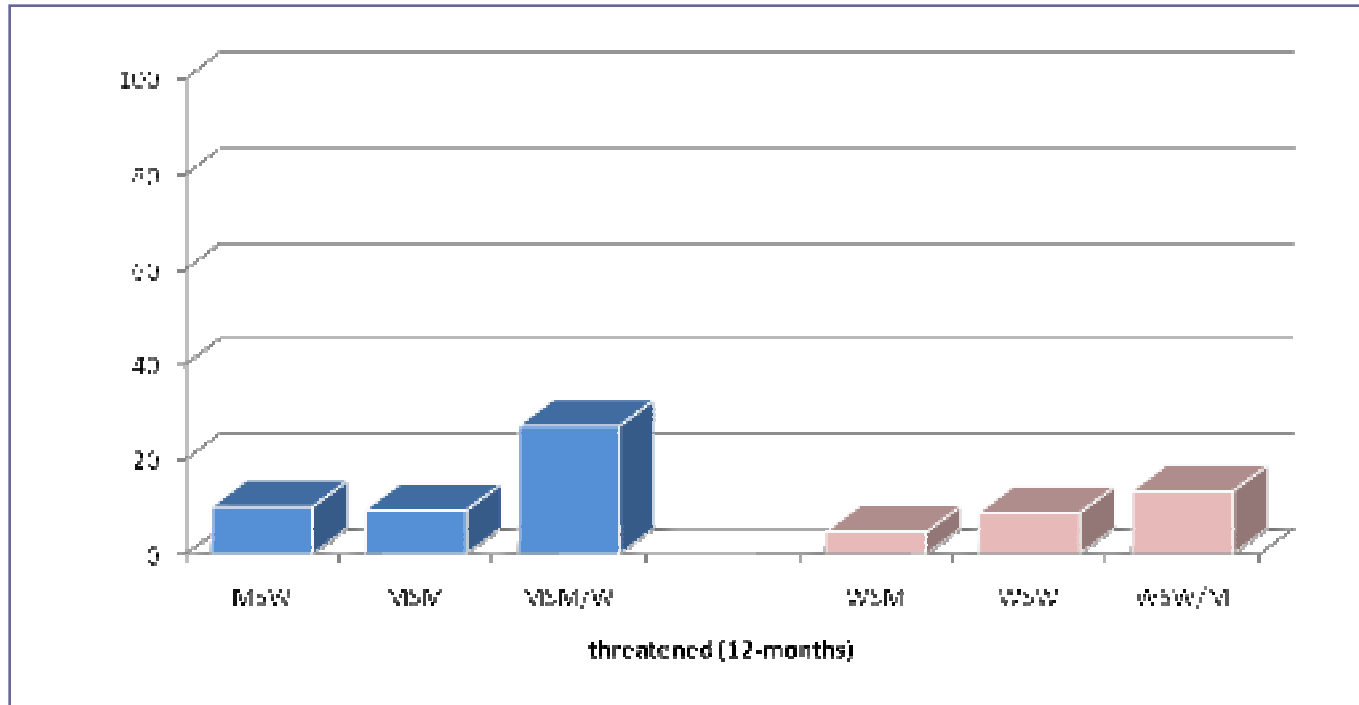p=0.01, CI=1.39-18.04

WSW: OR=2.24
p=0.33, CI=0.43-11.54

MSM/W: OR= 49.12
p=0.00, CI=15.48-155.80

WSW/M: OR= 2.52
p=0.19, CI=0.63-9.98

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FINDINGS: VICTIMIZATION

findings: victimization - threatened

MSM: OR=0.92
p=0.83

WSW: OR= 1.93
p=0.09
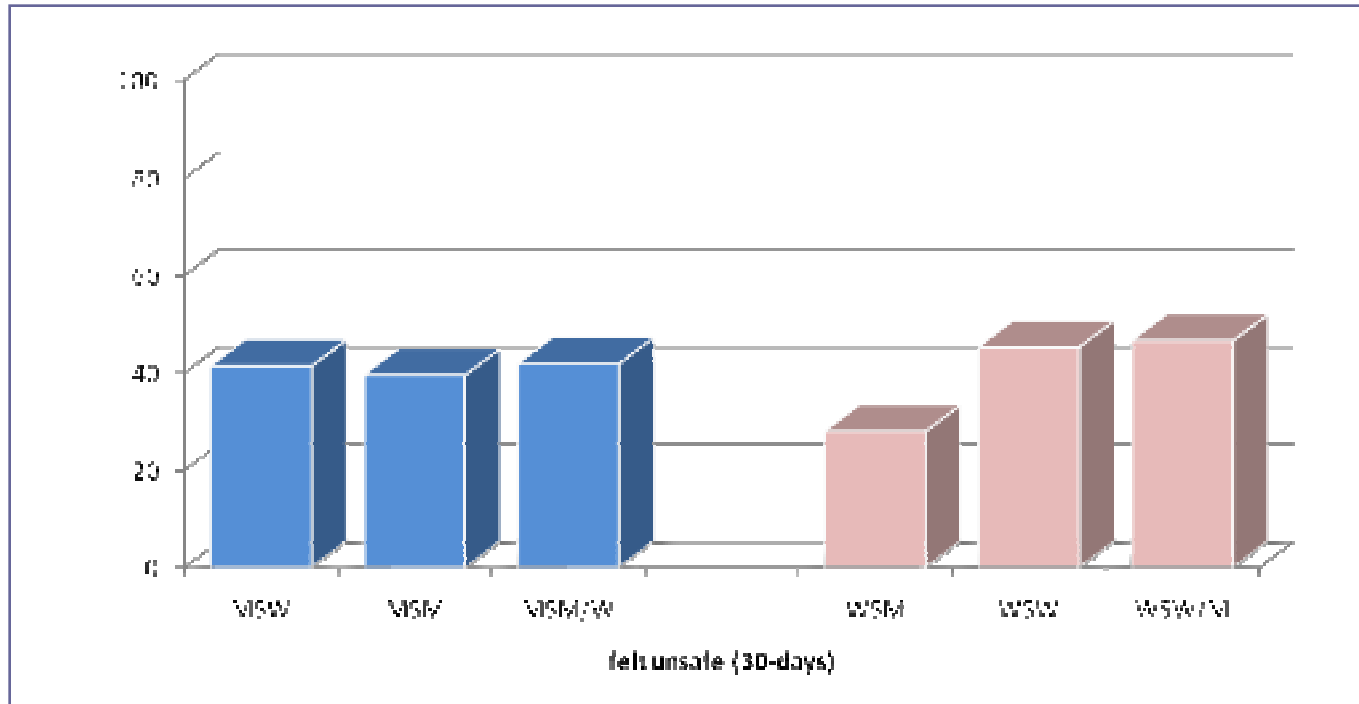
MSM/W: OR= 3.17
p=0.00

WSW/M: OR= 2.65
p=0.01

findings: victimization – felt unsafe

MSM: OR= 1.39
p=0.37

WSW: OR=1.05
p=0.91

MSM/W: OR= 4.35
p=0.00

WSW/M: OR= 2.14
p=0.01

findings: overview

- Overall trends show that boys with any same-sex behavior or identity (MSM, MSM/W) and girls with bisexual behavior or identity (WSW/M) were more likely to report ever using substances and using substances in the past 30-days.

- Girls who reported only same-sex behavior and/or identified as lesbian (WSW) were more likely only for certain substances (cocaine, heroin).

- Only significant differences between groups in reported alcohol use was for girls with bisexual behavior or identity (WSW/M).

- Girls with same-sex and bisexual behavior or identity (WSW/M, WSW) and boys with bisexual behavior & identity (MSM/W) reported increased tobacco use (at 30-days).

- Boys and girls with bisexual behavior & identity (MSM/W & WSW/M) appear to have elevated risk for using some drugs **and** higher rates of victimization

limitations

- Sample is school-based and cannot speak to the experiences of out-of-school youth.

- Combining identity & behavior is problematic and fails to recognize that these are different, fluid and overlapping constructs.

