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Disparities in Sexual Health and Behavioural Outcomes for Gay, Bisexual and Other Men who have Sex with Men (MSM) by Ethnicity in New Zealand, 2006-2011



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Introduction

Internationally, there exist **inequities in HIV prevalence between MSM of different races and/or ethnicities**.¹⁻² Researchers have looked at various reasons that might explain these inequities, but there is no clear and consistent understanding.

In New Zealand, research among MSM has not generally not indicated any discrepancy between ethnic groups in terms of HIV/STI prevalence,³⁻⁴ However, no research among MSM in New Zealand has specifically examined the role of ethnicity in HIV prevention behaviours.

The **aim of this research** was to investigate disparities between ethnic groups for sexual health and behavioural outcomes among MSM using a modified "Total Response" method [Poster TUPDC0104 (online proceedings only), formerly WEPE143 (printed proceedings)].

Methods

Data were used from New Zealand's on-going HIV behavioural surveillance among MSM, which consists of the **Gay Auckland Periodic Sex Survey (GAPSS)** and **Gay men's Online Sex Survey (GOSS)**.

- Participants were **recruited** from:
 - GAPSS: community fair day, gay bars, and sex-on-site venues
 - GOSS: online dating sites
- Eligibility** criteria:
 - At least 16 years old, and report sex with another man in the last five years
- Self-completed anonymous questionnaire**
- Data pooled across **2006, 2008, and 2011**
- Key informant consultation** with Māori, Pacific, and Asian academic and **community members** to inform research approach and process
- Ethnicity (main predictor)**
 - Classified using a modified Total Response method producing three dichotomous variables each with a common referent group (European-only)
 - Asian** (including Chinese and Indian) vs. European-only
 - indigenous **Māori** vs. European-only
 - Pacific** people (including Samoan, Cook Island Māori, Tongan, and Niuean) vs. European-only
- Sexual health & behavioural outcomes:**
 - An **HIV test**: ever in lifetime vs. never; <12 months vs. not
 - Any **STI diagnosis** (<12 months) vs. none
 - Any **STI testing** or treatment (<12 months) vs. none
 - >20 male **sexual partners** (<6 months) vs. fewer
 - High condom use** (always / almost always) versus **low-medium use** (about half the time / very rarely / never) for anal intercourse (<6 months): with **casual partners** (sex <4 times) and with **regular partners** (sex >3 times)
- Other factors:**
 - Recruitment year (2006, 2008, 2011) & site (fair, bar, sex-on-site, online)
 - Age (# years), sexual identity (gay, bisexual, or other), education (any tertiary education versus none)
- Univariate and multivariate logistic regression**
 - Controlling for other factors (see above), p<0.05 considered significant

Results

A pooled sample of 8,350 MSM was collected from New Zealand's 2006, 2008, and 2011 national HIV behavioural surveillance survey responses, of whom **8,040 MSM completed the ethnicity question** (n=310, 3.7% missing). Men who indicated any ethnicity other than the major four groups under investigation were excluded (n=180). Of the remaining MSM who reported at least one of the four major ethnicities (n=7,860), there were **801 Māori** men (10.2%), **304 Pacific** men (3.9%), **693 Asian** men (8.8%), and 6155 men who only reported European ethnicities (78.3%).

The **demographic characteristics** of the overall sample, and for Asian, Māori and Pacific men, along with differences in comparison to European-only men, are shown in **Table 1**. Different proportions of Asian & Māori men were recruited each year. The other following differences were found:

- Asian men were:**
 - Less likely to have been recruited online
 - More likely to be younger in age
 - More likely to identify as gay
 - More likely to report any tertiary education
- Māori men were:**
 - More likely to be younger in age
 - Less likely to identify as gay
- Pacific men were:**
 - Less likely to have been recruited online
 - More likely to be younger in age
 - Less likely to identify as gay

Table 1. Prevalence of and differences in demographic characteristics of Asian, Māori and Pacific MSM compared with "European-only" MSM in New Zealand based on univariate analyses

