Supplementary material Sex Transm Infect

Characteristics and sexual health service use of MSM engaging in chemsex: results from a large online survey in England - Supplementary material

Survey advertised and linked 7,367 clinic attendees invited in Scruff, Gaydar, Grindr, Sigma to participate in survey at home (Unknown number of sexual health clinics people viewed link) 1,084 clinic attendees did not begin survey 3,975 app users began survey 6,283 began survey online online 5,832 ineligible for MSM-312 ineligible for MSMfocused study* focused study 3,663 eligible MSM (had sex 451 eligible MSM (had sex with with man in last 12 months, age man in last 12 months, age >15, >15, consent to survey) consent to survey) 66 app respondents had already been recruited via clinic 4,048 unique eligible MSM from clinic and app surveys combined (451 clinic + 3,597 app recruitment) 115 stated no sex in last 12 months 3,933 had sex with a man in last 12 months

Figure 1: Flow chart of survey recruitment from sexual health clinics (left) and apps (right)

^{*}Note that the low proportion of eligible SHC-recruited respondents reflects that women and heterosexual men were also invited to the overall RiiSH study, however they were routed to a different questionnaire for heterosexual respondents which is not relevant to this paper.

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Table 1: Comparison of demographic characteristics among respondents to the RiiSH survey recruited from sexual health clinics and from social networking/dating apps in England (2016-2017). Non-missing percentages presented.

	Number			Non-missing percentage			
	Clinic	Арр		Clinic	App		Chi2 p
	recruited	recruited	Total	recruited	recruited	Total	value
Age group							
16-29	181	638	819	43.0%	18.2%	20.8%	< 0.001
30-44	163	1,090	1,253	38.7%	31.0%	31.9%	
45-59	66	1,349	1,415	15.7%	38.4%	36.0%	
60+	11	435	446	2.6%	12.4%	11.3%	
Ethnicity*							
White British/Irish	267	2,856	3,123	64.0%	82.2%	80.2%	< 0.001
White other	55	333	388	13.2%	9.6%	10.0%	
Black	30	54	84	7.2%	1.6%	2.2%	
Asian	31	127	158	7.4%	3.7%	4.1%	
Mixed ethnicity	23	77	100	5.5%	2.2%	2.6%	
Other	11	28	39	2.6%	0.8%	1.0%	
Country of birth*							
Not UK	134	583	717	31.9%	16.9%	18.5%	< 0.001
UK	286	2,876	3,162	68.1%	83.1%	81.5%	
Highest qualification received*							
Below degree	153	1,693	1,846	36.4%	49.2%	47.8%	< 0.001
Uni degree or higher	267	1,745	2,012	63.6%	50.8%	52.2%	
HIV status*							
HIV-negative/untested	321	3,037	3,358	76.8%	86.8%	85.8%	< 0.001
HIV-positive	97	460	557	23.2%	13.2%	14.2%	
Sex app							
Grindr	-	1,894	1,894	-	53.9%	48.2%	-
Gaydar	-	1,527	1,527	-	43.5%	38.8%	
Scruff	-	67	67	-	1.9%	1.7%	
Sigma website		20	20		0.6%	0.5%	
Total	421	3,512	3,993	100.0%	100.0%	100.0%	

^{*}Variables have <2.5% missing data with no difference by recruitment method

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Table 2: Univariable logistic regression analysis results on association between highest qualification received and chemsex in the 12 months prior to completing RiiSH MSM survey (2016-2017), stratified by continent of birth (simplified to UK vs non-UK; Non-missing percentages presented)

	No chemsex in past 12 months		Chemsex in past 12 months		Univariable logistic regression		
	n	%	n	%	Odds ratio	95% confidence interval	Global p value
All							
Not university educated	1683	48.7%	159	40.5%	1.40	1.13-1.73	0.002
University educated	1771	51.3%	234	59.5%			
Born outside UK							
Not university educated	164	28.3%	26	24.1%	1.24	0.77-2.00	0.371
University educated	416	71.7%	82	75.9%			
Born in UK							
Not university educated	1500	53.1%	132	47.0%			
University educated	1326	46.9%	149	53.0%	1.27	0.99-1.63	0.510

Table 3. History of condomless anal sex (CAS) and HIV status of partner(s) in 3 months prior to completing RiiSH MSM survey (2016-2017), by HIV status and chemsex participation in the past 12 months. Non-missing percentages presented

	No chemsex in past 12 months		Chemsex in past 12 months	
	n	%	n	%
HIV-positive*				
No CAS	164	43.7%	24	20.5%
All partners seroconcordant	68	18.1%	52	44.4%
>1 serodiscordant partner	87	23.2%	29	24.8%
>1 partner with unknown HIV status	56	14.9%	12	10.3%
HIV-negative/unknown*				
No CAS	1586	58.1%	70	30.0%
All partners seroconcordant	747	27.4%	72	30.9%
>1 serodiscordant partner	180	6.6%	42	18.0%
>1 partner with unknown HIV status	218	8.0%	49	21.0%

^{*}Missingness similar across all groups: HIV-positive reporting no chemsex: 11.3%; HIV-positive reporting chemsex: 12.0%, HIV-negative/unknown reporting chemsex: 10.4%; HIV-negative/untested reporting no chemsex: 11.6%. No identified demographic differences between persons who did and did not respond.