- Cross-sectional survey: these correlations should not be misconstrued as causations.
    - Could well be other underlying factors that explain correlations (e.g. risk-seeking)

- Although statistically significant, many of the cells were quite small.

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discussion/implications

- These data suggest that NYC youth with same- and both-sex behavior and/or identity may face significantly greater risk for substance use than their heterosexual peers.

- Prevention and health promotion programs must include messages which target and resonate with these youth.

- These data also show unacceptably high rates of victimization that must be addressed.

- Furthermore, the data suggest the importance of including sexual orientation and behavior on the YRBS.

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next steps

- Build a model to test if these effects are mediated by violence/victimization

- Attempt to disaggregate sexual orientation and behavior and see if we have enough power to re-analyze any of these variables (e.g., may be able to look at highly prevalent behaviors like lifetime smoking or drinking)

- Compare the NYC YRBS sample to those in other jurisdictions

For more information please contact
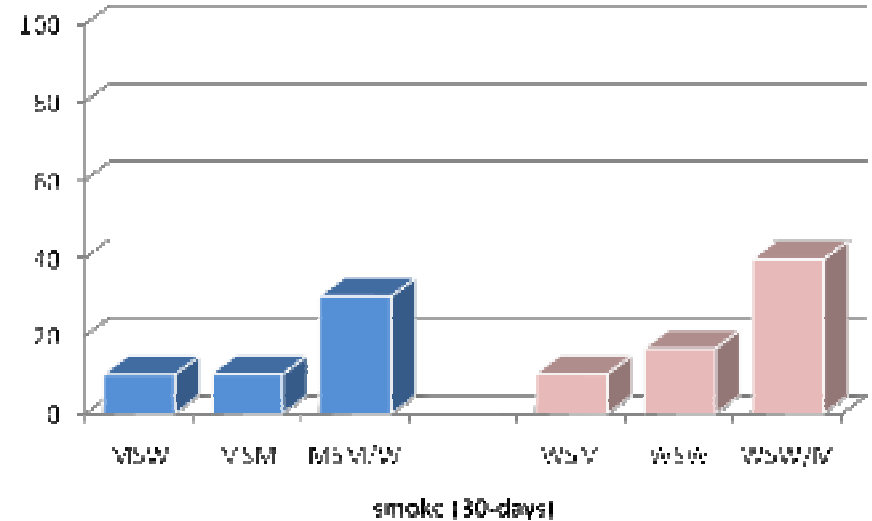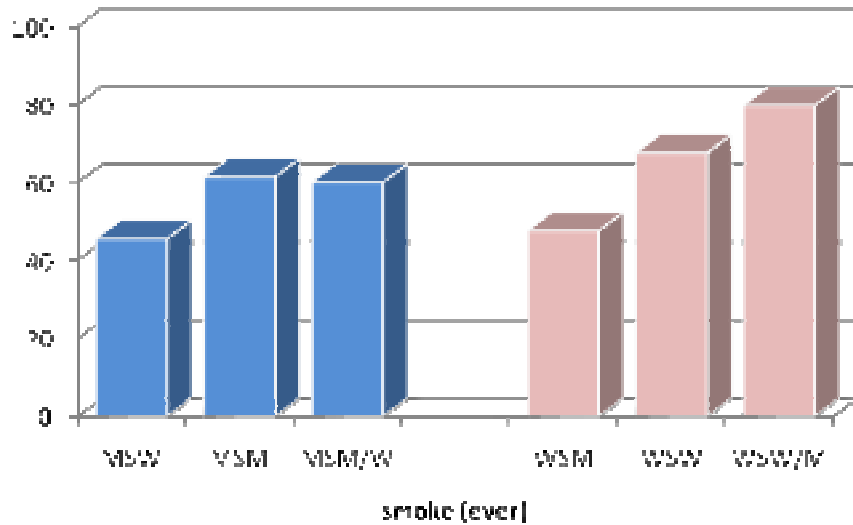James E. Egan: jegan@nyam.org / 212-822-7347

