Use of geo-social networking applications (GSNa) is independently associated with diagnosis of a sexually transmitted infection (STI) among men who have sex with men testing for STIs: Findings from the MSM Internet Survey Ireland (MISI) 2015

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Background

- In Ireland and globally, MSM are disproportionately affected by STIs.
- Literature describes several socio-demographic factors, lifestyle and sexual behaviours associated with increased risk of STI diagnosis.

Aim

Identify factors associated with a self-reported STI diagnosis in the MSM population who tested for STIs in the previous year.

Methods

- MISI 2015: anonymous, online national survey measuring levels and distributions of sexual risk and precaution behaviours, health promotion needs and penetration of key interventions.
- Subset analysis of MSM who were sexually active and had an STI test in previous year.
- Descriptive, univariable and multivariable analysis of socio-demographic features, lifestyle and sexual behaviours.
- Measured association of risk factors with self-reported STI diagnosis using odds ratios (OR) and adjusted odds ratios (aOR) with 95% confidence intervals (CI).

Results

- Total MISI population n=3,090 , 37.5% (n=1,158) tested for STIs in previous year.
- 21.3% (n=224) had an STI diagnosis (of those who tested).

Table 1 Factors associated with an STI diagnosis in MSM tested for STIs in the previous year

Characteristic		STI +ve (%)	Univariable analysis		Multivariable analysis	
			OR (95%CI)	p-value	aOR (95%CI)	p-value
Age (years)	<25	47 (16.0)	Ref	-	Ref	-
	25-39	123 (22.2)	1.50 (1.03-2.17)	0.032	1.81 (1.04-3.15)	0.035
	≥40	74 (24.7)	1.72 (1.14-2.60)	0.009	1.74 (0.92-3.32)	0.089
Employment status	Student	31 (15.4)	Ref	-	Ref	-
	Employed	174 (21.6)	1.51 (1.00-2.30)	0.052	1.38 (0.75-2.54)	0.304
	Unemployed	19 (28.4)	2.17 (1.13-4.18)	0.020	1.20 (0.51-2.78)	0.680
	Other^^	14 (28.0)	2.13 (1.03-4.41)	0.041	1.48 (0.51-4.33)	0.475
Sexual identity	Bisexual/other^^^	20 (13.4)	Ref	-	Ref	-
	Gay	222 (22.4)	1.86 (1.14-3.06)	0.012	1.25 (0.65-2.43)	0.506
Outness	Out to less than half/none	45 (16.9)	Ref	-	Ref	-
	Out to more than half/all	193 (22.4)	1.43 (1.00-2.05)	0.052	1.53 (0.92-2.55)	0.104
HIV status	Negative/not tested	208 (20.3)	Ref	-	Ref	-
	Positive	34 (30.9)	1.76 (1.14-2.72)	0.013	1.00 (0.54-1.81)	0.981
Poppers in the previous year	No	92 (15.6)	Ref	-	Ref	-
	Yes	143 (27.0)	2.00 (1.49-2.70)	<0.001	1.00 (0.63-1.43)	0.814
Other/recreational drugs in the previous year	No	122 (18.2)	Ref	-	Ref	-
	Yes	122 (25.6)	1.55 (1.16-2.06)	0.003	1.17 (0.79-1.74)	0.429
Use of geosocial networking apps (GSNa) to meet new sexual partner in previous year	No	51 (12.7)	Ref	-	Ref	-
	Yes	193 (25.9)	2.40 (1.71-3.38)	<0.001	**1.95 (1.12-3.39)**	**0.020**
Use of GSNa to meet most recent sexual partner	No	90 (18.9)	Ref	-	*	*
	Yes	117 (26.4)	1.53(1.12-2.10)	0.007		
Condomless anal intercourse (CAI) ≥2 non-steady partners	No	82 (16.8)	Ref	-	Ref	-
	Yes	102 (40.8)	3.42 (2.39-4.90)	<0.001	**2.83 (1.84-4.34)**	**<0.001**
Total number of sexual partners in previous year	(with each increase of one partner)	233 (21.4)	1.04 (1.03-1.05)	<0.001	**1.02 (1.00-1.03)**	**0.034**

^number of participants who provided an answer to this question, ^^Includes long-term sick, medically retired, retired and other, ^^^ Heterosexual, but had sex with a man in the previous 12 months/don't assign themselves a sexual identity

Conclusions

Factors independently associated with an STI diagnosis were
- Use of GSNa to meet new sexual partners in the previous year.
- CAI≥ 2 non-steady sexual partners in the previous year.
- Total number of sexual partners in the previous year.

Recommendations

- GSNa are key settings for STI prevention and testing messages.
- MSM testing for STIs, and particularly those with higher number of sexual partners, should have easy access to condoms and information on STI risk reducing strategies.

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