	European ^a n (%)	Asian n (%)	Māori n (%)	Pacific n (%)
Sample size	6155	693	801	304
% of N	78.3	8.8	10.2	3.9
Recruitment year				
2006	2594 (42.1)	235 (33.9) ^b	302 (37.7) ^b	123 (40.5)
2008	1619 (26.3)	204 (29.4) ^b	220 (27.5) ^b	89 (23.0)
2011	1942 (31.6)	254 (36.7) ^b	279 (34.8) ^b	92 (30.3)
Recruitment site				
Fair day	1537 (25.0)	240 (34.6) ^b	213 (26.6)	100 (32.9) ^b
Bars	267 (4.3)	24 (3.5) ^b	49 (6.1)	18 (5.9) ^b
Sex-on-site venue	415 (6.7)	90 (13.0) ^b	53 (6.6)	23 (7.6) ^b
Online dating site	3936 (64.0)	339 (48.9) ^b	486 (60.7)	163 (53.6) ^b
Age (in years)				
Mean	36.1	29.7 ^b	31.2 ^b	29.4 ^b
SD	13.1	8.9	10.7	10.3
Sexual identity				
Gay	4342 (70.8)	523 (76.1) ^b	484 (60.6) ^b	188 (62.6) ^b
Bisexual	1518 (24.8)	142 (20.7) ^b	185 (23.2) ^b	71 (23.5) ^b
Other	271 (4.4)	22 (3.2) ^b	130 (16.3) ^b	43 (14.2) ^b
Education level				
less than tertiary	3913 (64.2)	238 (34.6) ^b	534 (67.5)	198 (66.7)
any tertiary	2185 (35.8)	450 (65.4) ^b	257 (32.5)	99 (33.3)

^a European-only men are the referent. ^b statistically significant difference (p<0.05).
NB: Missing data are omitted from the table.

Multivariate analyses, which controlled for participant's recruitment year and site, age, sexual identity, and education, assessed potential **disparities between ethnic groups in terms of various sexual health and behavioural outcomes**, as shown in **Table 2 (top of next panel)**.

Table 2. Differences in sexual health and behavioural outcomes for Asian, Māori and Pacific MSM compared with European-only MSM in New Zealand based on multivariate analysis controlling for recruitment year & site, age, sexual identity, and education level

	Asian vs. European	Māori vs. European	Pacific vs. European
An HIV test (ever in lifetime)	Asian MSM less likely AOR=0.63 (0.52,0.75)	no difference AOR=1.09 (0.92,1.29)	Pacific MSM less likely AOR=0.74 (0.57,0.95)
An HIV test (past year)	Asian MSM less likely AOR=0.79 (0.66,0.94)	no difference AOR=1.08 (0.92,1.26)	no difference AOR=0.88 (0.68,1.13)
Any STI testing (past year)	Asian MSM less likely AOR=0.62 (0.53,0.74)	no difference AOR=1.09 (0.94,1.28)	no difference AOR=0.96 (0.76,1.23)
Any STI diagnosis (past year)	no difference AOR=0.76 (0.56,1.03)	no difference AOR=1.04 (0.80,1.34)	no difference AOR=1.42 (0.99,2.03)
≥ 20 sex partners (past 6 months)	no difference AOR=1.17 (0.87,1.56)	Māori MSM more likely AOR=1.44 (1.12,1.87)	Pacific MSM more likely AOR=2.44 (1.75,3.41)
High condom use, casual partners (past 6 months)	no difference AOR=0.96 (0.73,1.26)	no difference AOR=0.84 (0.67,1.06)	Pacific MSM less likely AOR=0.57 (0.40,0.80)
High condom use, regular partner (past 6 months)	no difference AOR=1.19 (0.90,1.57)	Māori MSM more likely AOR=1.67 (1.28,2.17)	no difference AOR=1.00 (0.68,1.45)

Conclusions

In these large and diverse samples of MSM, compared with European men, there were **several notable differences in sexual health and behavioural outcomes for Asian, Māori and Pacific men**. Māori and Pacific men were more likely to report at least 20 sexual partners, but had divergent patterns of condom use; Pacific men were less likely to report high condom use with casual partners while Māori men were more likely to report high condom use with their regular partner. Asian and Pacific men reported lower prevalence of lifetime HIV testing compared with European men, and Asian men also reported lower prevalence of HIV and STI testing in the year prior to survey. Future research should **investigate within-group trends** to inform HIV prevention and monitor progress.

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