THANK YOU

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ADDITIONAL FINDINGS

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Findings: XXX

MSM:
OR= , p=
CI=

WSW:
OR= , p=
CI=

MSM/W:
OR= , p=
CI=

WSW/M:
OR= , p=
CI=

Findings: XXX

alcohol (ever)

alcohol (30-days)

MSM:
OR= , p=
CI=

WSW:
OR= , p=
CI=

MSM/W:
OR= , p=
CI=

WSW/M:
OR= , p=
CI=

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Findings: XXX

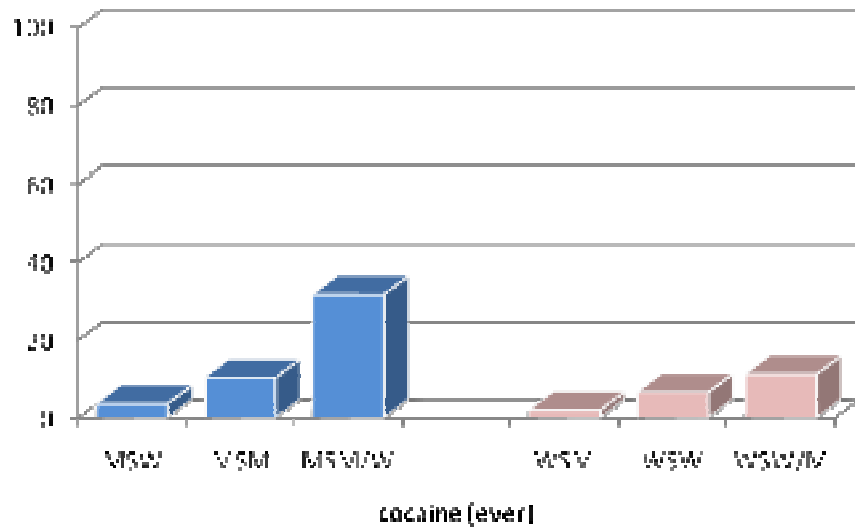MSM:
OR= , p=
CI=

MSM/W:
OR= , p=
CI=

WSW:
OR= , p=
CI=
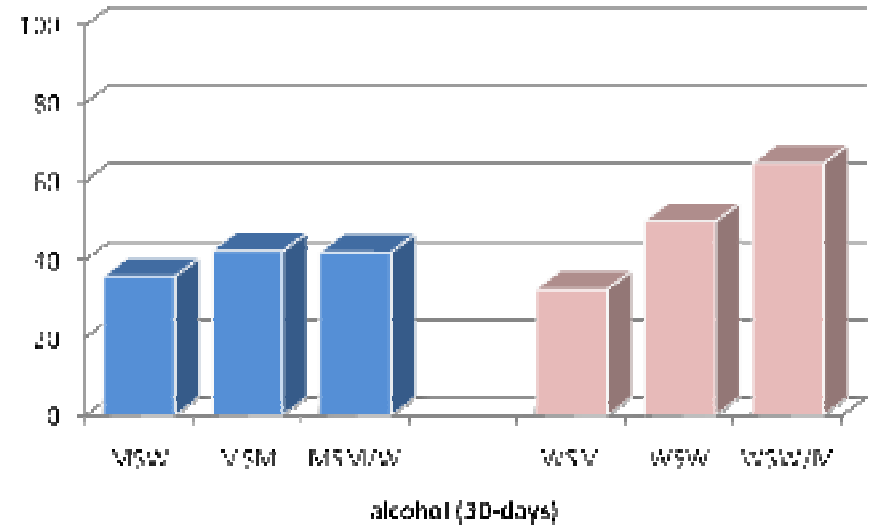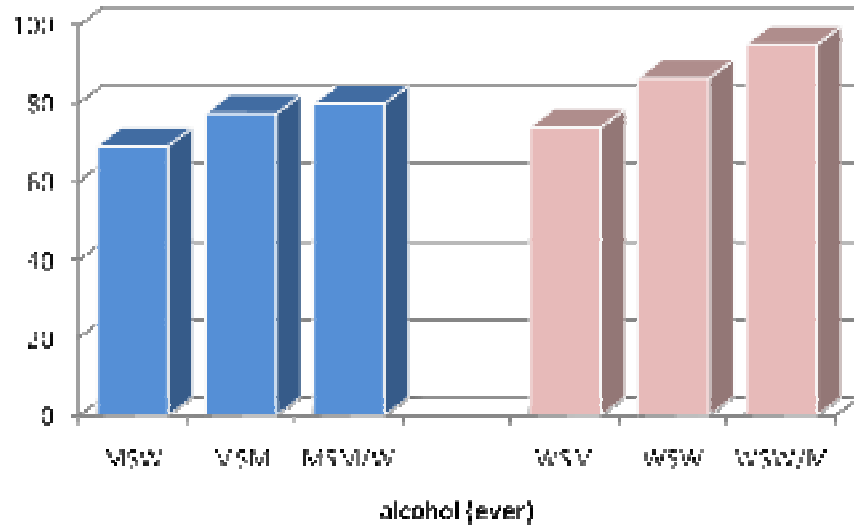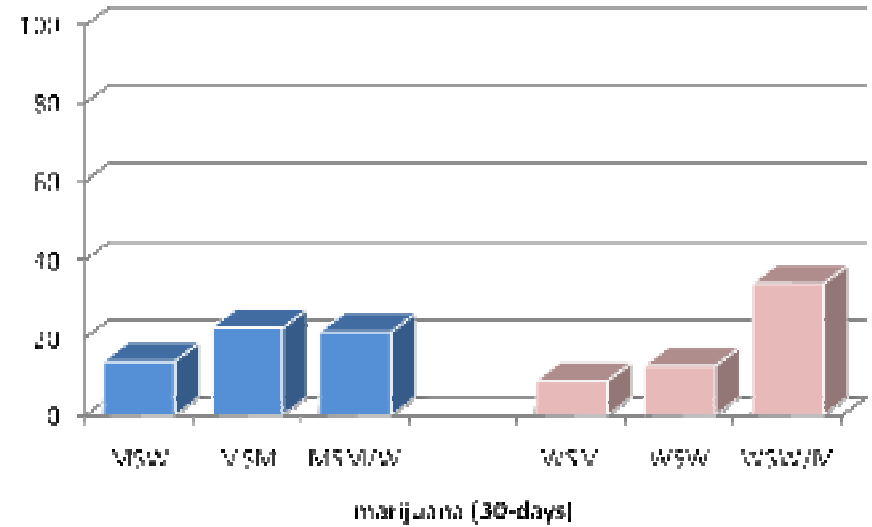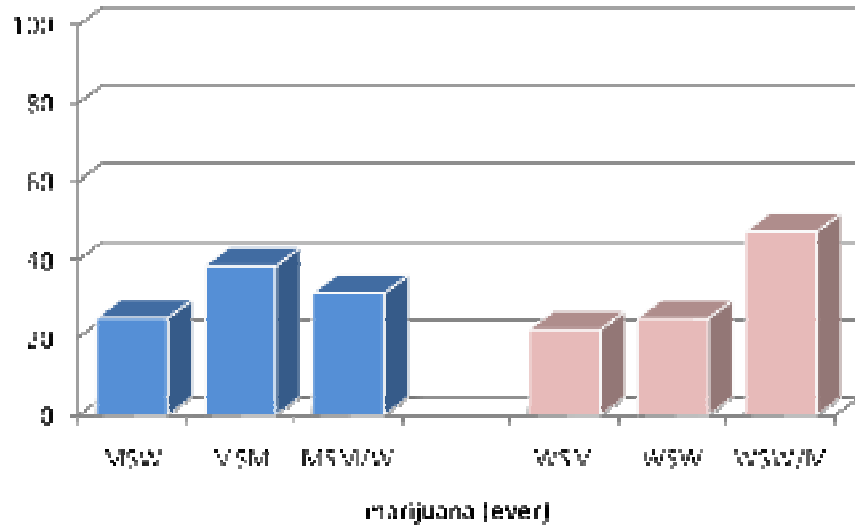
WSW/M:
OR= , p=
CI=

Findings: XXX

MSM:
OR= , p=
CI=

MSM/W:
OR= , p=
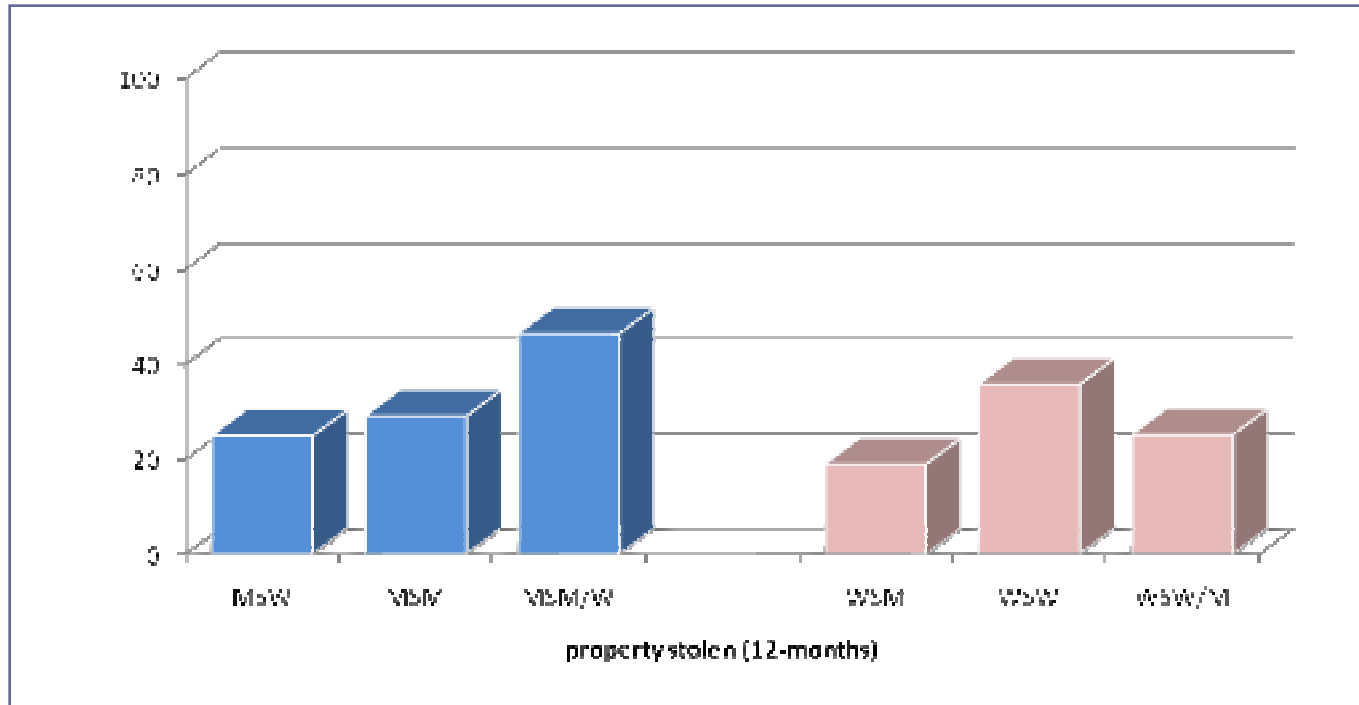CI=

WSW:
OR= , p=
CI=
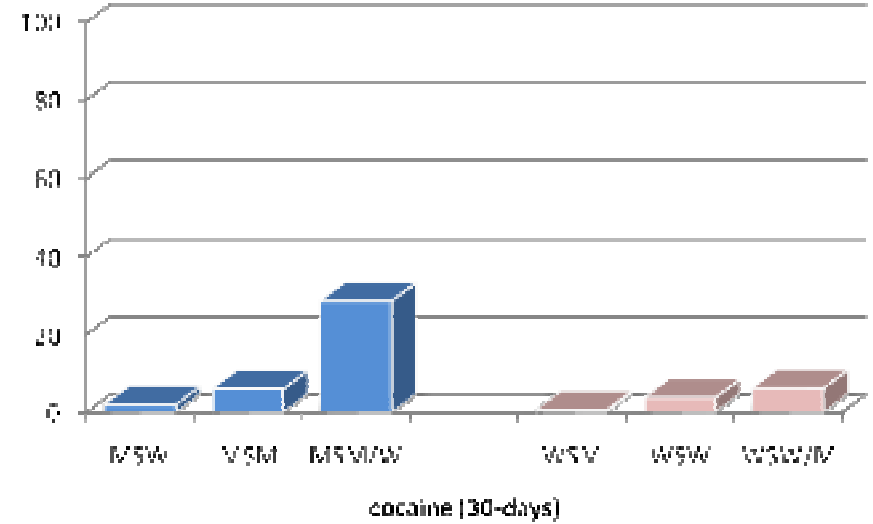
WSW/M:
OR= , p=
CI=

findings: victimization – property stolen
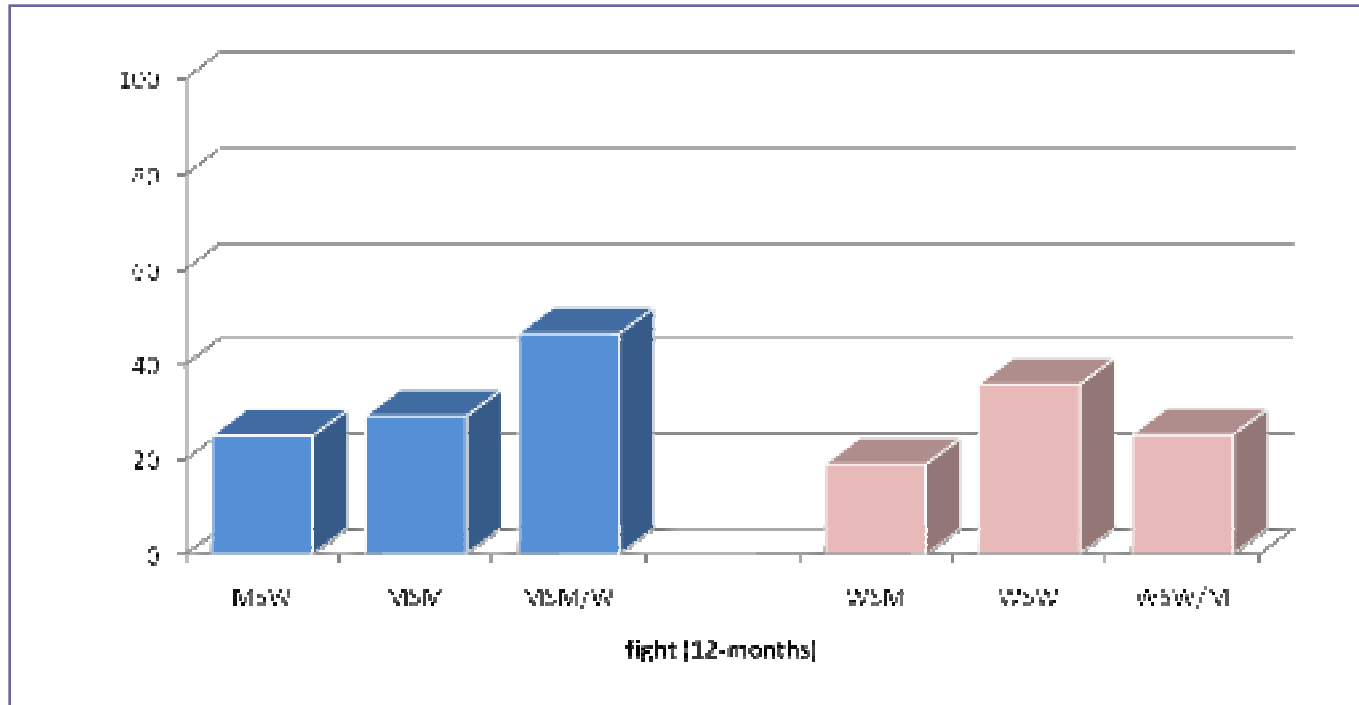

property stolen (12-months)

MSM:
OR=1.42 , p=0.19
CI=

WSW:
OR= 2.31, p=0.04
CI=

MSM/W:
OR= 2.57, p=0.00
CI=

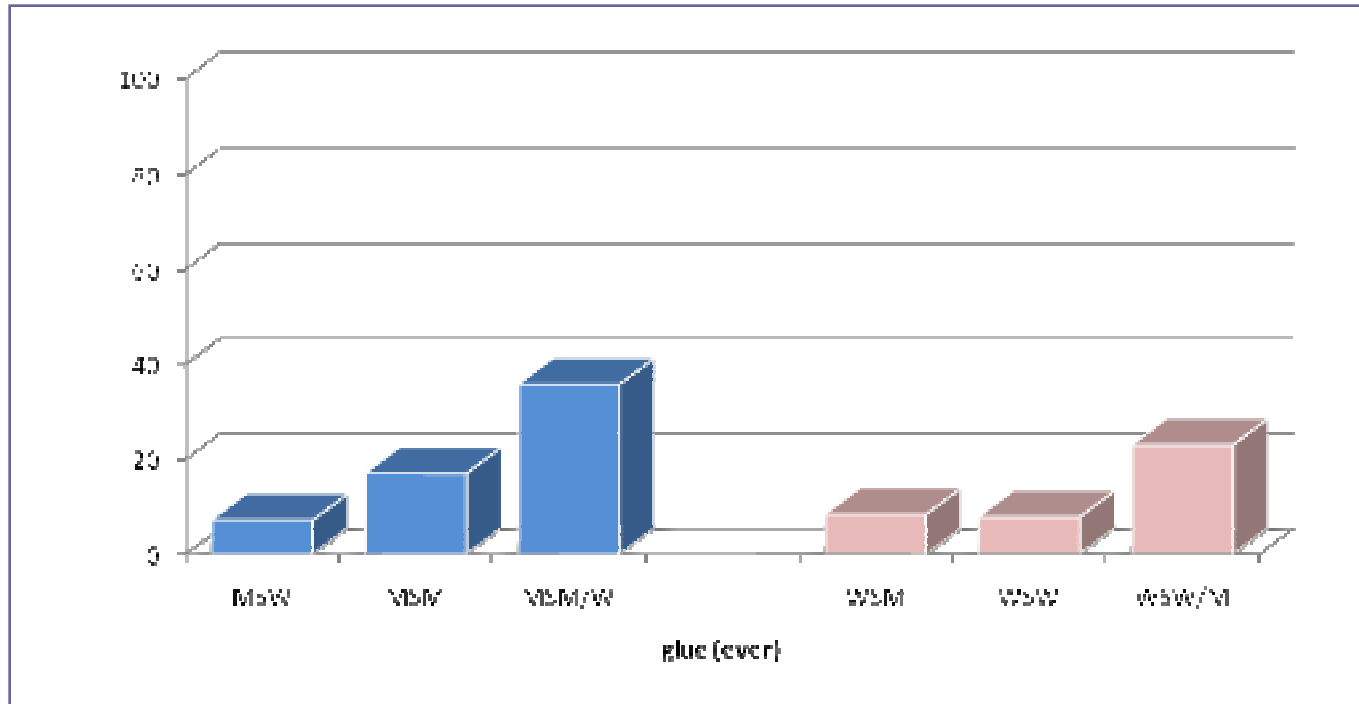WSW/M:
OR= 1.45, p=0.05
CI=

findings: victimization – fight

MSM:
OR=1.17 , p=0.57
CI=

MSM/W:
OR= 0.96, p=0.89
CI=

WSW:
OR= 2.08, p=0.00
CI=

WSW/M:
OR= 2.02, p=0.00
CI=

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findings: inhalants

MSM: OR= 2.89
p=0.00, CI=1.40-5.96

WSW: OR= 0.86
p=0.73, CI=0.36-2.03

MSM/W: OR= 6.51
p=0.00, CI=2.25-18.81

WSW/M: OR= 3.07
p=0.00, CI=1.80-5.24